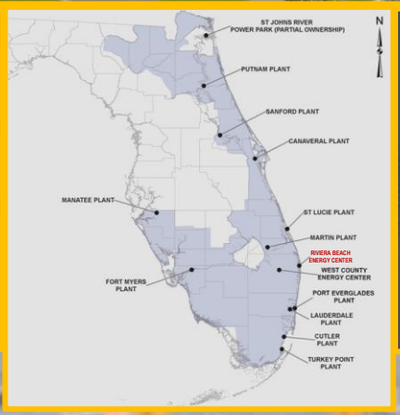
Riviera Beach

Energy Center



Site Certification Application

Volume II of III

February 2009

FPL

SITE CERTIFICATION APPLICATION
RIVIERA BEACH ENERGY CENTER

VOLUME 2 OF 3

Submitted by:

Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408

February 2009

0838-7633

Kennard F. Kosky, P.E.
Professional Registered Engineer No. 14996

Golder Associates Inc.*
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500

*** Board of Professional Engineers**
Certificate of Authorization No. 00001670

SEAL

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ACRONYMS AND ABBREVIATIONS

AAQS	ambient air quality standards
ABI	Applied Biology Inc.
ANSI	American National Standards Institute
APPZ	Avon Park Permeable Zone
BACT	Best Available Control Technology
BBtu/hr	billion British thermal units per hour
BMP	Best Management Practice
Btu/kWh	British thermal unit per kilowatt hour
Btu/lb	British thermal unit per pound
Btu/scf	British thermal unit per standard cubic foot
°C	degrees Celsius
CAA	Clean Air Act
CadnaA	Computer Aided Noise Abatement
C&D	construction and demolition
CEM	continuous emission monitoring
CFR	Code of Federal Regulations
cfs	cubic feet per second
cf/yr	cubic foot per year
CLG	Certified Local Government
CO	carbon monoxide
CO_2	carbon dioxide
CPUE	catch per unit effort
CRA	Community Redevelopment Area
CT	combustion turbine
dB	decibel
dBA	A-weighted decibel
DHR	Division of Historical Resources
DLN	dry low-NO_x
DO	dissolved oxygen
EAI	Ecological Associates, Inc.
ECRWRF	East Central Regional Water Reclamation Facility
EDTA	ethylene diamine tetra-acetic acid
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ERP	Environmental Resource Permit
°F	degrees Fahrenheit
F.A.C.	Florida Administrative Code
FAS	Floridan Aquifer System
FCREPA	Florida Committee on Rare and Endangered Plants and Animals
FDACS	Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection

FDHR	Florida Division of Historical Resources
FEMA	Federal Emergency Management Agency
FFWCC	Florida Fish and Wildlife Conservation Commission
FGT	Florida Gas Transmission
FIND	Florida Inland Navigation District
FLUCFCS	Florida Land Use, Cover and Forms Classification System
FMSF	Florida Master Site File
FNAI	Florida Natural Area Inventory
FP	fibropapillomatosis
FPL	Florida Power & Light Company
FPSC	Florida Public Service Commission
FR	Federal Register
F.S.	Florida Statutes
ft^2/day	square feet per day
ft-bgs	feet below ground surface
ft-msl	feet above mean sea level
g/bhp-hr	grams per brake horsepower-hour
GHG	greenhouse gas
GLO	General Land Office
gpm	gallons per minute
gr/100 scf	grains per 100 standard cubic feet
H_2SO_4	sulfuric acid
HAP	hazardous air pollutant
HHV	high heating value
hp	horsepower
hr/yr	hour per year
HRSG	heat recovery steam generator
Hz	hertz
ICU	Intermediate Confining Unit
IRG	Inwater Research Group
KMIA	NWS station at Miami International Airport
KPBI	NWS station at Palm Beach International Airport
kg	kilogram
km	kilometer
kV	kilovolt
kW	kilowatt
lb/hr	pound per hour
lb/MW-hr	pound per megawatt-hour
lb/MMBtu	pound per million British thermal units
LEED	Leadership in Energy and Environmental Design
LFA	Lower Floridan Aquifer
LHV	low heating value

m	meter
MACT	maximum achievable control technology
MCU	Middle Confining Unit
MGD	million gallons per day
mg/L	milligrams per liter
MMBtu/hr	million British thermal units per hour
MMcf/hr	million cubic feet per hour
mph	miles per hour
MPS	Mitsubishi Power Systems
MSGP	Multi-sector Generic Permit
MSW	municipal solid waste
MW	megawatt
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NGVD	national geodetic vertical datum
NO_2	nitrogen dioxide
NOI	Notice of Intent
NOT	Notice of Termination
NO_x	nitrogen oxides
NOAA	National Oceanic and Atmospheric Administration
NP	National Park
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NSPS	New Source Performance Standards
NWA	National Wilderness Area
NWS	National Weather Service
O_2	oxygen
O_3	ozone
OSHA	Occupational Safety and Health Administration
Pb	lead
PBCERM	Palm Beach County Department of Environmental Resources Management
PEP	Partnership for Ecosystem Protection
PM	particulate matter
$PM_{2.5}$	particulate matter with an aerodynamic diameter of 2.5 micrometers or less
PM_{10}	particulate matter with an aerodynamic diameter of 10 micrometers or less
POTW	privately owned treatment works
ppm	parts per million
ppmvd	parts per million by volume dry
PPSA	Power Plant Siting Act
ppt	parts per thousand
PSD	prevention of significant deterioration
PVC	polyvinyl chloride

QA/QC	quality assurance/quality control
RBEC	Riviera Beach Energy Center
RICE	reciprocating internal combustion engines
RO/MB	reverse osmosis/mixed bed
SAS	surficial aquifer system
SCA	Site Certification Application
scf/yr	standard cubic foot per year
SCR	selective catalytic reduction
SCRAM	Support Center for Regulatory Air Models
SFHA	Special Flood Hazard Area
SFWMD	South Florida Water Management District
SHPO	State Historic Preservation Office
SO_2	sulfur dioxide
SPL	sound pressure level
SRPP	Strategic Regional Policy Plan
SWPPP	Stormwater Pollution Prevention Plan
TDS	total dissolved solids
TPY	ton per year
TTN	Technology Transfer Network
UFA	Upper Floridan Aquifer
UF/BEBR	University of Florida, Bureau of Economic and Business Research
$\mu g/m^3$	micrograms per cubic meter
µm	micrometer
µPa	micropascal
µS/cm	microsiemens per centimeter
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VAMC	Veterans Administration Medical Center
VOC	volatile organic compound
vph	vehicle per hour

SCA DEFINITIONS

1. "Riviera Plant" or "existing Plant" – refers to the existing Florida Power & Light Company (FPL) power plant, including Units 3 and 4 and support facilities, located on the existing Site.

2. "Riviera Plant Site" or "existing Site" – refers to the approximately 46 acres of FPL-owned property: approximately 39 acres east of U.S. Highway 1 (including submerged lands and intake culvert and oil pipeline easements) and approximately 7 acres west of U.S. Highway 1 containing transmission lines.

3. "Riviera Beach Energy Center" or "RBEC" or "converted Plant" – refers to the proposed combined cycle generating unit and support facilities to be constructed and operated on a portion of the existing Site (i.e., on FPL-owned property east of U.S. Highway 1).

4. "Riviera Beach Energy Center Project" or "Project" – refers to the entire "Project" for which FPL seeks certification, including dismantlement of the existing Plant, construction of the converted Plant, the construction parking and laydown area, certain transmission-related activities, and the manatee viewing center.

5. "Riviera Beach Energy Center Site" or "Site" – refers to the property on which the converted Plant will be located, as the Site to be certified for the Riviera Beach Energy Center (i.e., 39 contiguous acres including leased submerged lands and intake culvert and oil pipeline easements).

6. "Power Block" – refers to the area that will be occupied by the proposed combined cycle unit that includes three combustion turbines/heat recovery steam generators (CTs/HRSGs), steam turbine generator, fuel heater, auxiliary boiler, emergency generators, and fire pump engine.

7. "Construction support area" – refers to the FPL-owned property located on the southern portion of the existing Site. This area will be used for temporary construction parking and office trailers during construction of the Project.

8. "Construction parking and laydown area" – refers to the 7 acres of FPL-owned property located to the west of U.S. Highway 1 across from the Site. This area will be used during construction of the Project for parking and construction laydown.

9. "Construction" – refers to work to be performed as part of the Project, including dismantlement of existing Plant facilities, as well as construction of the converted Plant, the construction parking and laydown area, certain transmission-related activities, and the manatee viewing center.

10. "Dismantlement" – refers to all activities associated with the removal of existing Riviera Plant facilities.

11. "Manatee embayment" – refers to the area previously used for the Units 1 and 2 discharge and which now is and in the future will receive a small portion of the once-through cooling water discharge from Units 3 and 4 for the manatees.

12. "Manatee viewing center" – refers to a manatee viewing area (overlooking the manatee embayment), a parking area, and a building for public access to be constructed and operated on the southern portion of the existing Site.. The parking area and building will be located in the portion of the Site to be used for the construction support area.

APPENDIX 10.1

COORDINATION

APPENDIX 10.1

COORDINATION

State, regional, and local governmental agencies were contacted by FPL representatives to inform these agencies about the Riviera Beach Energy Center and to solicit input regarding the Project. The Agency staff contacted is listed below:

Florida Department of Environmental Protection, Siting Office (Tallahassee)
Michael Halpin
Cindy Mulkey
Ann Seiler

Florida Department of Environmental Protection, Wastewater Section (Tallahassee)
Marc Harris
Bala Nori
Michael Hatcher

Florida Department of Environmental Protection, Bureau of Air Regulations (Tallahassee)
Teresa Heron
Al Linero
Deborah Nelson

Florida Department of Environmental Protection, Southeast District Office (West Palm Beach)
Timothy Gray
Joe May
Manuel Delosantos
Jose Calas
Linda Brien
Todd Brown
Joe Lurix
Kevin Claridge
Bruce Offord

Florida Fish and Wildlife Conservation Commission (Tallahassee/Vero Beach)
Mary Ann Poole
Carol Knox
Leslie Ward
Ron Mezich
Tom Reinert
Kipp Frohlich
Steve Lau

Florida Department of Community Affairs (Tallahassee)
Dr. Barbara Lenczewski

Florida Department of Transportation (Tallahassee/Ft. Lauderdale)
Connie Mitchell
Larry Hymowitz
Andrew Riddle

South Florida Water Management District (West Palm Beach)
James Golden

U.S. Fish and Wildlife Service (Jacksonville)
Dave Flemming
Dawn Jennings
Jim Valade
Kalani Cairns

City of Riviera Beach
Pamela Ryan
Mary McKinney
Jerrell Harris

City of West Palm Beach
Charles Wu
Eric Schneider
Angela Vann
Suzanne Payson
Claudia McKenna

Treasure Coast Regional Planning Council (Stuart)
Peter Merritt

Environmental Protection Agency (Atlanta)
Karrie-Jo Shell

APPENDIX 10.2

FEDERAL PERMIT APPLICATIONS OR APPROVALS

APPENDIX 10.2.1

316 DEMONSTRATIONS

FPL performed a 316 study for the Riviera Plant from February 1974 through October 1974 and from January 1975 through December 1975. The 316(a) and 316(b) study culminated in a comprehensive report submitted to affected agencies including the U.S. Environmental Protection Agency (EPA) and the predecessor of the Florida Department of Environmental Protection. During the course of this study, the field programs, methodology, and draft report were submitted to EPA and other agencies for technical input. The final report prepared by Applied Biology, Inc., dated September 1976, was titled "Ecological Parameter Monitoring at the Riviera Plant". The objective of this study was to evaluate whether the operation of the Riviera Plant interfered with the protection and propagation of a balanced, indigenous population of fish, shellfish, and wildlife or caused substantial damage to the biological community of the adjacent waters. The data and conclusions of this report formed the technical basis for 316(a) and 316(b) decisions by EPA.

In accordance with the implementation of the Phase II 316(b) Rule for Existing Facilities (69 Federal Register 41576, July, 2004), FPL performed an Impingement and Entrainment Characterization Study for the Riviera Plant from May 18, 2006 to May 3, 2007. This report was submitted to FDEP on August 6, 2008, with the NPDES permit renewal application and is available upon request.

Summarized below is information related to 316(a) and (b).

316(a)

FDEP has determined that the Riviera Plant is subject to the requirements of Rule 62-302.520(1)(a), F.A.C., which states that facilities with heated water discharges existing on July 1, 1972, "shall not increase the temperature of the receiving body of water (RBW) so as to cause substantial damage or harm to the aquatic life or vegetation therein or interfere with beneficial uses assigned to the RBW". As a thermal discharge that was in existence prior to July 1, 1972, the existing Riviera Plant is not subject to numerical thermal surface water criteria or temperature limits.

316(b)

The U.S. Court of Appeals for the Second Circuit in January 2007 remanded most of the substantive provisions of the Phase II Rule requirements [40 CFR, Subpart J, as incorporated by reference at Rule 62-620.100(3)(v), F.A.C.]. Additionally, EPA's March 20, 2007 Memorandum to all Regional Administrators confirmed that the Phase II Rule "should be considered suspended", and advised that during the interim period intake considerations shall be evaluated based on Best Professional Judgment.

FPL will revisit the 316(b) demonstration when EPA revises the rule, and follow the assessment, evaluation, and Best Technology Available (BTA) selection process as appropriate under the revised rule.

APPENDIX 10.2.2

The Riviera Plant is currently authorized to operate under Industrial Wastewater Facility Permit No. FL0001546, which is currently under review for renewal by FDEP.

FPL is seeking a "modification" to the Industrial Wastewater Facility Permit to authorize the conversion of the Riviera Plant to the proposed Riviera Beach Energy Center as described in FDEP Form 2CS. The Industrial Wastewater Facility Permit modification application (Forms 1 and 2CS) is provided in Attachment B. The RBEC water balance is provided as Attachment B-1. Attachment B-2 provides a complete description of the operation of the converted Plant, as well as a table and Figures B-2.1 through B-2.5 to provide further details.

WASTEWATER FACILITY OR ACTIVITY PERMIT APPLICATION FORM 1 GENERAL INFORMATION

This form must be completed by all persons applying for a permit for a wastewater facility or activity under Chapter 62-620, F.A.C..
See Form 1 to determine which other application forms you will need.

DEP Form 62-620.910(1)
(Effective October 23, 2000)

DESCRIPTION OF PERMIT APPLICATION FORMS

Form 1 - General information. This booklet includes general information on applying for a permit for a wastewater facility or activity under Chapter 62-620, Florida Administrative Code (F.A.C.). **Form 1 is required for all permit applications.**

Form 2 - Specific information. This group of forms includes the specific information required for the type of wastewater facility or activity for which a permit is needed. Select the appropriate form(s) to be submitted with Form 1.

Form 2A - Domestic Wastewater Facilities.
Form 2B - Concentrated Animal Feeding Operations and Aquatic Animal Production Facilities.
Form 2CS -Industrial Wastewater Facilities (discharging process wastewater to surface waters).
Form 2CG -Industrial Wastewater Facilities (discharging process wastewater to ground water).
Form 2ES -Industrial Wastewater Facilities (discharging non-process wastewater to surface waters).
Form 2EG -Industrial Facilities (discharging non-process wastewater to ground water).
Form 2F - Stormwater Discharge Associated with Industrial Activity
Form 2CR -Non-Discharging/Closed Loop Recycle System.

SECTION A - GENERAL INSTRUCTIONS

Who Must Apply:

Persons who are or are going to discharge wastewater to waters of Florida or the United States must file for and be granted a permit under Sections 403.087, 403.088, or 403.0885, Florida Statutes (F.S.). Persons that discharge stormwater associated with industrial activity to surface waters of the state must file for and be granted a permit under Section 403.0885, F.S. There are severe penalties for discharging without a permit.

There are some exceptions to this requirement. Discharges of domestic sewage from vessels and discharges from properly operating marine engines are not required to have a permit under the laws listed above. However, discharges of rubbish, trash, garbage or other such materials discharged overboard do require permits. Vessels operated in a capacity other than as a means of transportation are required to have a permit if they are discharging to waters. These types include vessels used as an energy or mining facility, a storage facility, a seafood processing facility, or an anchored facility for the purpose of mineral or oil exploration or development.

The introduction of sewage, industrial wastes, or other pollutants into a domestic wastewater treatment facility does not need a permit under Sections 403.087, 403.088 or 403.0885, F.S. Persons discharging to permitted wastewater treatment facilities must comply with all applicable pretreatment standards. If a person has a plan or an agreement to switch from direct discharge into waters of the state to discharge to a domestic treatment facility, it does not relieve the person from obtaining a permit for the discharge until such time as the connection is made and the discharge is stopped.

Most discharges from agricultural and silvicultural activities to waters of the state do not require a permit under Sections 403.087, 403.088, or 403.0885, F.S. However, permits under those sections are required for discharges from concentrated animal feeding operations, concentrated aquatic animal production facilities, activities associated with approved aquaculture projects, and silvicultural point sources.

Where to Apply:

Permit applications must be filed with the Department of Environmental Protection (DEP) district office shown in Figure 1 for the county in which the wastewater facility or activity is located, except for permit applications for steam electrical generating power plants which are filed with the DEP office in Tallahassee. DEP offices are located at

Figure 1. State Map Showing DEP District Offices

NORTHWEST DISTRICT
160 Government Center, Ste 308
Pensacola, Florida 32501-5794
Phone No. (850) 595-8300

NORTHEAST DISTRICT
7825 Baymeadows Way, Suite B-200
Jacksonville, Florida 32256-7577
Phone No. (904) 448-4300

SOUTHWEST DISTRICT
3804 Coconut Palm Drive
Tampa, Florida 33619-8318
Phone No. (813) 744-6100

CENTRAL DISTRICT
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767
Phone No. (407) 894-7555

SOUTH DISTRICT
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901
Phone No. (239) 332-6975

SOUTHEAST DISTRICT
400 North Congress Avenue
West Palm Beach, Florida 33401
Phone No. (561) 681-6600

When to Apply:

Applications must be filed with the appropriate DEP office 180 days before your current permit expires or 180 days before startup of a new or modified facility. If the submitted application is for a new facility or for a modification of an existing facility, the information required for describing the construction must be filed at least 90 days before construction begins. The DEP encourages applicants to file the materials describing the construction of a new facility or the modification of an existing facility as early as possible to avoid problems with delays in startup or facility redesign to achieve effluent limitations.

Federal regulations provide that a new source in the NPDES program may not be constructed or started to be constructed before the issuance of an operation permit. Because of this regulation, a permit application for a new source may need to be submitted well in advance of the required 180 days.

Fees:

Application fees are listed in Section 62-4.050, Florida Administrative Code (F.A.C.). An application will not be processed until the application fee has been paid. If the DEP determines that a permit should be issued for less than five years duration, the application fee will be pro rated.

If a permit is issued for a surface water discharge, the permittee will be assessed a regulatory and surveillance program fee annually. Those fees are listed in Section 62-4.052, F.A.C. Failure to pay the annual fee may result in revocation of the permit.

Availability of Information to the Public:

Information contained in these applications forms will, upon request, be made available to the public for inspection and copying. However, you may request confidential treatment for certain information which you may submit to supplement the information requested on these forms. Section 62-620.302, F.A.C., and 40 CFR 2 provide set forth the procedures for making the claim. No information on Forms 1 and 2A through 2EG may be claimed as confidential.

Completion of Forms:

Unless otherwise specified in instructions to the forms, each item in each form must be answered. To indicate that each item has been considered, enter "NA", for not applicable, if a particular item does not fit the circumstances or characteristics of your facility or activity.

If you have previously submitted information to the DEP which answers a question, you may either repeat the information in the space provided or attach a copy of the previous submission. DO NOT WRITE "ON FILE". Some items in the form require narrative explanation. If more space is necessary to answer a question, attach a separate sheet entitled "Additional Information."

SECTION B - FORM 1 LINE-BY-LINE INSTRUCTIONS

This form must be completed by all applicants.

Completing This Form:

Please type or print in the underlined areas only. Some items have a limited number of spaces or characters so that your response may be entered into a computer program. Please do not exceed this maximum number with your response. Abbreviate if necessary to stay within the number of characters allowed for each item. Use one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response.

Item I

Space is provided at the upper right hand corner of Form 1 for insertion of your Facility Identification Number. If you have an existing facility, enter your identification number. If you don't know your identification number, please contact the appropriate DEP office which will provide you with your number. If your facility is new (not yet constructed), leave this item blank.

Item II

Answer each question to determine which supplementary forms you need to fill out. Be sure to check the glossary in Section C of these instructions for the legal definitions of any words you are not certain of their meaning.

If you answer "no" to every question, then you may not need a permit. However, you should call the appropriate district office to determine if you have made a correct determination. If you answer "yes" to any question, then you must complete and file the supplementary form by the deadline listed in Section A along with this form.

Item III

Enter the facility's official or legal name. Do not use a colloquial name.

Item IV

Give the name, title, and work telephone number of a person who is thoroughly familiar with the operation of the facility, with the facts reported in this application, and who can be contacted by reviewing offices if necessary.

Item V

Give the complete mailing address of the office where correspondence should be sent. This often is not the address used to designate the location of the facility or activity.

Item VI

Give the address or location of the facility identified in Item III of this form. If the facility lacks a street name or route number, give the most accurate alternative geographic information (for example, section number or quarter section number from county records or at intersection of Rts 426 and 22).

Item VII

List four, in descending order of significance, 4-digit standard industrial classification (SIC) codes which best describe your facility in terms of the principal products or services you produce or provide. Also, specify each classification in words. These classifications may differ from the SIC codes describing the operation generating the discharge from the facility.

SIC code numbers are descriptions which may be found in the "Standard Industrial Classification Manual" prepared by the Executive Office of the President, Office of Management and Budget, which is available from the Government Printing Office, Washington, D.C. Your local library may have a copy of this publication which you may use. Use the current edition of the manual. If you have any questions concerning the appropriate SIC code for your facility, please contact the appropriate DEP district office.

Item VIII-A

Give the name, as it is legally referred to, of the person, firm, public organization, or any other entity which operates the facility described in this application. This may or may not be the same name as the facility. The operator of the facility is the legal entity which controls the facility's operation rather than the plant or site manager. Do not use a colloquial name.

Item VIII-B

Indicate whether the entity which operates the facility also owns it by marking the appropriate box.

Item VIII-C

Enter the appropriate letter to indicate the legal status of the operator of the facility. Indicate "public" for a facility solely owned by a local government, such as a city, town, county, etc.

Items VIII-D through H

Enter the telephone number and address of the operator identified in Item VIII-A.

Item IX

Indicate whether the facility is located on Indian Lands.

Item X

Give the number of each presently effective wastewater and stormwater permit issued to the facility listed in this application. List relevant federal, state, and local permits. DO NOT LIST ALL YOUR PERMITS. LIST ONLY CURRENT ENVIRONMENTAL PERMITS RELATING TO THIS PROJECT.

Item XI

Provide a topographic map or maps of the area extending at least to one mile beyond the property boundaries of the facility which clearly show the following:

The legal boundaries of the facility;

The location and serial number of each of your existing and proposed intake and discharge structures;

All hazardous waste management facilities;

Each well where you inject fluids underground; and

All springs and surface water bodies in the area, plus all drinking water wells within 1/4 mile of the facility which are identified in the public record or otherwise known to you.

If an intake or discharge structure, hazardous waste disposal site, or injection well associated with the facility is located more than one mile from the plant, include it on the map, if possible. If not, attach additional sheets describing the location of the structure, disposal site, or well, and identify the U.S. Geological Survey (or other) map corresponding to the location.

On each map, include the map scale, a meridian arrow showing north, and latitude and longitude at the nearest whole second. On all maps of rivers, show the direction of the current, and in tidal waters, show the directions of the ebb and flow tides. Use a 7-1/2 minute series map published by the U.S. Geological Survey. If a 7-1/2 minute series map has not been published for your facility site, then you may use a 15 minute series map from the U.S. Geological Survey. If neither a 7-1/2 nor 15 minute series map has been published for your facility site, use a plat map or other appropriate map, including all the requested information; in this case, briefly describe land uses in the map area (for example, residential, commercial).

You may trace your map from a geological survey chart, or other map meeting the above specifications. If you do, your map should bear a note showing the number or title of the map or chart from which it was traced. Include the names of nearby towns, water bodies, and other prominent points.

You may obtain a topographic map from:

Eastern Mapping Center
National Cartographic Information Center
U.S. Geological Survey
536 National Center
Reston, VA 22092

Item XII

Briefly describe the nature of your business (for example, products produced or services provided).

Item XIII

Section 403.161, F.S., provides severe penalties for submitting false information on this application form or any reports or records required by a permit, if issued. There are both civil and criminal penalties, in addition to the revocation of the permit.

Rule 62-620.305, F.A.C., requires that the application and any reports required by the permit, if issued, to be signed as follows:

A. For a corporation, by a responsible corporate officer as described in Rule 62-620.305, F.A.C.;
B. For partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
C. For a municipality, state, federal or other public facility, by a principal executive officer or elected official.

SECTION C - GLOSSARY

NOTE: This Glossary includes terms used in the instructions and in Forms 1, 2A through 2EG. If you have any questions concerning the meaning of any of these terms, please contact your DEP district office.

Activity means any action which results in a discharge of wastes into waters of the State or that is reasonably expected to be a source of water pollution.

Aliquot means a sample of specified volume used to make up a total composite sample.

Animal Feeding Operation means a lot or facility (other than an aquatic animal production facility) where the following conditions are met:

A. Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period; and

B. Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

Two or more animal feeding operations under common ownership are a single animal feeding operation if they adjoin each other or if they use a common area or system for the disposal of wastes.

Animal Unit means a unit of measurement for any animal feeding operation calculated by adding the following number: The number of slaughter and feeder cattle multiplied by 1.0; plus the number of mature dairy cattle multiplied by 1.4; plus the number of swine weighing over 25 kilograms (approximately 55 pounds) multiplied by 0.4; plus the number of sheep multiplied by 0.1; plus the number of horses multiplied by 2.0.

Application means the approved DEP standard forms for applying for a permit, including any approved additions, revisions, or modifications to the forms. Approved forms are numbered, Form 62-620.910, and have an effective date of October 1, 1994, or later.

Aquifer means a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

Best Management Practices (BMP) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs include treatment requirements, operation procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Biological Monitoring Test means any test which include the use of aquatic algal, invertebrate, or vertebrate species to measure acute or chronic toxicity, and any biological or chemical measure of bioaccumulation.

Bypass means the intentional diversion of wastes from any portion of a treatment facility.

Concentrated Animal Feeding Operation means an animal feeding operation which meets the criteria set forth in Chapter 62-670, F.A.C.

Concentrated Aquatic Animal Production Facility means a hatchery, fish farm, or other facility which contains, grows or hold aquatic animals as set forth in Chapter 62-660, F.A.C.

Contact Cooling Water means water used to reduce temperature which comes into contact with a raw material, intermediate product, waste product other than heat, or finished product.

CWA means the Clean Water Act as amended, 33 U.S.C. 1251 et seq.

Dike means any embankment or ridge of either natural or manmade materials used to prevent the movement of liquids, sludges, solids, or other materials.

Discharge (of a Pollutant) means any addition of any pollutant or combination of pollutants to waters of the State from any point source; or any addition of any pollutant or combination of pollutants to the marine waters of the State from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes discharges into waters of the State from surface runoff which is collected or channelled by man; discharges through pipes, sewers, or other conveyances owned by the State, a municipality, or other person which do not lead to POTWs; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any indirect discharge.

Effluent Limitation mean any restriction imposed by the DEP on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into waters of the State.

Effluent Limitation Guideline means a regulation published under Section 304(b) of the Clean Water Act to adopt or revise effluent limitations.

EPA means the United States Environmental Protection Agency.

Existing Source or Existing Discharger means any source which is not a new source or a new discharger.

Facility or wastewater facility means any facility which can reasonably be expected to be a source of pollution and includes any or all of the following: a collection and transmission system, a wastewater treatment works, a reuse or disposal system, and a residuals management facility.

Ground Water means water below the land surface in a zone of saturation.

Indirect Discharger means an industrial discharger introducing pollutants to a publicly owned treatment works.

Injection Well mean a well into which fluids are injected.

MGD means millions of gallons per day.

Municipality means a city, village, town, borough, county, district, association, or other public body created by or under State law and have jurisdiction over disposal of sewage, industrial wastes, or other wastes.

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, termination, monitoring and enforcing permits and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA. The term includes a State program which has been authorized by EPA under 40 CFR Part 123.

New Discharger mean any building, structure, facility, or installation: (A) from which there is or may be a new or additional discharge of pollutants at a site at which on October 18, 1972, it had never discharged pollutants; (B) which has never received a finally effective NPDES permit for discharges at that site; and (C) which is not a "new source." This definition includes an indirect discharger which commences discharging into water of the State. It also includes any existing mobile point source, such as an offshore oil drilling rig, seafood processing vessel, or aggregate plant that begins discharging at a location for which it does not have an existing permit.

New Source means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced: (A) after promulgation of standards of performance under Section 306 of the CWA which are applicable to such source; or (B) after proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

Non-Contact Cooling Water means water used to reduce temperature which does not come into direct contact with any raw material, intermediate produce, waste product (other than heat), or finished product.

Off-Site means any site which is not "on-site."

On-Site means on the same or geographically contiguous property which may be divided by public or private right(s)-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along, the right(s)-of-way. Non-contiguous properties owned by the same person, but connected by a right-of-way which the person controls and to which the public does not have access, is also considered on-site property.

Operator means the person responsible for the overall operation of a facility.

Outfall means a point source.

Owner means the person who owns a facility or part of a facility.

Permit means an authorization, license, or equivalent control document issued by the State to implement the requirements of 40 CFR 122, 123, and 124 and Chapter 403, F.S.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended), heat, wrecked or discarded equipment, rocks, sand, cellar dirt and industrial, municipal, and agriculture waste discharged into water. It does NOT mean: (A) sewage from vessels; or (B) water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Privately Owned Treatment Works means any device or system which is used to treat domestic wastewater from any facility which is not a POTW.

Process Wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly Owned Treatment Works (POTW) means any device or system used in the treatment (including recycling and reclamation) of domestic sewage or industrial wastes of a liquid nature which is owned by a State or municipality. This definition includes any sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Residuals means the solid, semisolid, or liquid residue generated during the treatment of domestic wastewater. Not included are solids removed from pump stations and lift stations, and screenings and grit removed from the headworks of domestic wastewater treatment facilities. Also not included are other solids removed prior to treatment of the residuals to meet the stabilization standards of Chapter 62-640, F.A.C., or ash generated during the incineration of residuals.

Sewage From Vessels means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes that are discharged from vessels and regulated under Section 312 of the CWA.

Sewage Sludge means residuals.

Silvicultural Point Source means any discernable, confined and discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into water of the State.

Stormwater Discharge Associated with Industrial Activity is as defined in 40 CFR 122.26(b)(14).

Surface Impoundment or Impoundment means a facility or part of a facility which is a natural topographic depression, manmade excavation, or diked area formed primarily of earthen materials (although it may be lined with manmade materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.

Toxic Pollutant means any pollutant listed as toxic under Section 307(a)(1) of the CWA.

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Waters of the State means the waters defined in Section 403.031, F.S., and including waters of the United States to the seaward boundaries of the State.

WASTEWATER FACILITY OR ACTIVITY PERMIT
APPLICATION FORM 1
GENERAL INFORMATION

I IDENTIFICATION NUMBER:

Facility ID FL0001546

II CHARACTERISTICS:

INSTRUCTIONS: Complete the questions below to determine whether you need to submit any permit application forms to the Department of Environmental Protection. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the blank in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements. See Section B of the instructions. See also, Section C of the instructions for definitions of the terms used here.

SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED
A. Is this facility a domestic wastewater facility which results in a discharge to surface or ground waters?		X	
B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters?		X	
C. Does or will this facility (other than those describe in A. or B.) discharge process wastewater, or non-process wastewater regulated by effluent guidelines or new source performance standards, to surface waters?	X		2-CS
D. Does or will this facility (other than those described in A. or B.) discharge process wastewater to ground waters?		X	
E. Does or will this facility discharge non-process wastewater, not regulated by effluent guidelines or new source performance standards, to surface waters?		X	
F. Does or will this facility discharge non-process wastewater to ground waters?		X	
G. Does or will this facility discharge stormwater associated with industrial activity to surface waters?	X		none (MSGP)
H. Is this facility a non-discharging/closed loop recycle system?		X	

III NAME OF FACILITY: (40 characters and spaces)

Riviera Beach Energy Center

DEP Form 62-620.910(1)
(Effective October 23, 2000)

Facility ID FL0001546

IV FACILITY CONTACT: (A. 30 characters and spaces)

A. Name and Title (Last, first, & title)	B. Phone (area code & no.)
Randall R. LaBauve, Vice President	561-691-7001

V FACILITY MAILING ADDRESS: (A. 30 characters and spaces; B. 25 characters and spaces)

A. Street or P.O. Box: 700 Universe Blvd.		
B. City or Town: Juno Beach	State: FL	Zip Code: 33408

VI FACILITY LOCATION: (A. 30 characters and spaces; B. 24 characters and spaces; C. 3 spaces (if known); D. 25 characters and spaces; E. 2 spaces; F. 9 spaces)

A. Street, Route or Other Specific Identifier: 200-300 Broadway		
B. County Name: West Palm Beach	C. County Code (if known):	
D. City or Town: Riviera Beach	E. State: FL	F. Zip Code: 33404

VII SIC CODES: (4-digit, in order of priority)

1. Code #: 4911	(Specify)	2. Code #:	(Specify)
3. Code #:	(Specify)	4. Code #:	(Specify)

VIII OPERATOR INFORMATION: (A. 40 characters and spaces; B. 1 character; C. 1 character (if other, specify); D. 12 characters; E. 30 characters and spaces; F. 25 characters and spaces; G. 2 characters; H. 9 characters)

A. Name: Florida Power & Light Company		B. Is the name in VIII A. the owner? ☒Yes ☐No	
C. Status of Operator: F = Federal; S = State; P = Private; O = Other; M = Public (other than F or S)	(code) P	(specify) Utility	D. Phone No.:
E. Street or P. O. Box: 200-300 Broadway			
F. City or Town: Riviera Beach		G. State: FL	H. Zip Code: 33404

IX INDIAN LAND: Is the facility located on Indian lands? ☐ Yes ☒ No

Facility ID FL00001546

X EXISTING ENVIRONMENTAL PERMITS:

A. NPDES Permit No.	B. UIC Permit No.	C. Other (specify)	D. Other (specify)
FL0001546,FLROSA771			

XI MAP: Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII NATURE OF BUSINESS (provide a brief description)

Steam-electric generating facility.

XIII CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Randall R. LaBauve, VP
A. Name (type or print)

B. Signature

Vice President
Official Title (type or print)

2/2/09
C. Date Signed

WASTEWATER APPLICATION FORM 2CS

PERMIT TO DISCHARGE PROCESS WASTEWATER
FROM NEW OR EXISTING
INDUSTRIAL WASTEWATER FACILITIES
TO SURFACE WATER

INSTRUCTIONS - FORM 2CS

This form must be completed by all applicants who check "yes" to Item II-C in DEP Form 62-620.910(1).

Public Availability of Submitted Information.

You may not claim as confidential any information required by this form or DEP Form 62-620.910(1), whether the information is reported on the forms or in an attachment. This information will be made available to the public upon request. Any information you submit to the Department which goes beyond that required by this form or DEP Form 62-620.910(1) you may claim as confidential, but claims for information which is effluent data will be denied. If you do not assert a claim of confidentiality at the time of submitting the information, the Department may make the information public without further notice to you. Claims of confidentiality must be in accordance with Rule 62-620.302, Florida Administrative Code.

Completeness

Your application will not be considered complete unless you answer every question on this form (DEP Form 62-620.910(5))and on Form 1 (DEP Form 62-620.910(1)). If an item does not apply to you, enter "NA" (for "not applicable") to show that you considered the question. Also, you may need a Plan of Study (POS) to develop Water Quality Effluent Limitations (WQBEL) required by Rule 62-650, F.A.C. Please contact the Department for information.

Follow-up Requirements (for New or Substantially Modified Facilities)

Although you are now required to submit estimated data on this form, please note that no later than six months after you begin discharging from the proposed or substantially modified facility, you must complete and submit items VII and VIII of this Form 2CS (DEP Form 62-620.910(5)). However, you need not complete those portions of Item V requiring test which you have already performed under the discharge monitoring requirements of your permit.

Definitions

All significant terms used in these instructions and in the form are defined in the glossary found in the General Instructions which accompany Form 1.

DEP ID Number

If you are applying for a renewal of an existing permit or for a substantial revision to an existing permit, fill in your DEP Identification Number at the top of each page of Form 2CS. You may copy this number directly from Item 1 of Form 1. If you are applying for a permit for a proposed facility, leave the DEP Identification Number blank. The Department will assign a number.

Item I

You may use the map you provided for Item XI of Form 1 to determine the latitude and longitude of each of your discharge locations.

Item II

Describe the design of each outfall, including construction materials used or to be used.

Item III

Describe the surface water body which will be or is receiving effluent from the wastewater facility.

Item IV

A. The line drawing should show generally the route taken by water in your facility from intake to discharge. Show all operations contributing wastewater, including process and production areas, sanitary flows, cooling water, and stormwater runoff. You may group similar operations into a single unit, labeled to correspond to the more detailed listing in Item III B. The water balance should show average flows. Show all significant losses of water to products, atmosphere, and discharge. You should use actual measurements whenever available; otherwise, use your best estimate.

B. List all sources of wastewater to each discharge point. Operations may be described in general terms (for example, "dye-making reactor" or "distillation tower"). You may estimate the flow contributed by each source if no data are available. For stormwater discharges you may estimate the average flow, but you must indicate the rainfall event upon which the estimate is based and the method of estimation. For each treatment unit, indicate its size, flow rate, and retention time, and describe the ultimate disposal of any solid or liquid wastes not discharged. Treatment units should be listed in order and you should select the proper code from Table 2CS-1 to fill in column 3-b for each treatment unit. Insert "XX" into column 3-b if no code corresponds to a treatment unit you list.

C. A discharge is intermittent unless it occurs without interruption during the operating hours of the facility, except for infrequent shut-downs for maintenance, process changes, or other similar activities. A discharge is seasonal if it occurs only during certain parts of the year. Fill in every applicable column in this item for each source of intermittent or seasonal discharges. Base your answers on actual data whenever available; otherwise, provide your best estimate. Report the highest daily value for flow rate and total volume in the "Max. Daily" columns (columns 4-a and 4-b). Report the average of all daily values measured during days when the discharge occurred within the last year in the "Long Term Avg." columns (columns 4-a and 4-b).

Item V

"Production" in this question refers to those goods which the proposed, substantially modified, or existing facility will produce or is producing, not to "wastewater" production. This information is only necessary where production-based new source performance standards (NSPS) or effluent guidelines apply to your facility. Your estimated production figures should be based on a realistic projection of actual daily production level (not design capacity) for each of the first three operating years of the facility. This estimate must be a long-term-average estimate (e.g., average production on an annual basis). If production will vary depending on long-term shifts in operating schedule or capacity, you may report alternate production estimates and the basis for the alternate estimates.

A. All NSPS and effluent guidelines promulgated by EPA appear in the Federal Register and are published annually in 40 CFR Subchapter N. A guideline applies to you if you have any operations contributing process wastewater in any subcategory covered by a BPT, BCT, or BAT guideline. If you are unsure whether you are covered by a promulgated NSPS or effluent guideline, check with your DEP district office (*Figure 1 in the Form 1 instructions*). You must check "yes" if an applicable NSPS or effluent guideline has been promulgated, even if the guideline limitations are being contested in court. If you believe that a promulgated NSPS or effluent guideline has been remanded for reconsideration by a court and does not apply to your operations, you may check "no."

B. An NSPS or effluent guideline is expressed in terms of production (*or other measure of operation*) if the limitation is expressed as mass of pollutant per operational parameter: for example, "pounds of BOD per cubic foot of logs from which bark is removed," or "pounds of TSS per megawatt hour of electrical energy consumed by smelting furnace." An example of a guideline not expressed in terms of a measure of operation is one which limits the concentration of pollutants.

C. This item must be completed only if you checked "yes" to Item V-B. The production information requested here is necessary to apply effluent guidelines to your facility and you cannot claim it as confidential. However, you do not have to indicate how the reported information was calculated. Report quantities in the units of measurement used in the applicable NSPS or effluent guideline. The production figures provided must be based on actual daily production and not on design capacity or on predictions of future operations. To obtain alternate limits under Rule 62-620.620(2)(b)3., F.A.C., you must define your maximum production capability and demonstrate to the Department that your actual production is substantially below maximum production capability and that there is a reasonable potential for an increase above actual production during the duration of the permit.

Item VI

A. If you check "yes" to this question, complete all parts of the chart, or attach a copy of any previous submission you have made to the Department containing the same information.

B. You are not required to submit a description of future pollution control projects if you do not wish to or if none is planned.

Item VII (*A, B, C, and D, including Tables VII-A, VII-B, and VII-C*)

This item requires you to collect and report data on the pollutants discharged from each of your discharge points. Each part of this item addresses a different set of pollutants and must be completed in accordance with the specific instructions for that part. The following general instructions apply to the entire item.

General Instructions

Part A requires you to report at least one analysis for each pollutant listed. Parts B and C require you to report analytical data in two ways. For some pollutants, you may be required to mark "X" in the "Testing Required" column (*column 2-a, Part C*), and test (*sample and analyze*) and report the levels of the pollutants in your discharge whether or not you expect them to be present in your discharge. For all other, you must mark "X" in either the "Believe Present" column or the "Believe Absent" column (*columns 2-a or 2-b, Part B, and Columns 2-b or 2-c, Part C*) based on your best estimate, and test for those which you believe to be present. (*See specific instructions on the form and below for Parts A through D.*) Base your determination that a pollutant is present in or absent from your discharge on your knowledge of your raw materials, maintenance chemicals, intermediate and final products and by-products, and any previous analyses known to you of your effluent or similar effluent. (*For example, if you manufacture pesticides, you should expect those pesticides to be present in contaminated stormwater runoff.*) If you would expect a pollutant to be present solely as a result of its presence in your intake water, you must mark "Believe Present" but you are not required to analyze for that pollutant. Instead, mark an "X" in the "Intake" column.

A. Reporting

All levels must be reported as concentration and as total mass. You may report some or all of the required data by attaching separate sheets of paper instead of filling out pages *VII*-1 to *VII*-10 if the separate sheets contain all the required information in a format which is consistent with pages *VII*-1 to *VII*-10 in spacing and in identification of pollutants and columns. (*For example, the data systems used in your GC/MS analysis may be able to print data in the proper format.*) Use the following abbreviations in the columns headed "Units" (*column 3, Part A, and Column 4, Parts B and C*).

Concentration
ppm - parts per million
mg/l - milligrams per liter
ppb - parts per billion
µg/l - micrograms per liter

Mass
lbs - pounds
ton - tons (English tons)
mg - milligrams
g - grams
kg - kilograms
T - tonnes (metric tons)

All reporting of values for metals must be in terms of "total recoverable metal," unless (1) an applicable, promulgated effluent limitation or standard specifies the limitation for the metal in dissolved, valent, or total form; or (2) all approved analytical methods for the metal inherently measure only its dissolved form (e.g., hexavalent chromium). If you measure only one daily value, complete only "Max. Daily Values" columns and insert "1" into the "Number of Analyses" column (*columns 2-a and 2-d, Part A, and column 3-a, 3-d, Parts B and C*). The Department may require you to conduct additional analyses to further characterize your discharges. For composite sample, the daily value is the total mass or average concentration found in a composite sample taken over the operating hours of the facility during a 24-hour period; for grab samples, the daily value is the arithmetic or flow-weighted total mass or average concentration found in a series of at least four grab samples taken over the operating hours of the facility during a 24-hour period. If you measure more than one daily value for a pollutant and those values are representative of your waste stream, you must report them. You must describe your method of testing and data analysis. You also must determine the average of all values within the last year and report the concentration and mass under the "Long Term Avg. Values" columns (*column 2-c, Part A, and column 3-c, Parts B and C*), and the total number of daily values under the "Number of Analyses" columns (*column 2-d, Part A, and columns 3-d, Parts B and C*). Also determine the average of all daily values taken during each calendar month, and report the highest average under the "Max. 30-day Values" columns (*column 2-c, Part A, and column 3-b, Parts B and C*).

B. Sampling

The collection of the samples for the reported analyses should be supervised by a person experienced in performing sampling of industrial wastewater. Any specific requirements contained in the applicable analytical methods should be followed for sample containers, sample preservation, holding times, the collection of duplicate samples, etc. The time when you sample should be representative of your normal operation, to the extent feasible, with all processes which contribute wastewater in normal operation, and with your treatment system operating properly with no system upsets. Samples should be collected from the center of the flow channel, where turbulence is at a maximum, at a site specified in your present permit, or at any site adequate for the collection of a representative sample. Sampling for metals that are hardness-dependent shall also include sampling for hardness.

For pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, and fecal coliform, grab samples must be used. For all other pollutants 24-hour composite samples must be used. However, a minimum of one grab sample may be taken for effluents from holding ponds, or other impoundments with a retention period of greater than 24 hours. For stormwater discharges a minimum of one to four grab samples may be taken, depending on the duration of the discharge. One grab must be taken in the first hour (*or less*) of discharge, with one additional grab (*up to a minimum of four*) taken in each succeeding hour of discharge for discharges lasting four or more hours. The Department may waive composite sampling for any discharge point for which you demonstrate that use of an automatic sampler is infeasible and that a minimum of four grab samples will be representative of your discharge.

Grab and composite samples[1] are defined as follows:

> Grab sample: An individual sample or at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

[1]Sampling requirements are periodically reviewed in light of recent research on testing methods. Upon completion of the review, changes to sampling requirements may be made. Before starting any required sampling or submitting past sampling to the Department, be sure that you have a current copy of 40 CFR Part 136 or Chapter 160, Florida Administrative Code.

Composite sample: A combination of at least 8 sample aliquots of a least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. For GC/MS Volatile Organic Analysis (VOA), aliquots must be combined in the laboratory immediately before analysis. Four (4) (*rather than eight*) aliquots or grab samples should be collected for VOA. These four samples should be collected during actual hours of discharge over a 24-hour period and need not be flow proportioned. Only one analysis is required.

Data from samples taken in the past may be used if all data requirement are met; sampling was done no more than three years before submission; and all data are representative of the present discharge. Among the factors which would cause the data to be unrepresentative are significant changes in production level; changes in raw materials, processes, or final products; and changes in wastewater treatment. When EPA promulgates new analytical methods in 40 CFR Part 136, EPA will provide information as to when you should use the new methods to generate data on your discharges. The Department may promulgate new methods in Chapter 160, Florida Administrative Code, with the date when the new methods are to be used. Always be sure you have current copies of these two documents before you take samples or submit sampling data to the Department. If you have submitted data from past sampling, the Department may request additional information, including current quantitative data, if it is determined to be necessary to assess your discharges.

C. Analysis

You must use test methods promulgated in 40 CFR Part 136 or Chapter 160, Florida Administrative Code; however, if none has been promulgated for a particular pollutant, you may use any suitable method for measuring the level of the pollutant in your discharge if you submit a description of the method or a reference to a published method. Your description should include the sample holding time, preservation techniques, and the quality control measures which you used. If you have two or more substantially identical discharge points, you may request permission from the Department to sample and analyze only one point and submit the results of the analysis for other substantially identical points. If your request is granted by the Department, or a separate sheet attached to the application form identify which point you did test, and describe why the other points you did not test are substantially identical to the point which you did test.

D. Reporting of Intake Data

You are not required to report data under the "Intake" columns unless you wish to demonstrate your eligibility for a "net" effluent limitation for one or more pollutants, that is, an effluent limitation adjusted by subtracting the average level of the pollutant(s) present in your intake water. To demonstrate your eligibility, under the "Intake" columns report the average of the results of analyses on your intake water (*If your water is treated before use, test the water after it is treated.*), and discuss the requirements for a new limitation with the appropriate district office.

Part VII-A

Part VII-A must be completed by all applicants for all discharge points including discharges of non-contact cooling water or storm runoff. However, at your request, the Department may waive the requirement to test for one or more of these pollutants, upon a determination that available information is adequate to support issuance of the permit with less stringent reporting requirements for these pollutants. Use composite samples for all pollutants in this Part, except use grab samples for pH and temperature. See the discussion in General Instructions to item *VII* for definitions of the columns in Part A. The "Long Term Avg. Values" column (*column 2-c*) and "Max. 30-day Values" column (*column 2-b*) are not compulsory but should be filled out if data are available.

Part VII-B

Part VII-B must be completed by all applicants for all discharge points, including points containing only non-contact cooling water or storm runoff. You must report quantitative data if the pollutant(s) in question is limited in an effluent limitation either directly or indirectly but expressly through a limitation on an indicator (*e.g., use of TSS as an indicator to control the discharge of iron and aluminum*). For other discharged pollutants you must provide quantitative data or explain their presence in your discharge. The Department will consider a request to eliminate the requirement to test for pollutants for an industrial category or subcategory. Your request must be supported by data representative of the industrial category or subcategory in question. The data must demonstrate that individual testing for each applicant is unnecessary, because the facilities in the category or subcategory discharge substantially identical levels of the pollutant or discharge the pollutant uniformly at sufficiently low levels. Use composite samples for all pollutants you analyze for in this part, except use grab samples for residual chlorine, oil and grease, and fecal coliform. The "Long Term Avg. Values" column (*column 2-c*) and "Max. 30-day Values" column (*column 2-b*) are not compulsory but should be filled out if data are available.

Part VII-C

Table 2CS-2 at the end of these instructions lists 34 primary industry categories. For each discharge point, if any of your processes which contribute wastewater falls into one of those categories, you must mark "X" in "Testing Required" column (*column 2-a)* and test for (1) all of the toxic metals, cyanide, and total phenols; and (2) the organic toxic pollutants contained in Table 2CS-3 as applicable to your category. The organic toxic pollutants are listed by GC/MS fractions on pages *VII*-4 to *VII*-10 in Part *VII*-C. The inclusion of total phenols in Part VII-C is not intended to classify total phenols as a toxic pollutant. When you determine which industry category you are in to find your testing requirements, you are not determining your category for any other purpose and you are not giving up your right to challenge your inclusion in that category before your permit is issued. For all other cases (*secondary industries, non-process wastewater discharge points, and GC/MS fractions that are not required*), you must mark "X" in either the "Believed Present" column or the "Believed Absent" column for each pollutant.

You must report quantitative data as follows:

For every pollutant you know or have reason to believe is present in your discharge in concentrations of 10 ppb or greater;

For acrolein; acrylonitrile; 2,4 dinitrophenol; and 2-methyl-4,6 dinitrophenol where you expect these four pollutants to be discharged in concentrations of 100 ppb or greater; and

For every pollutant expected to be discharged in concentrations less that the thresholds specified above. For pollutants in this last category, in lieu of quantitative data, you may briefly describe the reasons the pollutant is expected to be discharged.

You are required to mark "Testing Required" for dioxin if you use or manufacture one of the following compounds:

(a) 2,4,5-trichlorophenoxy acetic acid, (2,4,5-T);
(b) 2-(2,4,5-trichlorophenoxy) propanoic acid, (Silvex, 2,4,5-TP);
(c) 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate, (Erbon);
(d) 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate, (Ronnel);
(e) 2,4,5-trichlorophenol, (TCP); or
(f) hexachlorophene, (HCP).

If you mark "testing Required" or "Believed Present," you must perform a screening analysis for dioxin, using gas chromatography with an electron capture detector. A TCDD standard for quantitation is not required. Describe the results of this analysis in the space provided: for example, "no measurable baseline deflection at the retention time of TCDD" or "a measurable peak within the tolerances of the retention time of TCDD." The Department may require you to perform a quantitative analysis if you report a quantitative analysis if you report a positive result.

Part VII-D

List any pollutants in Table 2CS-3 that you believe to be present and explain why you believe them to be present. No analysis is required, but if you have analytical data, you must report it. For discharges of the hazardous substances listed in Table 2CS-4, you may be exempt from the reporting requirements of section 311 of the Clean Water Act. Please contact the Department for information.

Item VIII

This requirement applies to current use or manufacture of a toxic pollutant as an intermediate or final product or by-product. The Department may waive or modify the requirement if you demonstrate that it would be unduly burdensome to identify each toxic pollutant and the Department has adequate information to issue your permit. You may not claim this information as confidential; however, you do not have to distinguish between use or production of the pollutants or list the amounts.

Item IX

This item is self explanatory.

Item X

This item is self explanatory.

Item XI

This item is self explanatory.

Item XII

There are severe penalties for submitting false information on this application form. Chapter 62-620, Florida Administrative Code, requires, in addition to the certification provided by a professional engineer, a certification from the owner or responsible authority of the facility as follows:

A. For a corporation: by a responsible corporate official. For purposes of this section, a responsible corporate official means (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or (2) the manager of one or more manufacturing, production or operating facilities employing more than 250 person or have gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

B. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

C. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. A principal executive officer includes the chief executive officer of the agency or a senior executive officer having the responsibility for the overall operations of a principal geographic unit of the agency, for example, a regional or district administrator.

TABLE 2CS-1
CODES FOR TREATMENT UNITS

PHYSICAL TREATMENT PROCESSES			
1-A	Ammonia Stripping	1-N	Microstraining
1-B	Dialysis	1-O	Mixing
1-C	Diatomaceous Earth Filtration	1-P	Moving Bed Filters
1-D	Distillation	1-Q	Multimedia Filtration
1-E	Electrodialysis	1-R	Rapid Sand Filtration
1-F	Evaporation	1-S	Reverse Osmosis (Hyperfiltration)
1-G	Flocculation	1-T	Screening
1-H	Flotation	1-U	Sedimentation (Settling)
1-I	Foam Fractionation	1-V	Slow Sand Filtration
1-J	Freezing	1-W	Solvent Extraction
1-K	Gas-Phase Separation	1-X	Sorption
1-L	Grinding (Comminutors)	1-Y	Percolation Pond
1-M	Grit Removal		
CHEMICAL TREATMENT PROCESSES			
2-A	Carbon Adsorption	2-G	Disinfection (*Ozone*)
2-B	Chemical Oxidation	2-H	Disinfection (*Other*)
2-C	Chemical Precipitation	2-I	Electrochemical Treatment
2-D	Coagulation	2-J	Ion Exchange
2-E	Dechlorination	2-K	Neutralization
2-F	Disinfection (*Chlorine*)	2-L	Reduction
BIOLOGICAL TREATMENT PROCESSES			
3-A	Activated Sludge	3-E	Pre-Aeration
3-B	Aerated Lagoons	3-F	Spray Irrigation/Land Application

Table 2CS-1, Codes for Treatment Units contd.

3-C	Anaerobic Treatment	3-G	Stabilization Ponds
3-D	Nitrification-Denitrification	3-H	Trickling Filter
OTHER PROCESSES			
4-A	Discharge to Surface Water	4-C	Reuse/Recycle of Treated Effluent
4-B	Ocean Discharge Through Outfall	4-D	Underground Injection
SLUDGE TREATMENT AND DISPOSAL PROCESSES			
5-A	Aerobic Digestion	5-M	Heat Drying
5-B	Anaerobic Digestion	5-N	Heat Treatment
5-C	Belt Filtration	5-O	Incineration
5-D	Centrifugation	5-P	Land Application
5-E	Chemical Conditioning	5-Q	Landfill
5-F	Chlorine Treatment	5-R	Pressure Filtration
5-G	Composting	5-S	Pyrolysis
5-H	Drying Beds	5-T	Sludge Lagoons
5-I	Elutriation	5-U	Vacuum Filtration
5-J	Flotation Thickening	5-V	Vibration
5-K	Freezing	5-W	Wet Oxidation
5-L	Gravity Thickening		

TABLE 2CS-2
TESTING REQUIREMENTS FOR ORGANIC TOXIC POLLUTANTS INDUSTRY CATEGORY

INDUSTRY CATEGORY	GC/MS FRACTION[1]			
	Volatile	Acid	Base/Neutral	Pesticide
Adhesives and sealants	X	X	X	
Aluminum forming	X	X	X	
Auto and other laundries	X	X	X	X
Battery manufacturing	X		X	
Coal mining	X	X	X	X

Table 2CS-2, Testing Requirements for Organic Toxic Pollutants Industry Category contd.

Coil coating	X	X	X	
Copper forming	X	X	X	
Electric and electronic compounds	X	X	X	X
Electroplating	X	X	X	
Explosives manufacturing		X	X	
Foundries	X	X	X	
Gum and wood chemicals	X	X	X	X
Inorganic chemicals manufacturing	X	X	X	
Iron and steel manufacturing	X	X	X	
Leather tanning and finishing	X	X	X	X
Mechanical products manufacturing	X	X	X	
Nonferrous metals manufacturing	X	X	X	X
Ore mining	X	X	X	X
Organic chemicals manufacturing	X	X	X	X
Paint and ink formulation	X	X	X	X
Pesticides	X	X	X	X
Petroleum refining	X	X	X	X
Pharmaceutical preparations	X	X	X	
Photographic equipment and supplies	X	X	X	X
Plastic and synthetic materials manufacturing	X	X	X	X
Plastic processing	X			
Porcelain enameling	X		X	X
Printing and publishing	X	X	X	X
Pulp and paperboard mills	X	X	X	X
Rubber processing	X	X	X	
Soap and detergent manufacturing	X	X	X	
Steam electric power plants	X	X	X	
Textile mills	X	X	X	X
Timber products processing	X	X	X	X

[1]The pollutants in each fraction are listed in Item VII-C . X = Testing required.

TABLE 2CS-3
TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES
REQUIRED TO BE IDENTIFIED BY APPLICANTS
IF EXPECTED TO BE PRESENT

Toxic Pollutant

Asbestos

Hazardous Substances

Acetaldehyde
Allyl alcohol
Allylchloride
Amyl acetate
Aniline
Benzonitrile
Benzyl chloride
Butyl acetate
Butylamine
Captan
Carbaryl
Carbofuran
Carbon disulfide
Chlopyrifos
Coumpahos
Cresol
Crotonaldehyde
Cyclohexane
2,4-D (2,4-Dichlorophinoxyacetic acid)
Diazinon
Dicamba
Dichlobenil
Dichlone

Hazardous Substances

2,2 Dichloropropionic acid
Dichlorvos
Diethyl amine
Dimethyl amine
Dintrobenzene
Diquat
Disulfoton
Diuron
Epichlorohydrin
Ethion
Ethylene diamine
Formaldehyde
Furfural
Guthion
Isoprene
Isopropanolamine dodecylbenzenesulfonate
Kelthane
Kepone
Malathion
Mercaptodimethur
Methoxychlor
Methyl mercaptan
Methyl methacrylate
Methyl parathion
Mevinphos
Mexacarbate
Monoethyl amiine

Hazardous Substances

Monomethyl amine
Naled
Naphthenic acid
Nitrotoluene
Parathion
Phenolsulfonate
Phosgene
Propargite
Propylene oxide
Pyrethrins
Quinoline
Resorcinol
Strontium
Strychnine
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)
TDE (Terochlorodiphenyl ethane)
2,4,5-TP [2-(2,4,5-Trichlorophenoxyl)propanic acide]
Trichlorofon
Triethanolamine dodecylbenzenesulfonate
Triethylamine
Uranium
Vanadium
Vinyl acetate
Xylene
Xylenol
Zirconium

TABLE 2CS-4
HAZARDOUS SUBSTANCES

1. Acetaldehyde
2. Acetic acid
3. Acetic anhydride
4. Acetone cyanohydrin
5. Acetyl bromide
6. Acetyl chloride
7. Acrolein
8. Acrylonitrile
9. Adipic acid
10. Aldrin
11. Allyl alcohol
12. Alyll chloride
13. Aluminum sulfate
14. Ammonia
15. Ammonium acetate
16. Ammonium benzoate
17. Ammonium bicarbonate
18. Ammonium bichromate
19. Ammonium bifluoride
20. Ammonium bisulfite
21. Ammonium carbamate
22. Ammonium carbonate
23. Ammonium chloride
24. Ammonium chromate
25. Ammonium citrate
26. Ammonium fluoroborate
27. Ammonium fluoride
28. Ammonium hydroxide
29. Ammonium oxalate
30. Ammonium silicofluoride
31. Ammonium sulfamate
32. Ammonium sulfide
33. Ammonium sulfite
34. Ammonium tartrate
35. Ammonium thiocyanate
36. Ammonium thiosulfate
37. Amyl acetate
38. Aniline
39. Antimony pentachloride
40. Antimony potassium tartrate
41. Antimony tribromide
42. Antimony trichloride
43. Antimony trifluoride
44. Antimony trioxide
45. Arsenic disulfide
46. Arsenic pentoxide
47. Arsenic trichloride
48. Arsenic trioxide
49. Arsenic trisulfide
50. Barium cyanide
51. Benzene
52. Benzoic acid
53. Benzonitrile
54. Benzoyl chloride
55. Benzyl chloride
56. Beryllium chloride
57. Beryllium fluoride
58. Beryllium nitrate
59. Butylacetate
60. n-Butylphthalate
61. Butylamine
62. Butyric acid
63. Cadmium acetate
64. Cadmium bromide
65. Cadmium chloride
66. Calcium arsenate
67. Calcium arsenite
68. Calcium carbide
69. Calcium chromate
70. Calcium cyanide
71. Calcium dodecylbenzenesulfonate
72. Calcium hypochlorite
73. Captan
74. Carbaryl
75. Carbofuran
76. Carbon disulfide
77. Carbon tetrachloride
78. Chlordane
79. Chlorine
80. Chlorobenzene
81. Chloroform
82. Chloropyrifos
83. Chlorosulfonic acid
84. Chromic acetate
85. Chromic acid
86. Chromic sulfate
87. Chromous chloride
88. Cobaltous bromide
89. Cobaltous formate
90. Cobaltous sulfamate
91. Coumaphos
92. Cresol
93. Crotonaldehyde
94. Cupric acetate
95. Cupric acetoarsenite
96. Cupric chloride
97. Cupric nitrate
98. Cupric oxalate
99. Cupric sulfate
100. Cupric sulfate ammoniated
101. Cupric tartrate
102. Cyanogen chloride
103. Cyclohexane
104. 2,4-D acid (2,4-Dichlorophenoxyacetic acid)
105. 2,4-D esters (2,4-Dichlorophenoxyacetic acid esters)
106. DDT
107. Diazinon
108. Dicamba
109. Dichlobenil
110. Dichlone
111. Dichlorobenzene
112. Dichloropropane
113. Dichloropropene
114. Dichloropropene-Dichloropropane mix
115. 2,2-Dichloropropionic acid
116. Dichlorvos
117. Dieldrin
118. Diethylamine
119. Dimethylamine
120. Dinitrobenzene
121. Dinitrophenol
122. Dinitrotoluene
123. Diquat
124. Disulfoton
125. Diuron
126. Dodecylbenzesulfonic acid
127. Endosulfan
128. Endrin
129. Epichlorohydrin
130. Ethion
131. Ethylbenzene
132. Ethylenediamine
133. Ethylene dibromide
134. Ethylene dichloride
135. Ethylene Diaminetetracetic acid (EDTA)
136. Ferric ammonium citrate
137. Ferric ammonium oxalate
138. Ferric chloride
139. Ferric fluoride
140. Ferric nitrate

141. Ferric sulfate
142. Ferrous ammonium sulfate
143. Ferrous chloride
144. Ferrous sulfate
145. Formaldehyde
146. Formic acid
147. Fumaric acid
148. Furfural
149. Guthion
150. Heptachlor
151. Hexachlorocyclopentadiene
152. Hydrochloric acid
153. Hydrofluoric acid
154. Hydrogen cyanide
155. Hydrogen sulfide
156. Isoprene
157. Isopropanolamine dodecylbenzenesulfonate
158. Kelthane
159. Kepone
160. Lead acetate
161. Lead arsenate
162. Lead chloride
163. Lead fluoborate
164. Lead fluorite
165. Lead iodide
166. Lead nitrate
167. Lead stearate
168. Lead sulfate
169. Lead sulfide
170. Lead thiocyanate
171. Lindane
172. Lithium chromate
173. Malathion
174. Maleic acid
175. Maleic anhydride
176. Mercaptodimethur
177. Mercuric cyanide
178. Mercuric nitrate
179. Mercuric sulfate
180. Mercuric thiocyanate
181. Mercurous nitrate
182. Methoxychlor
183. Methyl mercaptan
184. Methyl methacrylate
185. Methyl parathion
186. Mevinphos
187. Mexacarbate
188. Monoethylamine
189. Monomethylamine
190. Naled
191. Naphthalene
192. Naphthenic acid
193. Nickel ammonium sulfate
194. Nickel chloride
195. Nickel hydroxide
196. Nickel nitrate
197. Nickel sulfate
198. Nitric acid
199. Nitrobenzene
200. Nitrogen dioxide
201. Nitrophenil
202. Nitrotoluene
203. Paraformaldehyde
204. Parathion
205. Pentachlorophenol
206. Phenol
207. Phosoene
208. Phosphoric acid
209. Phosphorus
210. Phosphorus oxychloride
211. Phosphorus pentasulfide
212. Phosphorus trichloride
213. Polychlorinated biphenyls (PCB)
214. Potassium arsenate
215. Potassium arsenite
216. Potassium bichromate
217. Potassium chromate
218. Potassium cyanide
219. Potassium hydroxide
220. Potassium permanganate
221. Propargite
222. Propionic acid
223. Propionic anhydride
224. Propylene oxide
225. Pyrethrins
226. Quinoline
227. Resorcinol
228. Selenium oxide
229. Silver nitrate
230. Sodium
231. Sodium arsenate
232. Sodium arsenite
233. Sodium bichromate
234. Sodium bifluoride
235. Sodium bisulfite
236. Sodium chromate
237. Sodium cyanide
238. Sodium dodecylbenzensulfonate
239. Sodium fluoride
240. Sodium hydrosulfide
241. Sodium hydroxide
242. Sodium hypochlorite
243. Sodium methylate
244. Sodium nitrate
245. Sodium phospate (dibasic)
246. Sodium phosphate (tribasic)
247. Sodium selenite
248. Strontium chromate
249. Strychnine
250. Styrene
251. Sulfuric acid
252. Sulfur monochloride
253. 2,4,5-T acid (2,4,5-Trichlorophenoxy acetic acid)
254. 2,4,5-T amines (2,4,5-Trichlorophenoxy acetic cid amines)
255. 2,4,5-T esters (2,4,5-Trichlorophenoxy acetic cid esters)
256. 2,4,5-T salts (2,4,5-Trichlorophenoxy acetic acid salts)
257. 2,4,5-TP acid (2,4,5-Trichlorophenoxy propanoic acid)
258. 2,4,5-TP acid esters (2,4,5-Trichlorophenoxy propanoic acid esters)
259. TDE (Tetrachlorodiphenyl ethane)
260. Tetraethyl lead
261. Tetraethyl pyrophosphate
262. Thallium sulfate
263. Toluene
264. Toxaphene
265. Trichlorofon
266. Trichloroethylene
267. Trichlorophenol
268. Triethanolamine dodecylbenzenesulfonate
269. Triethylamine
270. Trimethylamine
271. Uranyl acetate
272. Uranyl nitrate
273. Vanadium pentoxide
274. Vanadyl sulfate
275. Vinyl acetate
276. Vinylidene chloride
277. Xylene
278. Xylenol
279. Zinc acetate
280. Zinc ammonium chloride

HAZARDOUS SUBSTANCES (contd.)

281. Zinc borate
282. Zinc bromide
283. Zinc carbonate
284. Zinc chloride
285. Zinc cyanide
286. Zinc fluoride
287. Zinc formate
288. Zinc hydrosulfite
289. Zinc nitrate
290. Zinc phenolsulfonate
291. Zinc phosphide
292. Zinc silcofluoride
293. Zinc sulfate
294. Zirconium nitrate
295. Zirconium potassium fluoride
296. Zirconium sulfate
297. Zirconium tetrachloride

FORM

2CS

WASTEWATER APPLICATION FOR PERMIT TO DISCHARGE PROCESS WASTEWATER FROM NEW OR EXISTING INDUSTRIAL WASTEWATER FACILITIES TO SURFACE WATERS

Facility I.D. Number: FL0001546

Please print or type information in the appropriate areas.

I OUTFALL LOCATION For each outfall, list the X,Y coordinates and the name of the receiving water.
(latitude/longitude to the nearest 15 seconds)

A. Outfall No. (List)	B. Latitude			C. Longitude			D. Name of Receiving Water
	Deg.	Min.	Sec.	Deg.	Min.	Sec.	
D-013/D0183	26	45	52	80	02	21	Lake Worth Lagoon
D-014/D0184	26	45	52	80	02	21	Lake Worth Lagoon
D-0163	26	46	00	80	03	09	Lake Worth Lagoon
D-009	26	45	59	80	03	03	Lake Worth Lagoon
D-012/D-0182	26	45	52/57	80	03	03	Lake Worth Lagoon
TBD							
TBD							

II OUTFALL DESIGN

A. Outfall No. (List)	B. Design Configuration and Construction Materials	C. Distance from shore	D. Diameter	E. Elevation of Discharge Invert (MSL)	F. Receiving Water Depth at POD (MSL)
D-013/D0183	off-shore subsurface discharge, concrete pipe	1900 '	90"ID	-16.58	-22.66
D-014/D0184	off-shore subsurface discharge, concrete pipe	1900 '	90"ID	-16.58	-22.66
D-0163	discharge pipe to intake well	N/A			N/A
D-009	discharge pipe	N/A			-5
D-012/D-0182	surface discharge overflow from seal well	0	N/A	+12	4-6 feet

Facility I.D. Number: FL0001546

III RECEIVING WATER INFORMATION

For each surface water that will receive effluent, supply the following information:

A. Name of Receiving Water	B. Check One		C. Classification (See Ch. 62-302, F.A.C.)	D. Type of Receiving Water (canal, river, lake, etc.)
	Fresh	Salt or Brackish		
Lake Worth Lagoon	☐	☒	Class III Marine	Lagoon
	☐	☐		
	☐	☐		
	☐	☐		
	☐	☐		
	☐	☐		

E. Minimum 7-day 10-year low flow of the receiving water at each outfall (if appropriate).

F. Identify and describe the flow of effluent from each outfall to a major body of water. A suitably marked map or aerial photograph may be used.

G. Do you request a mixing zone under Rule 62-4.244, F.A.C.? If yes, for what parameters or pollutants?

IV FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of:

1. All operations contributing wastewater to the effluent; including process wastewater, sanitary wastewater, cooling water, and stormwater runoff;

2. The average flow contributed by each operation; and

3. The treatment received by the wastewater.

Use the space on the next page. Continue on additional sheets, if necessary.

(1) Outfall No. (List)	(2) Operation(s) Contributing Flow		(3) Treatment		
	(a) Operation (list)	(b) Avg. Flow & Units	(a) Description	(b) List Code from Table 2CS-1	
D-013	Once-through cooling water	299 MGD	Discharge to Surface Water	4A	
	Auxillary Cooling Water(D-0183)		Chlorination	2-F	
D-014	Once-through cooling water	299 MGD	Discharge to Surface Water	4A	
	Auxillary Cooling Water(D-0184)		Chlorination	2F	
TBD	Washwater/Equipment Drains	25 gpm	Discharge to surface waters	4-A	
TBD	HRSG/Evaporative Cooler Blowdown	36 gpm	Discharge to surface water	4-A	
TBD	R.O. reject	46 gpm	Discharge to surface water	4-A	
D-012	warm water for manatees	60 MGD	N/A	N/A	

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?
☐ Yes (complete the following table) ☒ No (go to D. below)

(1) Outfall No. (List)	(2)Operation(s) Contributing Flow(List)	(3) Frequency		(4) Flow				
		(a) Days per Week (specify avg.)	(b) Months per Yr. (specify avg.)	(a) Flow Rate (in mgd)		(b) Total Volume (specify with units)		(c) Duration (in days)
				Long Term Avg.	Max. Daily	Long Term Avg.	Max. Daily	

D. Describe practices to be followed to ensure adequate wastewater treatment during emergencies such as power loss and equipment failures causing shutdown of pollution abatement equipment of the proposed/permitted facilities.

E. List the method(s) and location(s) of flow measurement.

V PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☒ Yes (complete Item V-B) ☐ No (go to Section VI)

B. Are the limitations in the applicable guideline expressed in terms of production (or other measure of operation)?

☐ Yes (complete Item V-C) ☒ No (go to Section VI)

C. If you answered "yes" to Item V-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. Affected Outfalls
a. Quantity per Day	b. Units of Measure	c. Operation, Product, Materials, Etc. (specify)	(list outfall nos.)

Facility I.D. Number: FL0001546

VI IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement order, enforcement compliance schedule letter, stipulations, court orders, and grant or loan conditions.

☐ Yes (complete the following table) ☒ No (go to Item VI-B)

1. Identification of Condition, Agreement, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	a. No.	b. Source of Discharge		a. Required	B. Projected

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ Mark "X" if description of additional control programs is attached.

VII INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding--Complete one set of tables for each outfall -- Annotate the outfall number in the space provided. NOTE: Tables VII-A, VII-B, and VII-C are included on separate sheets number VII-1 through VII-9.

D. Use the space below to list any of the pollutants listed in Table 2CS-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. Pollutant	2. Source	1. Pollutant	2. Source
See attached 2CS data.			

Facility I.D. Number: FL0001546

VIII POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item VII-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or by-product?

☐ YES (list all such pollutants below) ☒ NO (go to IX)

IX BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ YES (identify the test(s) and describe their purposes below) ☒ NO (go to Section X)

Whole Effluent Acute Effulent Toxicity Testing has not been performed in the past 5 years and are not required in the current NPDES

X CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

☐ YES (list the name, address, telephone number, and certification number of, and pollutants analyzed by each such laboratory or firm below) ☐ NO (go to Section XI)

A. Name	B. Address	C. Telephone (area code & no.)	D. Pollutants Analyzed (list)

Facility I.D. Number: FL0001546

XI CONNECTION TO REGIONAL POTW

A. Indicate the relationship between this project and area regional planning for wastewater treatment. List steps to be taken for this industrial wastewater facility to become part of an area-wide wastewater treatment system.

Currently, domestic sanitary wastewater is discharged to the local POTW. This discharge will continue after the conversion.

XII-A CERTIFICATIONS FOR NEW OR MODIFIED FACILITIES

This is to certify the engineering features of this pollution control project have been designed by me and found to be in conformity with sound engineering principles, applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules of the Department. It is also agreed that the undersigned, if authorized by the owner, will furnish the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Harold A Fredjani, Jr

Signature

Harold A. Fredjani, Jr.

Name (please type)

(Affix Seal)

STATE OF FLORIDA PROFESSIONAL ENGINEER HAROLD A. FREDJANI, JR. LICENSE No. 36394

Golder Associates Inc. (Certification of Authorization No. 1670)

Company Name

Address 3730 Chamblee Tucker Road

Atlanta, Georgia 30341

Florida Registration No.: 36394

Telephone No:: 770-496-1893

Date 2/2/09

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Randall R. LaBauve, Vice President

Name & Official Title (Please type or print)

(561) 691-7001

Telephone No. (area code & No.)

Signature

2/2/09

Date Signed

XII-B CERTIFICATIONS FOR PERMIT RENEWALS

This is to certify the engineering features of this pollution control project have been examined by me and found to be in conformity with sound engineering principles, applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules of the Department.

Signature	Company Name
Name (please type)	Address
(Affix Seal)	Florida Registration No.:
	Telephone No::
	Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name & Official Title (Please type or print)	Signature
Telephone No. (area code & No.)	Date Signed

VII INTAKE AND EFFLUENT CHARACTERISTICS

PART A

VII-1

Facility ID No.: FL0001546 Outfall No. D013

1. Pollutant	2. Effluent							3. Units		4. Intake (optional)		
	a. Max. Daily Value		b. Max. 30-day Value		c. Annual Avg. Value		d. No. of Analyses	a. Concen-tration	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)	14	51,288.4					1	mg/L	lbs/day	14.6		1
b. Chemical Oxygen Demand (COD)	473	1,732,814.2					1	mg/L	lbs/day	406		1
c. Total Organic Carbon (TOC)	1.6	5,861.5					1	mg/L	lbs/day	0.57		1
d. Total Suspended Solids (TSS)	50	183,172.8					1	mg/L	lbs/day	76		1
e. Total Nitrogen (as N)	1.21	4,432.8					1	mg/L	lbs/day	1.21		1
f. Total Phosphorus (as P)	<0.01	<36.6					1	mg/L	lbs/day	<0.01		1
e. Ammonia (as N)	<0.10	<366.3					1	mg/L	lbs/day	0.13		1
f. Flow - actual or projected	Value 439		Value		Value		365*	MGD		Value		
g. Flow – design	Value		Value		Value			MGD		Value		
h. Specific Conductivity	Value 51,600		Value		Value		1	uMHOS		Value 51,800		1
i. Temperature (winter)	Value 96.8		Value		Value		--	°F		Value		
j. Temperature (summer)	Value 105.6		Value		Value		1	°F		Value		1
k. pH	Min 7.68	Max.	Min.	Max.			1	STANDARD UNITS				

PART B

1. Pollutant and CAS No. (if available)	2. Mark "X"		3. Effluent							4. Units		5. Intake (optional)		
	a. be-lieved present	b. be-lieved absent	a. Maximum Daily Value		b. Max. 30-Day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concen-tration	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Bromide (24959-67-9)	X		3.18	11,649.8					1	mg/L	lbs/day	3.18		1
b. Chlorine, Total Residual	X		0.040						1	mg/l		0.070		1
c. Color	X		5.00						1	CU		5.00		1
d. Fecal Coliform	X		2						1	col/100 ml		2		1
e. Fluoride (16984-48-8)	X		<1.0	<3,663.5					1	mg/L	lbs/day	<1.0		1
f. Nitrate-Nitrite (as N)	X		<2.30	<8,425.9					1	mg/L	lbs/day	<2.30		1

1. Pollutant and CAS No. (if available)	2. Mark "X"		3. Effluent							4. Units		5. Intake (optional)		
	a. believed present	b. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Average Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
g. Nitrogen, Total Organic (N)	X		0.01	36.6					1	mg/L	lbs/day	0		1
h. Oil and Grease	X		<1.4	<5,128.8					4	mg/L	lbs/day	<1.4		4
i. Phosphorus, Total (P) (7723-14-0)	X		<0.01	<36.6					1	mg/L	lbs/day	<0.01		1
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (as SO_4) (14808-79-8)	X		2800	10,257,674					1	mg/L	lbs/day	3000		1
l. Sulfide (as S)		X												
m. Sulfite (as SO_3) 14265-45-3)		X												
n. Surfactants	X		<0.043	<157.5					1	mg/L	lbs/day	<0.043		1
o. Aluminum, Total (7429-90-5)	X		<130	<476.2					1	ug/L	lbs/day	<130		1
p. Barium, Total (7440-39-3)		X												
q. Boron, Total (7440-42-8)		X												
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)	X		570	2,088.2					1	ug/L	lbs/day	550		1
t. Magnesium, Total (7439-95-4)	X		1300	4,762,491.5					1	mg/L	lbs/day	1300		1
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)		X												
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

Facility I.D. No.FL0001546 Outfall No. D013

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Average Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X			<13	<47.6					1	ug/L	lbs/day	<13		1
2M. Arsenic, Total (7723-14-0)	X			<5	<18.3					1	ug/L	lbs/day	<5		1
3M. Beryllium, Total (7440-41-7)	X			<0.6	<2.2					1	ug/L	lbs/day	<0.6		1
4M. Cadmium, Total (7440-43-9)	X			<5	<18.3					1	ug/L	lbs/day	<5		1
5M. Chromium, Total (7440-47-3)	X			<3	<11					1	ug/L	lbs/day	<3		1
6M. Copper, Total (7440-50-8)	X			4.7	17.2					1	ug/L	lbs/day	3.7		1
7M. Lead, Total (7439-92-1)	X			<10	<36.6					1	ug/L	lbs/day	<10		1
8M. Mercury, Total (7439-97-6)	X			0.00040	0.001					1	ug/L	lbs/day	0.00048		1
9M. Nickel, Total (7440-02-0)	X			<2	<7.3					1	ug/L	lbs/day	<2		1
10M. Selenium, Total (7782-49-2)	X			<4	<14.7					1	ug/L	lbs/day	<4		1
11M. Silver, Total (7440-22-4)	X			<0.8	<2.9					1	ug/L	lbs/day	<0.8		1
12M. Thallium, Total (7440-28-0)	X			7.1	26					1	ug/L	lbs/day	7.1		1
13M. Zinc, Total (7440-66-6)	X			<6	<22					1	ug/L	lbs/day	<6		1
14M. Cyanide, Total (57-12-5)	X			<0.00670	<0.025					4	ug/L	lbs/day	<0.00670		4
15M. Phenols, Total	X			<0.34	<1.2					4	ug/L	lbs/day	<0.34		4
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			x												

Facility I.D. No.FL0001546 Outfall No. D013

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Average Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS FRACTION - VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	X			<2.0	<7.3					4	ug/L	lbs/day	<2.0		4
2V. Acrylonitrile (107-13-1)	X			<2.4	<8.8					4	ug/L	lbs/day	<2.4		4
3V. Benzene (71-43-2)	X			<0.28	<1.03					4	ug/L	lbs/day	<0.28		4
5V. Bromoform (75-25-2)	X			<0.27	<0.99					4	ug/L	lbs/day	<0.27		4
6V. Carbon Tetrachloride (56-23-5)	X			<0.44	<1.6					4	ug/L	lbs/day	<0.44		4
7V. Chlorobenzene (108-90-7)	X			<0.33	<1.2					4	ug/L	lbs/day	<0.33		4
8V. Chlorodi-bromomethane (124-48-1)	X			<0.18	<0.66					4	ug/L	lbs/day	<0.18		4
9V. Chloroethane (75-00-3)	X			<0.42	<1.5					4	ug/L	lbs/day	<0.42		4
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	X			<1.2	<4.4					4	ug/L	lbs/day	<1.2		4
11V. Chloroform (67-66-3)	X			<0.26	<0.95					4	ug/L	lbs/day	<0.26		4
12V. Dichloro-bromomethane (75-27-4)	X			<0.21	<0.77					4	ug/L	lbs/day	<0.21		4
13V. Dichloro-difluoromethane (75-71-8)	X			<0.88	<1.2					4	ug/L	lbs/day	<0.88		4
14V. 1,1-Dichloroethane (75-34-3)	X			<0.23	<0.8					4	ug/L	lbs/day	<0.23		4
15V. 1,2-Dichloroethane (107-06-2)	X			<0.23	<0.8					4	ug/L	lbs/day	<0.23		4
16V. 1,1-Dichloroethylene (75-35-4)	X			<0.38	<1.4					4	ug/L	lbs/day	<0.38		4
17V. 1,2-Dichloropropane (78-87-5)	X			<0.21	<0.77					4	ug/L	lbs/day	<0.21		4
18V. 1,3-Dichloropropylene (542-75-6)	X			<0.19	<0.7					4	ug/L	lbs/day	<0.19		4
19V. Ethylbenzene (100-41-4)	X			<0.25	<0.9					4	ug/L	lbs/day	<0.25		4
20V. Methyl Bromide (74-83-9)	X			<0.36	<1.3					4	ug/L	lbs/day	<0.36		4
21V. Methyl Chloride (74-87-3)	X			<0.89	<3.3					4	ug/L	lbs/day	<0.89		4

Facility I.D. No.FL0001546 Outfall No. D013

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Average Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-98-2)	X			<0.34	<1.2					4	ug/L	lbs/day	0.43		4
23V. 1,1,2,2-Tetra-chloroethane (79-34-5)	X			<0.36	<1.3					4	ug/L	lbs/day	<0.36		4
24V. Tetrachloroethylene (127-18-4)	X			<0.32	<1.2					4	ug/L	lbs/day	<0.32		4
25V. Toluene (108-88-3)	X			<0.25	<0.9					4	ug/L	lbs/day	<0.25		4
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			<0.30	<1.1					4	ug/L	lbs/day	<0.30		4
27V. 1,1,1-Trichloroethane (71-55-6)	X			<0.22	<0.8					4	ug/L	lbs/day	<0.22		4
28V. 1,1,2-Trichloroethane (79-00-5)	X			<0.30	<1.1					4	ug/L	lbs/day	<0.30		4
29V. Trichloroethylene (79-01-6)	X			<0.35	<1.3					4	ug/L	lbs/day	<0.35		4
30V. Trichloro-fluoromethane (75-69-4)	X			<0.27	<0.99					4	ug/L	lbs/day	<0.26		4
31V. Vinyl Chloride (75-01-4)	X			<0.35	<1.3					4	ug/L	lbs/day	<0.35		4
GC/MS FRACTION - ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X			<1.5	<5.5					1	ug/L	lbs/day	<1.6		1
2A. 2,4-Dichlorophenol (120-83-2)	X			<1.5	<5.5					1	ug/L	lbs/day	<1.8		1
3A. 2,4-Dimethylphenol (105-67-9)	X			<1.3	<4.8					1	ug/L	lbs/day	<1.3		1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			<1.1	<4					1	ug/L	lbs/day	<1.0		1
5A. 2,4-Dinitrophenol (51-28-5)	X			<1.2	<4.4					1	ug/L	lbs/day	<1.2		1
6A. 2-Nitrophenol (88-75-5)	X			<1.5	<5.5					1	ug/L	lbs/day	<1.5		1
7A. 4-Nitrophenol (100-02-7)	X			<2.9	<10.6					1	ug/L	lbs/day	<2.9		1

Facility I.D. No.FL0001546 Outfall No D013

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. Testing Required	b. Believed Present	c. Believed Absent	a. Maximum Daily Value		b. Max. 30-Day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Avrg. Value		b. No of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS Fraction - Acid Compounds Contd.															
8A. P-Chloro-M-Cresol (59-50-7)	X			<1.2	<4.4					1	ug/L	lbs/day	<1.2		1
9A. Pentachlorophenol (87-86-5)	X			<1.8	<6.6					1	ug/L	lbs/day	<1.8		1
10A. Phenol (108-95-2)	X			<2.0	<7.3					1	ug/L	lbs/day	<2.0		1
11A. 2,4,5-Trichloro-phenol (88-06-2)	X			<1.6	<5.5					1	ug/L	lbs/day	<1.6		1
GC/MS Fraction - Base/Neutral Compounds															
1B. Acenaphthene (83-32-9)1	X			<0.014	<0.05					1	ug/L	lbs/day	<0.014		1
2B. Acenaphtylene (208-96-8)	X			<0.020	<0.07					1	ug/L	lbs/day	<0.020		1
3B. Anthracene (120-12-7)	X			<0.013	<0.05					1	ug/L	lbs/day	<0.013		1
4B. Benzidine (92-87-5)	X			<0.94	<3.4					1	ug/L	lbs/day	<0.95		1
5B. Benzo *(a)* Anthracene	X			<0.025	<0.9					1	ug/L	lbs/day	<0.026		1
6B. Benzo *(a)* Pyrene (50-32-8)	X			<0.017	<0.06					1	ug/L	lbs/day	<0.017		1
7B. 3,4-Benzo-fluoranthene (205-99-2)	X			<0.0081	<0.03					1	ug/L	lbs/day	<0.0082		1
8B. Benzo *(ghi)* Perylene (191-24-2)	X			<0.010	<0.04					1	ug/L	lbs/day	<0.010		1
9B. Benzo *(k)* Fluoranthene (207-08-9)	X			<0.010	<0.04					1	ug/L	lbs/day	<0.010		1
10B. Bis *(2-Chloroethoxy)* Methane (111-91-1)	X			<1.8	<6.6					1	ug/L	lbs/day	<1.8		1
11B. Bis *(2-Chloroethyl)* Ether (111-44-4)	X			<2.4	<8.8					1	ug/L	lbs/day	<2.5		1
12B. Bis *(2_Chloroisopropyl)* Ether (102-60-1)	X			<1.6	<5.9					1	ug/L	lbs/day	<1.6		1
13B. Bis *(2-Ethylhexyl)* Phthalate (117-81-7)	X			<2.4	<8.4					1	ug/L	lbs/day	<2.4		1

Facility I.D. No.FL0001546 Outfall No. D013

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. Testing Required	b. Believed Present	c. Believed Absent	a. Maximum Daily Value		b. Max. 30-Day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Avrg. Value		b. No of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS Fraction - Base/Neutral Compounds Contd.															
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X			<2.3	<8.4					1	ug/L	lbs/day	<1.4		1
15B Butyl Benzyl Phthalate (85-68-7)	X			<2.0	<7.3					1	ug/L	lbs/day	<2.0		1
16B. 2-Chloronaphthalene (91-58-7)	X			<1.2	<4.4					1	ug/L	lbs/day	<1.2		1
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	X			<1.5	<6.2					1	ug/L	lbs/day	<1.5		1
18B. Chrysene (218-01-9)	X			<0.012	<0.04					1	ug/L	lbs/day	<0.012		1
19B. Dibenzo *(a,h)* Anthracene (53-70-3)	X			<0.010	<0.04					1	ug/L	lbs/day	<0.010		1
20B. 1,2-Dichlorobenzene (95-50-1)	X			<0.91	<3.3					1	ug/L	lbs/day	<0.92		1
21B. 1,3-Dichlorobenzene (541-73-1)	X			<1.5	<5.5					1	ug/L	lbs/day	<1.5		1
22B. 1,4-Dichlorobenzene (106-46-7)	X			<0.47	<1.7					1	ug/L	lbs/day	<0.48		1
23B. 3,3'-Dichlorobenzidine (92-94-1)	X			<1.2	<4.4					1	ug/L	lbs/day	<1.2		1
24B. Diethyl Phthalate (84-66-2)	X			<1.5	<5.1					1	ug/L	lbs/day	<1.5		1
25B. Dimethyl Phthalate (131-11-3)	X			<1.7	<6.2					1	ug/L	lbs/day	<1.7		1
26B. Di-N-Butyl Phthalate (84-74-2)	X			<0.87	<3.3					1	ug/L	lbs/day	<0.88		1
27B. 2,4-Dinitrotoluene (121-14-2)	X			<1.3	<4.8					1	ug/L	lbs/day	<2.3		1
28B. 2,6-Dinitrotoluene (606-20-2)	X			<2.3	<8.4					1	ug/L	lbs/day	<1.3		1
29B. Di-N-Octyl Phthalate (117-84-0)	X			<1.5	<5.5					1	ug/L	lbs/day	<1.5		1

Facility I.D. No.FL0001546 Outfall No. D013

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. Testing Required	b. Be-lieved Present	c. Be-lieved Absent	a. Maximum Daily Value		b. Max. 30-Day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Avrg. Value		b. No of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS Fraction - Acid Compounds Contd.															
30B. 1,2-Diphenylhydrazine *(as Azobenzene)* (122-66-7)	X			<0.53	<1.9					1	ug/L	lbs/day	<0.53		1
31B. Fluoranthene (206-44-0)	X			<0.022	<0.08					1	ug/L	lbs/day	<0.022		1
32B. Fluorene (86-73-7)	X			<0.011	<0.04					1	ug/L	lbs/day	<0.011		1
33B. Hexachlorobenzene (118-74-1)	X			<1.7	<6.2					1	ug/L	lbs/day	<1.7		1
34B. Hexachlorobutadiene (87-68-3)	X			<1.8	<6.6					1	ug/L	lbs/day	<1.8		1
35B. Hexachlorocyclopentadiene (77-47-4)	X			<1.4	<4.8					1	ug/L	lbs/day	<1.4		1
36B. Hexachloroethane (67-72-1)	X			<1.4	<5.1					1	ug/L	lbs/day	<1.4		1
37B. Indeno *(1,2,3-cd)* Pyrene (193-39-5)	X			<0.015	<.06					1	ug/L	lbs/day	<0.015		1
38B. Isophorone (78-59-1)	X			<1.8	<6.6					1	ug/L	lbs/day	<1.8		1
39B. Naphthalene (91-20-3)	X			<0.012	<0.04					1	ug/L	lbs/day	<0.012		1
40B. Nitrobenzene (98-95-9)	X			<1.8	<6.6					1	ug/L	lbs/day	<1.8		1
41B. N-Nitrosodimethylamine (62-75-9)	X			<1.6	<5.9					1	ug/L	lbs/day	<1.6		1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X			<1.4	<5.1					1	ug/L	lbs/day	<1.4		1
43B. N-Nitro-sodiphenylamine (86-30-6)	X			<1.6	<5.9					1	ug/L	lbs/day	<1.6		1
44B. Phenanthrene (85-01-8)	X			<0.018	<0.07					1	ug/L	lbs/day	<0.018		1
45B. Pyrene (129-00-0)	X			<0.080	<0.3					1	ug/L	lbs/day	<0.081		1
46B. 1,2,4-Trichlorobenzene (120-82-1)	X			<1.6	<5.5					1	ug/L	lbs/day	<1.6		1

Facility I.D. No.FL0001546 Outfall No. D013

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. Testing Required	b. Believed Present	c. Believed Absent	a. Maximum Daily Value		b. Max. 30-Day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Avrg. Value		b. No of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS Fraction – Pesticides															
1P. Aldrin (309-00-2)			X												
2P. -BHC (319-84-6)			X												
3P. -BHC (319-85-7)			X												
4P. -BHC (58-89-9)			X												
5P. -BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. -Endosulfan (115-29-7)			X												
12P. -Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-92-4)			X												
16P. Heptachlor (76-44-8)			X												
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X												
19P. PCB-1254 (11097-69-1)			X												
20P. PCB-1221 (11104-28-2)			X												
21P. PCB-1232 (11141-16-5)			X												
22P. PCB-1248 (12672-29-6)			X												
23P. PCB-1260 (11096-82-5)			X												

Facility I.D. No. FL000 1546 Outfall No. D013

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. Testing Required	b. Believed Present	c. Believed Absent	a. Maximum Daily Value		b. Max. 30-Day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Avrg. Value		b. No of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS Fraction – Pesticides															
24P. PCB-1016 (12674-11-2)			X												
25P. Toxaphene (8001-35-2)			X												

1. Pollutant	2. Effluent							3. Units		4. Intake (optional)		
	a. Max. Daily Value		b. Max. 30-day Value		c. Annual Avg. Value		d. No. of Analyses	a. Concen-tration	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)	12.8	3.8					1	mg/L	lbs/day			
b. Chemical Oxygen Demand (COD)	8.00	2.4					1	mg/L	lbs/day			
c. Total Organic Carbon (TOC)	1.5	0.5					1	mg/L	lbs/day			
d. Total Suspended Solids (TSS)	<3	<0.9					1	mg/L	lbs/day			
e. Total Nitrogen (as N)	0.31	0.09					1	mg/L	lbs/day			
f. Total Phosphorus (as P)	0.06	0.02					1	mg/L	lbs/day			
e. Ammonia (as N)	0.18	0.05					1	mg/L	lbs/day			
f. Flow - actual or projected	Value 0.036		Value		Value		365*	MGD		Value		
g. Flow – design	Value		Value		Value			MGD		Value		
h. Specific Conductivity	Value 600		Value		Value		1	uMHOS		Value		
i. Temperature (winter)	Value		Value		Value		--	°F		Value		
j. Temperature (summer)	Value		Value		Value		1	°F		Value		
k. pH	Min 6.89	Max.	Min.	Max.			1	STANDARD UNITS				

PART B

1. Pollutant and CAS No. (if available)	2. Mark "X"		3. Effluent							4. Units		5. Intake (optional)		
	a. be-lieved present	b. be-lieved absent	a. Maximum Daily Value		b. Max. 30-Day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concen-tration	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X	0.0	0.0										
c. Color	X		10.0						1	CU				
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (as N)	X		<0.50	<0.15					1	mg/L	lbs/day			

1. Pollutant and CAS No. (if available)	2. Mark "X"		3. Effluent							4. Units		5. Intake (optional)		
	a. believed present	b. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Average Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
g. Nitrogen, Total Organic (N)	X		0	0					1	mg/L	lbs/day			
h. Oil and Grease	X		<1.4	<0.42					4	mg/L	lbs/day			
i. Phosphorus, Total (P) (7723-14-0)	X		0.06	<.02					1	mg/L	lbs/day			
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (as SO_4) (14808-79-8)		X												
l. Sulfide (as S)		X												
m. Sulfite (as SO_3) 14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)	X		<40	<0.012					1	ug/L	lbs/day			
p. Barium, Total (7440-39-3)		X												
q. Boron, Total (7440-42-8)		X												
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)	X		<5.0	<0.002					1	ug/L	lbs/day			
t. Magnesium, Total (7439-95-4)		X												
u. Molybdenum, Total (7439-98-7)	X		51.3	0.015					1	ug/L	lbs/day			
v. Manganese, Total (7439-96-5)	X		<2.0	<0.001					1	ug/L	lbs/day			
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

Facility I.D. No. FL0001546 Outfall No. D0163

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Average Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X			<5.0	<0.002					1	ug/L	lbs/day			
2M. Arsenic, Total (7723-14-0)	X			<2.0	<0.001					1	ug/L	lbs/day			
3M. Beryllium, Total (7440-41-7)	X			<0.10	<0.00003					1	ug/L	lbs/day			
4M. Cadmium, Total (7440-43-9)	X			<0.50	<0.15					1	ug/L	lbs/day			
5M. Chromium, Total (7440-47-3)	X			<3.0	<0.9					1	ug/L	lbs/day			
6M. Copper, Total (7440-50-8)	X			6.4	0.002					1	ug/L	lbs/day			
7M. Lead, Total (7439-92-1)	X			2.8	0.0008					1	ug/L	lbs/day			
8M. Mercury, Total (7439-97-6)	X			<0.00020	<0.0000001					1	ug/L	lbs/day			
9M. Nickel, Total (7440-02-0)	X			<4.0	<0.001					1	ug/L	lbs/day			
10M. Selenium, Total (7782-49-2)	X			<3.0	<0.9					1	ug/L	lbs/day			
11M. Silver, Total (7440-22-4)	X			<2.0	<0.001					1	ug/L	lbs/day			
12M. Thallium, Total (7440-28-0)	X			<1.3	<0.0004					1	ug/L	lbs/day			
13M. Zinc, Total (7440-66-6)	x			<6.2	<0.002					1	ug/L	lbs/day			
14M. Cyanide, Total (57-12-5)	x			<0.00670	<0.000002					4	ug/L	lbs/day			
15M. Phenols, Total	x			<0.0067	<0.000002					4	ug/L	lbs/day			
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			x												

Facility I.D. No. FL0001546 Outfall No. D0163

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Average Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS FRACTION - VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	X			<2.0	<0.001					4	ug/L	lbs/day			
2V. Acrylonitrile (107-13-1)	X			<2.4	<0.001					4	ug/L	lbs/day			
3V. Benzene (71-43-2)	X			<0.28	<0.00008					4	ug/L	lbs/day			
5V. Bromoform (75-25-2)	X			<0.27	<0.00008					4	ug/L	lbs/day			
6V. Carbon Tetrachloride (56-23-5)	X			<0.44	<0.0001					4	ug/L	lbs/day			
7V. Chlorobenzene (108-90-7)	X			<0.33	<0.0001					4	ug/L	lbs/day			
8V. Chlorodi-bromomethane (124-48-1)	X			<0.18	<0.00005					4	ug/L	lbs/day			
9V. Chloroethane (75-00-3)	X			<0.42	<0.0001					4	ug/L	lbs/day			
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	X			<1.2	<0.0004					4	ug/L	lbs/day			
11V. Chloroform (67-66-3)	X			<0.26	<0.00008					4	ug/L	lbs/day			
12V. Dichloro-bromomethane (75-27-4)	X			<0.21	<0.00006					4	ug/L	lbs/day			
13V. Dichloro-difluoromethane (75-71-8)	X			<0.88	<0.0003					4	ug/L	lbs/day			
14V. 1,1-Dichloroethane (75-34-3)	X			<0.23	<0.00007					4	ug/L	lbs/day			
15V. 1,2-Dichloroethane (107-06-2)	X			<0.23	<0.00007					4	ug/L	lbs/day			
16V. 1,1-Dichloroethylene (75-35-4)	X			<0.38	<0.0001					4	ug/L	lbs/day			
17V. 1,2-Dichloropropane (78-87-5)	X			<0.21	<0.00006					4	ug/L	lbs/day			
18V. 1,3-Dichloropropylene (542-75-6)	X			<0.19	<0.00006					4	ug/L	lbs/day			
19V. Ethylbenzene (100-41-4)	X			<0.25	<0.00008					4	ug/L	lbs/day			
20V. Methyl Bromide (74-83-9)	X			<0.36	<0.0001					4	ug/L	lbs/day			
21V. Methyl Chloride (74-87-3)	X			<0.89	<0.0003					4	ug/L	lbs/day			

Facility I.D. No.FL0001546 Outfall No. D0163

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Average Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-98-2)	X			<0.34	<0.0001					4	ug/L	lbs/day			
23V. 1,1,2,2-Tetra-chloroethane (79-34-5)	X			<0.36	<0.0001					4	ug/L	lbs/day			
24V. Tetrachloroethylene (127-18-4)	X			<0.32	<0.0001					4	ug/L	lbs/day			
25V. Toluene (108-88-3)	X			<0.25	<0.00008					4	ug/L	lbs/day			
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			<0.30	<0.00009					4	ug/L	lbs/day			
27V. 1,1,1-Trichloroethane (71-55-6)	X			<0.22	<0.00007					4	ug/L	lbs/day			
28V. 1,1,2-Trichloroethane (79-00-5)	X			<0.30	<0.00009					4	ug/L	lbs/day			
29V. Trichloroethylene (79-01-6)	X			<0.35	<0.0001					4	ug/L	lbs/day			
30V. Trichloro-fluoromethane (75-69-4)	X			<0.26	<0.00008					4	ug/L	lbs/day			
31V. Vinyl Chloride (75-01-4)	X			<0.35	<0.0001					4	ug/L	lbs/day			
GC/MS FRACTION - ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X			<1.7	<0.0005					1	ug/L	lbs/day			
2A. 2,4-Dichlorophenol (120-83-2)	X			<1.9	<0.0006					1	ug/L	lbs/day			
3A. 2,4-Dimethylphenol (105-67-9)	X			<1.4	<0.0004					1	ug/L	lbs/day			
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			<1.1	<0.0003					1	ug/L	lbs/day			
5A. 2,4-Dinitrophenol (51-28-5)	X			<1.3	<0.0004					1	ug/L	lbs/day			
6A. 2-Nitrophenol (88-75-5)	X			<1.7	<0.0005					1	ug/L	lbs/day			
7A. 4-Nitrophenol (100-02-7)	X			<3.2	<0.001					1	ug/L	lbs/day			

Facility I.D. No.FL0001546 Outfall No D0163

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. Testing Required	b. Believed Present	c. Believed Absent	a. Maximum Daily Value		b. Max. 30-Day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Avrg. Value		b. No of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS Fraction - Acid Compounds Contd.															
8A. P-Chloro-M-Cresol (59-50-7)	X			<1.7	<0.0005					1	ug/L	lbs/day			
9A. Pentachlorophenol (87-86-5)	X			<2.0	<0.0006					1	ug/L	lbs/day			
10A. Phenol (108-95-2)	X			<2.2	<0.0007					1	ug/L	lbs/day			
11A. 2,4,5-Trichloro-phenol (88-06-2)	X			<1.7	<0.0005					1	ug/L	lbs/day			
GC/MS Fraction - Base/Neutral Compounds															
1B. Acenaphthene (83-32-9)1	X			<0.016	<0.000005					1	ug/L	lbs/day			
2B. Acenaphtylene (208-96-8)	X			<0.022	<0.000007					1	ug/L	lbs/day			
3B. Anthracene (120-12-7)	X			0.88	0.0003					1	ug/L	lbs/day			
4B. Benzidine (92-87-5)	X			<1.0	<0.0003					1	ug/L	lbs/day			
5B. Benzo *(a)* Anthracene	X			2.4	0.0007					1	ug/L	lbs/day			
6B. Benzo *(a)* Pyrene (50-32-8)	X			0.71	0.0002					1	ug/L	lbs/day			
7B. 3,4-Benzo-fluoranthene (205-99-2)	X			0.83	0.0002					1	ug/L	lbs/day			
8B. Benzo *(ghi)* Perylene (191-24-2)	X			0.25	0.00008					1	ug/L	lbs/day			
9B. Benzo *(k)* Fluoranthene (207-08-9)	X			<0.011	<0.000003					1	ug/L	lbs/day			
10B. Bis *(2-Chloroethoxy)* Methane (111-91-1)	X			<2.0	<0.0006					1	ug/L	lbs/day			
11B. Bis *(2-Chloroethyl)* Ether (111-44-4)	X			<2.7	<0.0008					1	ug/L	lbs/day			
12B. Bis *(2_Chloroisopropyl)* Ether (102-60-1)	X			<1.7	<0.0005					1	ug/L	lbs/day			
13B. Bis *(2-Ethylhexyl)* Phthalate (117-81-7)	X			<2.6	<0.0008					1	ug/L	lbs/day			

Facility I.D. No.FL0001546 Outfall No. D0163

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. Testing Required	b. Believed Present	c. Believed Absent	a. Maximum Daily Value		b. Max. 30-Day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Avrg. Value		b. No of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS Fraction - Base/Neutral Compounds Contd.															
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X			<1.6	<0.0005					1	ug/L	lbs/day			
15B Butyl Benzyl Phthalate (85-68-7)	X			<2.2	<0.0007					1	ug/L	lbs/day			
16B. 2-Chloronaphthalene (91-58-7)	X			<1.3	<0.0004					1	ug/L	lbs/day			
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	X			<1.7	<0.0005					1	ug/L	lbs/day			
18B. Chrysene (218-01-9)	X			2.8	0.0008					1	ug/L	lbs/day			
19B. Dibenzo *(a,h)* Anthracene (53-70-3)	X			0.22	0.00007					1	ug/L	lbs/day			
20B. 1,2-Dichlorobenzene (95-50-1)	X			<1.0	<0.0003					1	ug/L	lbs/day			
21B. 1,3-Dichlorobenzene (541-73-1)	X			<1.7	<0.0005					1	ug/L	lbs/day			
22B. 1,4-Dichlorobenzene (106-46-7)	X			<0.52	<0.0002					1	ug/L	lbs/day			
23B. 3,3'-Dichlorobenzidine (92-94-1)	X			<1.3	<0.0004					1	ug/L	lbs/day			
24B. Diethyl Phthalate (84-66-2)	X			<1.6	<0.0005					1	ug/L	lbs/day			
25B. Dimethyl Phthalate (131-11-3)	X			<1.9	<0.0006					1	ug/L	lbs/day			
26B. Di-N-Butyl Phthalate (84-74-2)	X			<1.6	<0.0005					1	ug/L	lbs/day			
27B. 2,4-Dinitrotoluene (121-14-2)	X			<2.6	<0.0008					1	ug/L	lbs/day			
28B. 2,6-Dinitrotoluene (606-20-2)	X			<1.4	<0.0004					1	ug/L	lbs/day			
29B. Di-N-Octyl Phthalate (117-84-0)	X			<1.6	<0.0005					1	ug/L	lbs/day			

Facility I.D. No. FL0001546 Outfall No. D0163

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. Testing Required	b. Believed Present	c. Believed Absent	a. Maximum Daily Value		b. Max. 30-Day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Avrg. Value		b. No of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS Fraction - Acid Compounds Contd.															
30B. 1,2-Diphenylhydrazine *(as Azobenzene)* (122-66-7)	X			<0.58	<0.0002					1	ug/L	lbs/day			
31B. Fluoranthene (206-44-0)	X			1.5	0.0005					1	ug/L	lbs/day			
32B. Fluorene (86-73-7)	X			0.070	0.00002					1	ug/L	lbs/day			
33B. Hexachlorobenzene (118-74-1)	X			<1.9	<0.0006					1	ug/L	lbs/day			
34B. Hexachlorobutadiene (87-68-3)	X			<2.0	<0.0006					1	ug/L	lbs/day			
35B. Hexachlorocyclopentadiene (77-47-4)	X			<1.5	<0.0005					1	ug/L	lbs/day			
36B. Hexachloroethane (67-72-1)	X			<1.5	<0.0005					1	ug/L	lbs/day			
37B. Indeno *(1,2,3-cd)* Pyrene (193-39-5)	X			0.60	0.0002					1	ug/L	lbs/day			
38B. Isophorone (78-59-1)	X			<2.0	<0.0006					1	ug/L	lbs/day			
39B. Naphthalene (91-20-3)	X			<0.013	<0.000004					1	ug/L	lbs/day			
40B. Nitrobenzene (98-95-9)	X			<2.0	<0.0006					1	ug/L	lbs/day			
41B. N-Nitrosodimethylamine (62-75-9)	X			<1.8	<0.0005					1	ug/L	lbs/day			
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X			<1.6	<0.0005					1	ug/L	lbs/day			
43B. N-Nitro-sodiphenylamine (86-30-6)	X			<1.8	<0.0005					1	ug/L	lbs/day			
44B. Phenanthrene (85-01-8)	X			10	0.003					1	ug/L	lbs/day			
45B. Pyrene (129-00-0)	X			6.1	0.002					1	ug/L	lbs/day			
46B. 1,2,4-Trichlorobenzene (120-82-1)	X			<1.7	<0.0005					1	ug/L	lbs/day			

Facility I.D. No.FL0001546 Outfall No. D0163

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. Testing Required	b. Believed Present	c. Believed Absent	a. Maximum Daily Value		b. Max. 30-Day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Avrg. Value		b. No of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS Fraction – Pesticides															
1P. Aldrin (309-00-2)			X												
2P. -BHC (319-84-6)			X												
3P. -BHC (319-85-7)			X												
4P. -BHC (58-89-9)			X												
5P. -BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. -Endosulfan (115-29-7)			X												
12P. -Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-92-4)			X												
16P. Heptachlor (76-44-8)			X												
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X												
19P. PCB-1254 (11097-69-1)			X												
20P. PCB-1221 (11104-28-2)			X												
21P. PCB-1232 (11141-16-5)			X												
22P. PCB-1248 (12672-29-6)			X												
23P. PCB-1260 (11096-82-5)			X												

Facility I.D. No. FL000 1546 Outfall No. D0163

1. Pollutant and CAS Number (if available)	2. Mark "X"			3. Effluent							4. Units		5. Intake (optional)		
	a. Testing Required	b. Believed Present	c. Believed Absent	a. Maximum Daily Value		b. Max. 30-Day Value (if available)		c. Long Term Avrg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Avrg. Value		b. No of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS Fraction – Pesticides															
24P. PCB-1016 (12674-11-2)			X												
25P. Toxaphene (8001-35-2)			X												

Form 2CS Attachment B-1

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III E: NA

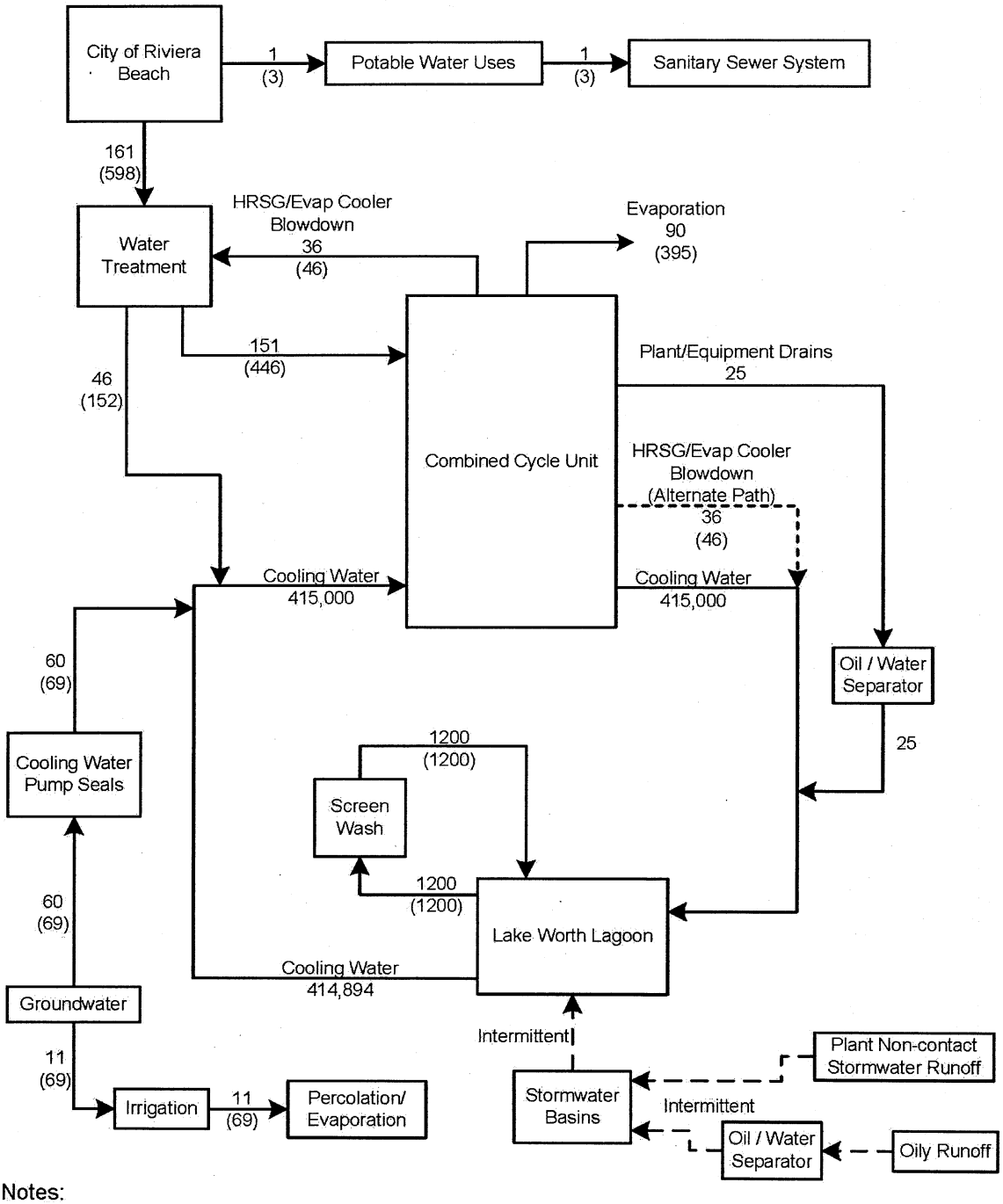
III F: See Water Balance for RBEC – Attachment B-1

IV A: See Water Balance for RBEC – Attachment B-1

IV B: See Attachment B-2

Table B-2.1 FPL Riviera Plant v. Riviera Beach Energy Center Outfalls

Figure B-2.1 Location of the FPL Riviera Plant in Palm Beach County, Florida
Figure B-2.2 Water Flow Diagram for Existing Riviera Plant
Figure B-2.3 Discharge Locations
Figure B-2.4 Water Balance for RBEC
Figure B-2.5 Operation Drainage Plan



Notes:
1. Flows are in gallons per minute unless otherwise noted.
2. Flows shown with no () are based on average daily water use at the following conditions:
   75 degree ambient temperature, CT evaporative coolers in service.
3. Numbers in () are peak intermittent flows.
4. Dashed lines indicate intermittent or alternate flow paths as noted.

Attachment B-1
Water Balance for RBEC
App.10.2.2/Attachment B-1.docx

Source: FPL, Golder; 2009.

FPL

Form 2CS Attachment B-2

FPL intends to convert the existing Riviera Plant into a modern, highly efficient, lower-emission, clean energy center using the latest combined cycle technology. The converted Plant, which will be renamed the Riviera Beach Energy Center (RBEC), will include a 3-on-1 combined cycle unit consisting of three new advanced combustion turbines (CTs), with heat recovery steam generators (HRSGs) and one steam turbine/electric generator. The converted Plant will be capable of producing a nominal 1,250 megawatts (MW) of electricity. The existing units will be dismantled with the exception of the once-through cooling water intake and discharge structures. The new condenser for RBEC will be constructed using non-copper alloy based materials. RBEC will be connected to the existing intake and discharge system.

RBEC Cooling Water System

The existing Riviera Plant configuration includes the withdrawal of once-through cooling water from the southwest corner of Slip Number 2 of the Port of Palm Beach via a 125-foot-long submerged culvert. Nearly all of the once-through cooling water is conveyed through a separate outlet for each unit's cooling water (condenser and auxiliary cooling water) discharge through a 90-inch internal diameter buried pipe. These pipes discharge the heated water about 1,941 feet offshore near the ship's channel for the Port of Palm Beach (in the middle of Lake Worth). The centerline elevation of the pipes at the discharge point is -16.58 feet MSL, and the pipe centerlines are 12 feet apart. Each pipe has a design full-flow average discharge velocity of about 10.2 feet per second. The remaining 1 percent of the cooling water is discharged via a siphon to the location of the manatee embayment. This water is released to provide warm water for use by the manatees.

The discharge of once-through cooling water and other wastewaters is permitted under Florida Department of Environmental Protection (FDEP) Industrial Wastewater Facility Permit No. FL0001546. The existing facility site location and water balance are provided as Figures B-2.1 and B-2.2, respectively). RBEC will continue to use the existing Plant's once-through cooling water intake system for condenser and auxiliary cooling, withdrawing surface water from the Lake Worth Lagoon, and discharging through the existing discharge system. The RBEC cooling system, including auxiliary cooling flows and intake screen wash, will have a total design intake flow capacity of 599 million gallons per day (MGD). The RBEC facility aerial map and water balance are provided as Figures B-2.3 and B-2.4, respectively. Table B-2.1 provides the list of existing waste

streams that are currently authorized in FDEP Industrial Wastewater Facility Permit FL0001546 as well as those proposed for discharge from the RBEC facility.

Cooling water will be required for condenser cooling, auxiliary cooling, and cooling pump seal water. Condenser cooling for the steam cycle portion of the converted Plant and auxiliary cooling will be accomplished using the existing once-through cooling system intake and discharge structures. Cooling pump seal and irrigation water will be obtained from existing onsite surficial aquifer wells that are permitted by the South Florida Water Management District (SFWMD). Process water for RBEC will be required for CT inlet air cooling, nitrogen oxide (NO_x) injection water when firing ultra low-sulfur light oil, steam cycle makeup, service water, and fire protection. Minor uses will include intake screen wash water, potable water for employee use, and water for irrigation. Water for screen wash will also come from the cooling water intake system. The design intake flow for RBEC will be the same as for the existing Plant, and the existing intake and discharge system will be used for RBEC. Therefore, the design intake velocity will remain the same. The total discharge flow rate of the existing Plant is about 415,000 gallons per minute (gpm), with a discharge plant heat rate of about 2.78 billion British thermal units per hour (BBtu/hr).

Design Circulation Flow and Heat Rejection Rate

The total discharge flow rate of the existing Plant is about 415,000 gpm, with a discharge heat rejection rate of about 2.78 BBtu/hr. This results in a full-load overall temperature rise of about 13.71 degrees Fahrenheit (°F) for the Riviera Plant. The converted Plant will have a steam electric generating capacity similar to the Riviera Plant, which will result in the full-load discharge heat rate remaining at about 2.78 BBtu/hr. The discharge flow rate and full-load overall temperature rise will remain virtually the same as the existing Riviera Plant.

The existing Riviera Plant thermal discharge existed on July 1, 1972, and thus, is subject to the thermal surface water criteria established by Rule 62-302.520(1) of the Florida Administrative Code (F.A.C.). Conversion of the existing Plant will not increase the thermal load to the Lake Worth Lagoon compared to the thermal load from the existing Plant. Consequently, the thermal surface water criteria for existing power plants will still be applicable to the thermal discharge from RBEC.

A comparative analysis of the extent of the full-load thermal plume for both the existing units and RBEC was performed using a computerized mathematical thermal model. Two cases were selected

for modeling; a summer case during which the maximum surface heat transfer is expected to occur, and a winter case during which the minimum surface heat transfer is expected to occur. The ambient temperatures selected for modeling the two cases are 91.6°F for summer (maximum) and 58.5°F for winter (minimum). Because the heat load will not change with the converted Plant, only one model run for each case was required. The results of the analysis are presented in Attachment B-3 and provide additional details regarding the analysis of the extent of the thermal plume from the converted Plant in comparison with the thermal plume from the existing Plant. As expected, the size of the thermal plume is minimal in both summer and winter, even assuming worst-case conditions of tidal flushing. Because of the high velocity of the subsurface discharge, mixing with ambient water is maximized.

Bypass Operation

Operation of RBEC during periods of Plant startup and shutdown, steam turbine shutdowns, or other atypical/emergency operating conditions where steam is being produced in the heat recovery steam generators (HRSGs) and discharged directly into the condenser instead of passing through the steam turbine is referred to as steam turbine bypass or "Bypass Operation". During the majority of the operating scenarios while in Bypass Operation, the amount of thermal energy delivered to the condenser falls within the design full-load thermal discharge.

Surface Water Discharge

FPL will continue to use a reverse osmosis/mixed bed (RO/MB) demineralizer system for process water treatment using water from the City of Riviera Beach. The RO reject water (45 gpm average/152 gpm peak flow) will be mixed with the cooling water flow used for condenser cooling. Water from the Lake Worth Lagoon that is used for the intake screen wash (flow 1,200 gpm) will be released back to the Lake Worth Lagoon. Water from the City of Riviera Beach will be used as process water treatment system influent and may be used as service water.

The wastewaters generated by RBEC will include cooling water, HRSG and evaporative cooler blowdown, process water treatment system wastewater, wash water, and equipment area stormwater. HRSG and evaporative cooler blowdown will be routed to the cooling water discharge or possibly be reused as cooling water. The following water treatment wastewaters and non-hazardous low-volume

wastewaters (e.g., wash water and equipment drains) will be treated, as necessary and appropriate, and routed to the cooling system outfall:

An estimated 35 gpm average (46 gpm peak) of HRSG blowdown and evaporative cooler blowdown, which is relatively pure water;

An estimated average of 45 gpm (152 gpm peak) of reverse osmosis (R.O.) reject/demineralizer regeneration water, which will have a relatively high total dissolved solid (TDS) content; and

An estimated average of 25 gpm of non-hazardous/low-volume wastewater and includes plant and equipment drains.

The combined peak discharge of 223 gpm will be mixed with the once-through cooling water discharge, resulting in a significant dilution ranging from approximately 1,000 to 1 up to 2,000 to 1. The constituents in these wastewaters are basically concentrated dissolved solids from the potable water source, and the discharge is to a high-TDS estuarine environment. At these dilution rates, these small flows will have no adverse effect on the Lake Worth Lagoon, and therefore, the anti-degradation considerations specified in Section 403.088(2)(b) of the Florida Statutes are not applicable to the RBEC project.

The principal uses of chemicals and biocides will be for steam cycle water quality control and chemical cleaning of the HRSGs and pre-HRSG piping systems. Intermittent shock chlorination, as authorized under FDEP Industrial Wastewater Facility Permit FL0001546, will continue to be used for RBEC to prevent biofouling of the heat rejection system.

The steam-condensate-feedwater will be chemically treated to prevent corrosion or scaling of the condensate piping and the HRSG. The steam cycle water will be treated with ammonia or an amine for pH control. Sodium phosphate will be fed to the HRSGs for control of pH and hardness. Residual phosphate in the HRSG will react with hardness to form a non-adherent precipitate that will be removed through HRSG boiler blowdown.

The HRSG and feedwater piping will be chemically cleaned initially during commissioning and also periodically during the life of the converted Plant. The chemicals used will not be permanently stored onsite but will be delivered to the Site by a licensed contractor at the time of the scheduled periodic

cleanings. The chemical cleaning solutions to be used for acid and alkaline cleaning of the HRSG must be consistent with the HRSG manufacturer's recommendations. Chemicals typically used in HRSG and feedwater pipe cleaning may include the following:

- Inhibited citric acid;
- Aqueous ammonia;
- Organic chelates, such as Ethylene Diamine Tetra-acetic Acid (EDTA);
- Disodium phosphate;
- Trisodium phosphate;
- Nonfoaming wetting agents; and
- Foam inhibitors.

Wastewaters will consist of the cleaning solutions and material removed during the cleaning process. Chemical cleaning is an infrequent maintenance operation; it does not contribute to the liquid wastes produced by the normal operation of RBEC. Chemical cleaning wastes will be maintained onsite and tested and, if meeting the requirements authorized under FDEP Industrial Wastewater Facility Permit FL0001546, will be routed to the condenser cooling system outfall.

Manatee Protection Plan

Operation of the existing Riviera Plant will cease prior to dismantlement and construction activities associated with the conversion Project. Consequently, there will be a 4-year period until operation of RBEC commences, during which the normal warm water discharge from the Plant will not occur. FPL will comply with the goals of the Riviera Plant Manatee Protection Plan, pursuant to the requirements of the Industrial Waste Water Facility Permit for the Plant, to avoid potential impacts to manatees during this 4-year period.

FPL proposes to install a 30-Million Btu/hr electric heater system to discharge warm water starting when the Riviera Plant is removed from service and continuing until operation of RBEC as required by the Manatee Protection Plan. The electric heater system discharge will be located adjacent to the Units 3 and 4 seal well, which is where the existing Plant discharges heated water for manatee protection. The depth in this area will continue to be approximately 4 to 6 feet deep. The intake for the system will be located approximately 500 feet north of the system discharge, in the existing Units 1 and 2 intake structure. Warm water will be discharged from November 15 through March 31 (to

coincide with the time of greatest manatee abundance), if the ambient water temperature falls below 61°F. The temporary heating system is predicted to provide at least 0.9 acre of water at or above 68°F during worst-case meteorological conditions under which FPL will endeavor to release heated water for manatee protection consistent with the Manatee Protection Plan for the Riviera Plant.

See Attachment B-3 for additional information regarding the analysis of the comparative extent of the thermal plume for the temporary heating system in comparison with the existing units.

Stormwater Management

The surface water management system for RBEC will be designed to meet the requirements of applicable local, regional, State, and federal requirements, which include the rules of the SFWMD, the City of Riviera Beach, FDEP, and EPA. The design rainfall event, based on a 25-year 72-hour storm, is approximately 13.5 inches. The basic design philosophy is that the required water quality treatment volume of runoff from RBEC will be treated by onsite dry detention. Drainage from the Manatee Viewing Area will be treated by a combination of dry retention and detention.

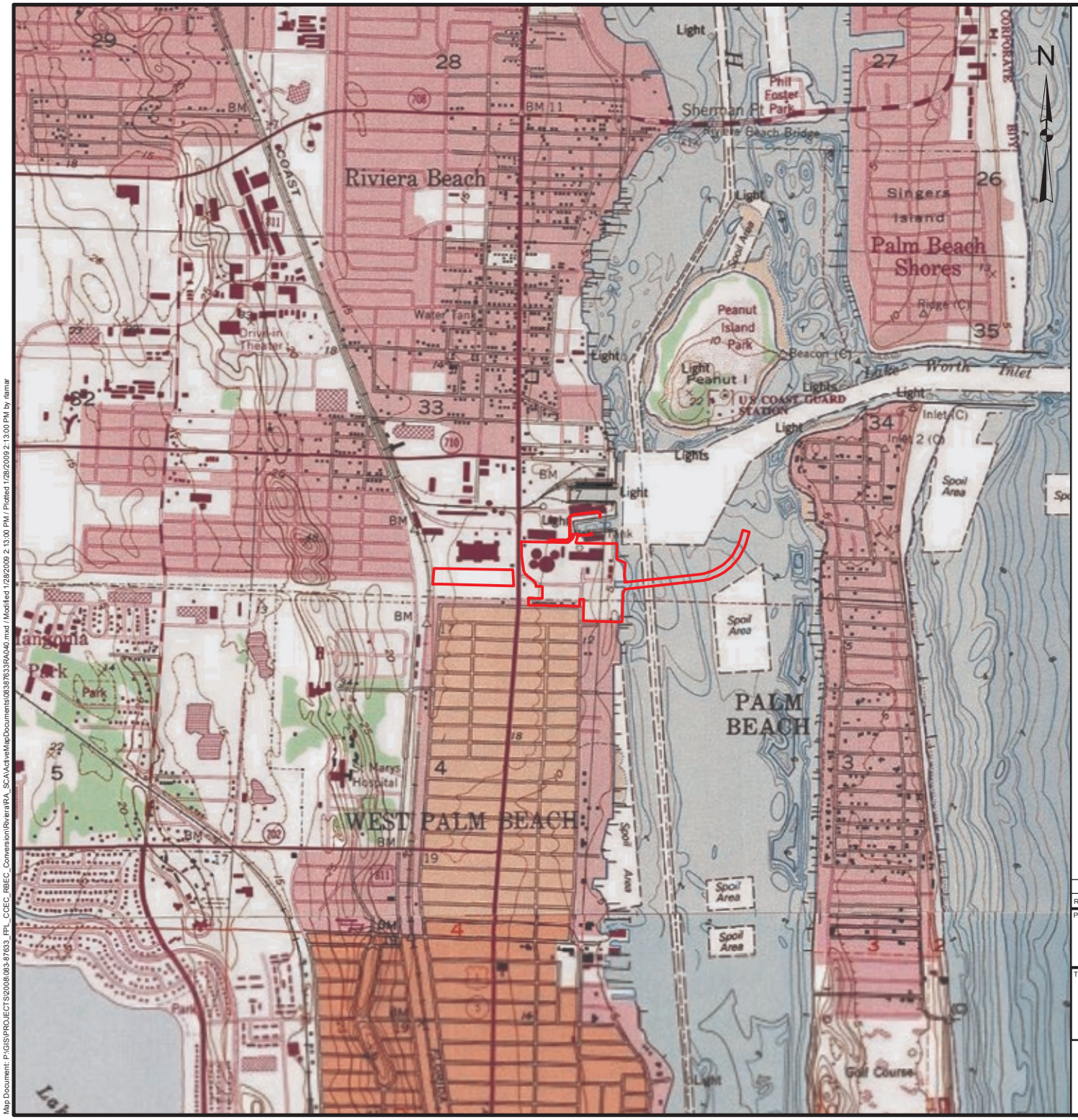
The Project drainage system of catch basins, pipes, channels, swales, and culverts will convey runoff to stormwater detention ponds. Preliminary surface water and stormwater management calculations that include RBEC and the Manatee Viewing Area are depicted in Figure B-2.5.

Lake Worth Lagoon TMDLs

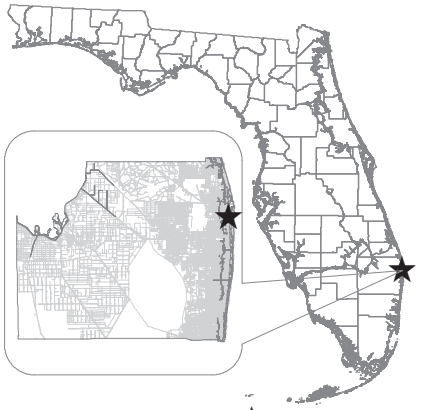
The segment of the Lake Worth Lagoon adjacent to RBEC (WBID 3226E) is included on the 1998 303(d) list of impaired waters for dissolved oxygen and coliforms, but no TMDL or draft TMDL has been issued at this time. This water body segment was not listed in either the May 3, 2006 Secretarial Order of Group 4 verified impaired waters or in the list of Group 4 water segments proposed for delisting.

TABLE B-2.1
FPL Riviera Plant v. Riviera Beach Energy Center Outfalls

Outfall	Existing Riviera Plant (FL00001546)	Riviera Beach Energy Center
D-012/D-0182	Unit 2 Once-Through Cooling Water (OTCW) and Auxiliary Equipment Cooling Water (AECW)	OTCW & AECW
D-013/D-0183	Unit 3 OTCW & AECW	
D-014/D0184	Unit 4 OTCW & AECW	
D-0163	Unit 3 Boiler Blowdown	HRSG Blowdown
D-0164	Unit 4 Boiler Blowdown	HRSG Blowdown
D-009	Intake Screen Wash Water	Intake Screen Wash Water
	Process wastewater, stormwater, boiler makeup water treatment wastewater, equipment area floor drains, curbed water treatment area floor drains, fuel oil burner pump and unloading equipment area drainage, and low-volume and metal cleaning wastewater to Land Application System R-001and E/P Ponds EP-1, EP-2, and EP-3	Cooling water pump seals, Plant/equipment drains, Plant non-contact stormwater, treated oily runoff



AREA MAP



★ RBEC Site Location

LEGEND

Plant

REFERENCES

1. Topographic Imagery, Quad name, Riviera Beach. Quad number, 2301. Date 1983. Quad name, Palm Beach. Quad number 2201. Date 1983. USGS.
2. Plant, FPL, 2009.

2,000 1,000 0 2,000 Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
RIVIERA POWER PLANT

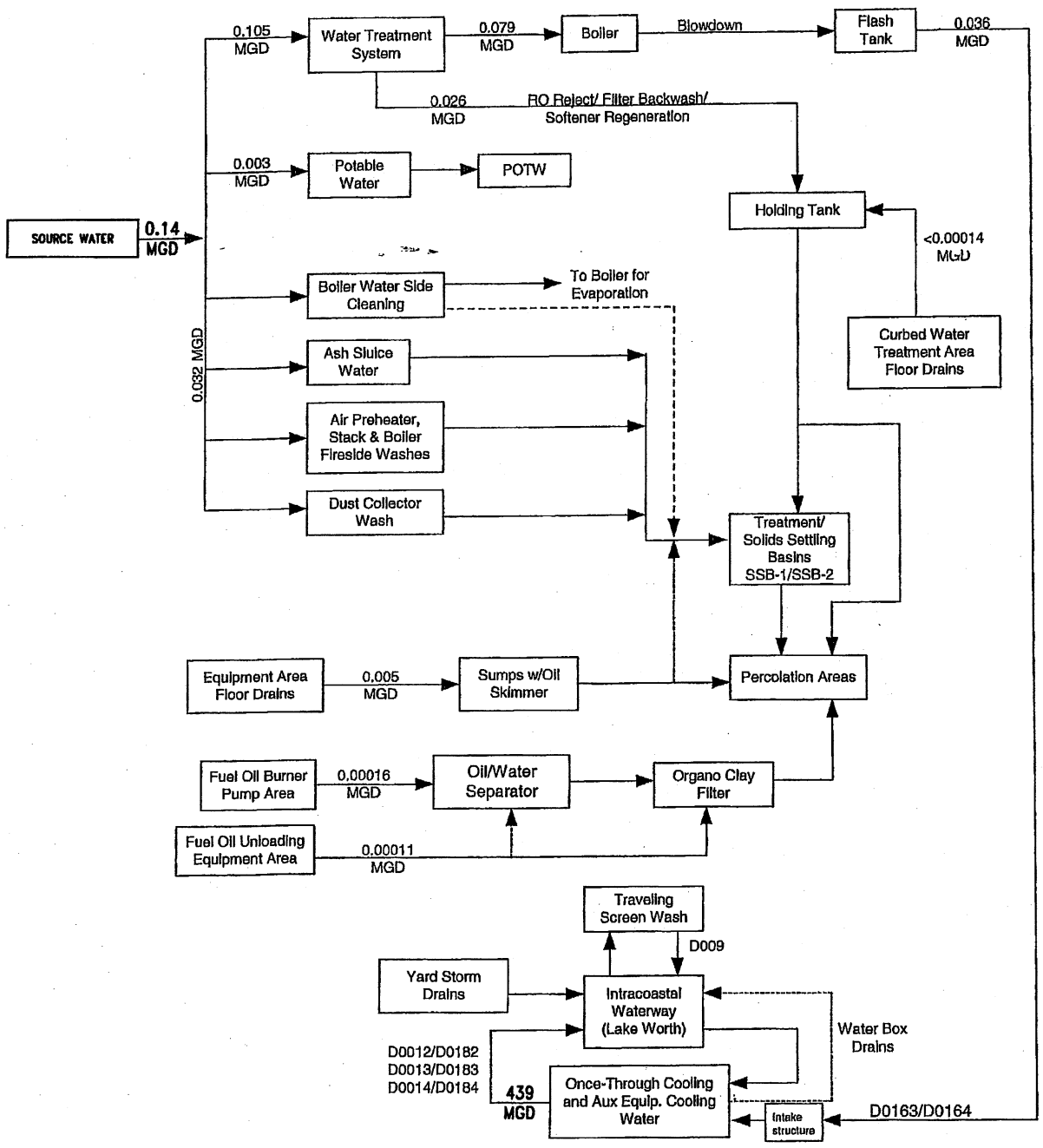
TITLE

LOCATION OF THE FPL RIVIERA PLANT
IN PALM BEACH COUNTY, FLORIDA

FPL

PROJECT No.		083-87633	FILE No.	08387633RA040
DESIGN	MM	1/28/2009	SCALE: AS SHOWN	REV. 2
GIS	NRL	1/28/2009		
CHECK	RCM	1/28/2009	FIGURE B-2.1	
REVIEW	KFK	1/28/2009		

Map Document: P:\GIS\PROJECTS\2008\083-87633_FPL_CCEC_RBEC_Conversion\Riviera\RA_SCA\ActiveMapDocuments\08387633RA040.mxd / Modified 1/28/2009 2:13:00 PM / Plotted 1/28/2009 2:13:00 PM by rlamar



Note:
The values on this table reflect historical use and are not design values. Please refer to Figure B-2.4 for the correct water flows for the converted facility.

* See Item IV E Attachment for derivation of flow rates

LEGEND

PRIMARY PATH

ALTERNATE FLOW PATH

MGD – MILLION GALLONS PER DAY

REV	DATE	REVISION DESCRIPTION	BY	CH	COR	APR	ORG
0	7-16-08	ISSUED FOR 2008 NPDES PERMIT RENEWAL APPLICATION	JCS	AF		AF	PGD

FPL

SYSTEM	DISCIPLINE	PLANT/UNIT
WR	M	RIVIERA PLANT
SCALE: N/A	CAD FILE NAME	TITLE: WATER FLOW DIAGRAM ITEM IV A ATTACHMENT Figure B-2.2
DRAWING SIZE: A (8.5X11)	FPL ARCHIVE NAME	

DRAWING NUMBER: PRV3-M0113-WR

SHEET 1 OF 1 | REV 0

FPGSYM/FPGBDR-A 9/90

TECHNICAL ACCEPTANCE: ENGINEERING ORGANIZATION | ORG | BY | DATE

WALKDOWN INFORMATION: AS-BUILT INFORMATION | ORG | BY | DATE

BAR CODE

LEGEND

- Point of Discharge - Shoreline
- Point of Discharge - Offshore

NOTES

REFERENCE

1. Imagery, National Image Mosaics, WMS Service, http://iq.usgs.gov/cgi-bin/nuiwms.exe?

0 250 500 1,000 Feet

SCALE AS SHOWN

PROJECT

FPL
RIVIERA POWER PLANT

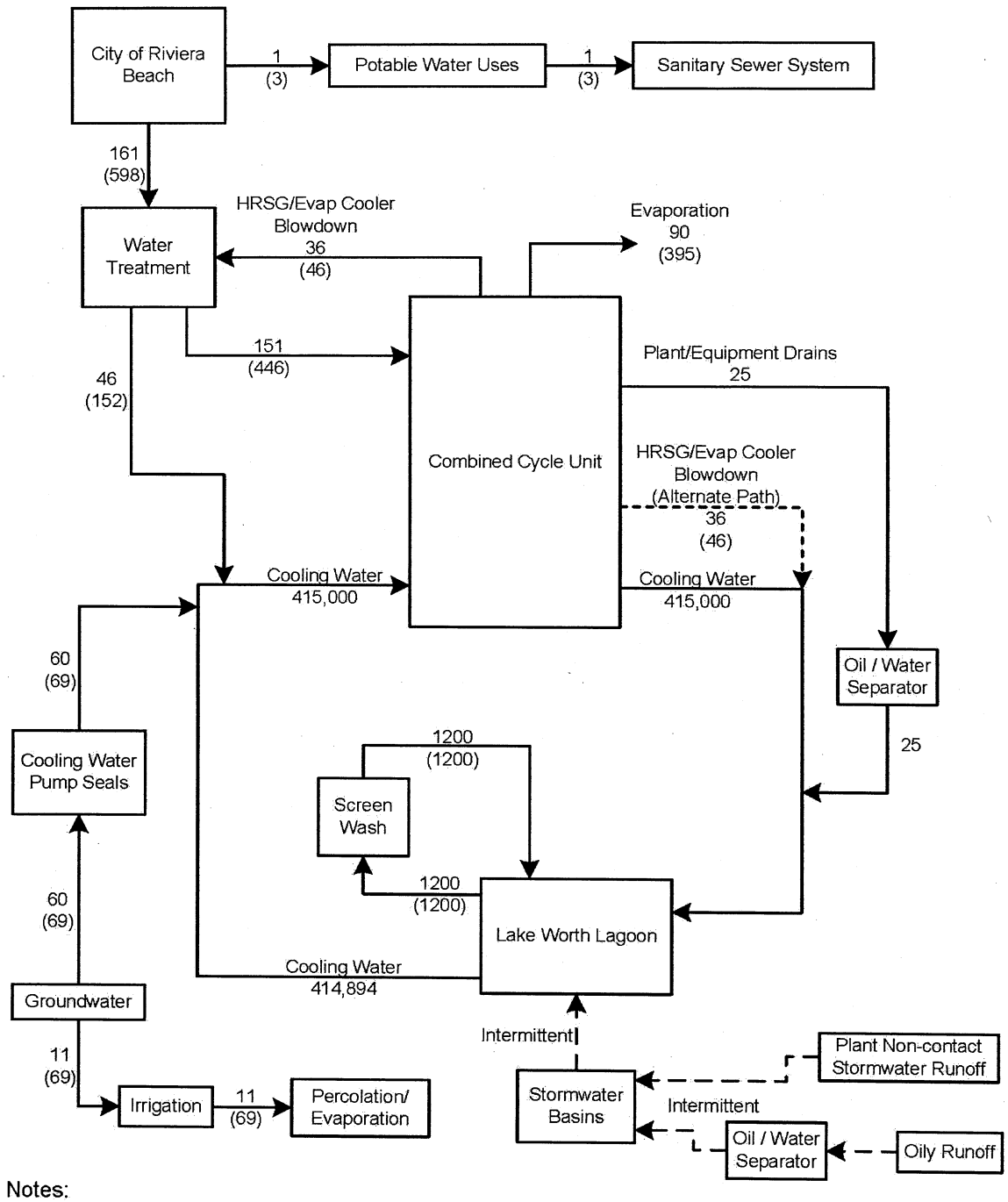
TITLE

Discharge Locations

PROJECT No. 083-87633			File No.	REV. 0
DESIGN	KK	12/18/2008	FIGURE B-2.3	
GIS	KK	12/18/2008		
CHECK				
REVIEW				

FPL

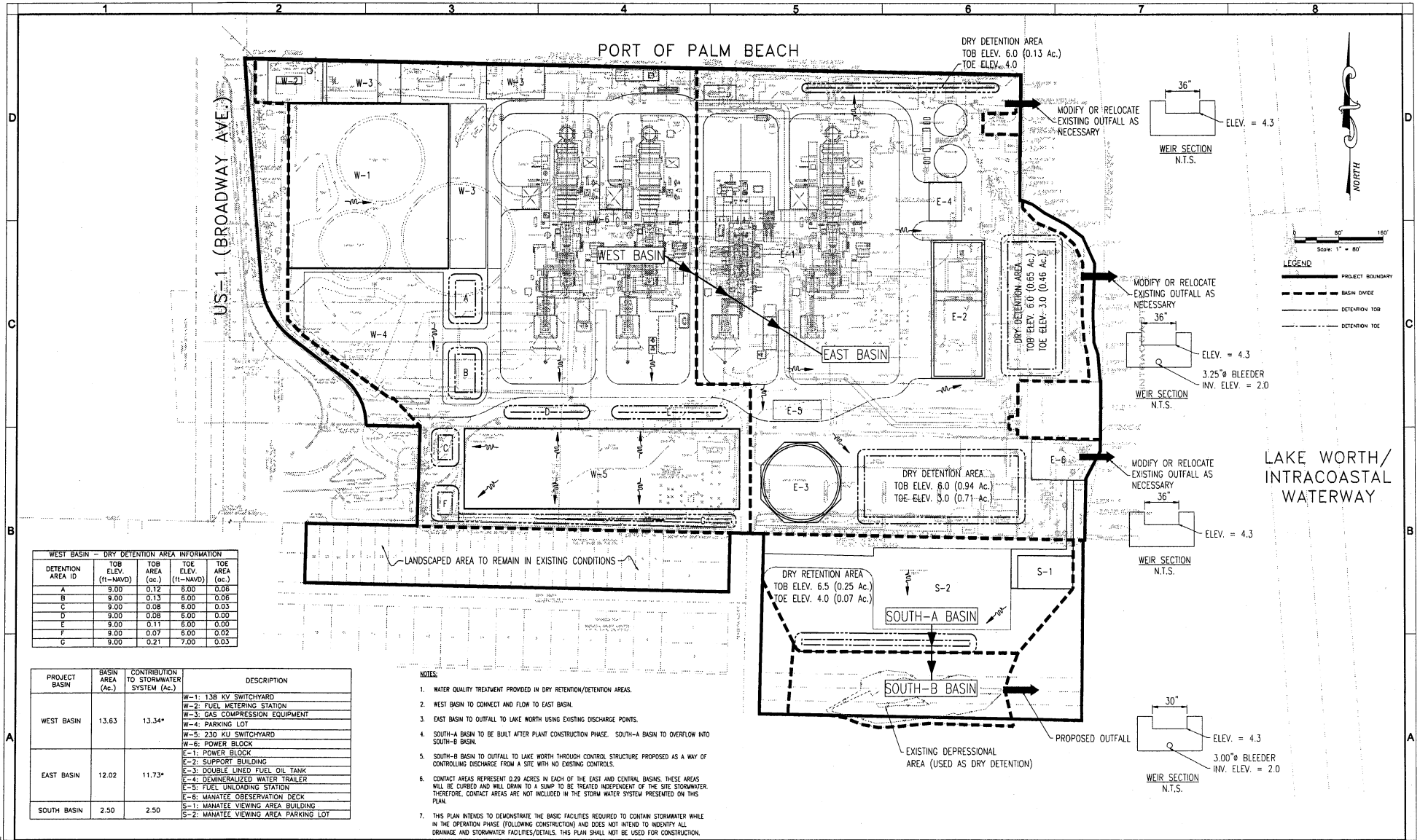
Project: Q:\GIS\FPL\Riviera_Report\PROJECTS\Revised_10_9\Fig_B_2_3.mxd Plot: Q:\GIS\FPL\Riviera_Report\PLOTS\Revised_10_9\Fig_B_2_3.mxd



Notes:
1. Flows are in gallons per minute unless otherwise noted.
2. Flows shown with no () are based on average daily water use at the following conditions:
   75 degree ambient temperature, CT evaporative coolers in service.
3. Numbers in () are peak intermittent flows.
4. Dashed lines indicate intermittent or alternate flow paths as noted.

Figure B-2.4
Water Balance for RBEC
App.10.2.2/Fig B-2.4.docx

Source: FPL, Golder; 2009.



WEST BASIN – DRY DETENTION AREA INFORMATION				
DETENTION AREA ID	TOB ELEV. (ft–NAVD)	TOB AREA (ac.)	TOE ELEV. (ft–NAVD)	TOE AREA (ac.)
A	9.00	0.12	6.00	0.08
B	9.00	0.13	6.00	0.06
C	9.00	0.08	6.00	0.03
D	9.00	0.08	6.00	0.00
E	9.00	0.11	6.00	0.00
F	9.00	0.07	6.00	0.02
G	9.00	0.21	7.00	0.03

PROJECT BASIN	BASIN AREA (Ac.)	CONTRIBUTION TO STORMWATER SYSTEM (Ac.)	DESCRIPTION
WEST BASIN	13.63	13.34*	W-1: 138 KV SWITCHYARD
			W-2: FUEL METERING STATION
			W-3: GAS COMPRESSION EQUIPMENT
			W-4: PARKING LOT
			W-5: 230 KV SWITCHYARD
			W-6: POWER BLOCK
EAST BASIN	12.02	11.73*	E-1: POWER BLOCK
			E-2: SUPPORT BUILDING
			E-3: DOUBLE LINED FUEL OIL TANK
			E-4: DEMINERALIZED WATER TRAILER
			E-5: FUEL UNLOADING STATION
			E-6: MANATEE OBESERVATION DECK
SOUTH BASIN	2.50	2.50	S-1: MANATEE VIEWING AREA BUILDING
			S-2: MANATEE VIEWING AREA PARKING LOT

NOTES:

1. WATER QUALITY TREATMENT PROVIDED IN DRY RETENTION/DETENTION AREAS.
2. WEST BASIN TO CONNECT AND FLOW TO EAST BASIN.
3. EAST BASIN TO OUTFALL TO LAKE WORTH USING EXISTING DISCHARGE POINTS.
4. SOUTH-A BASIN TO BE BUILT AFTER PLANT CONSTRUCTION PHASE. SOUTH-A BASIN TO OVERFLOW INTO SOUTH-B BASIN.
5. SOUTH-B BASIN TO OUTFALL TO LAKE WORTH THROUGH CONTROL STRUCTURE PROPOSED AS A WAY OF CONTROLLING DISCHARGE FROM A SITE WITH NO EXISTING CONTROLS.
6. CONTACT AREAS REPRESENT 0.29 ACRES IN EACH OF THE EAST AND CENTRAL BASINS. THESE AREAS WILL BE CURBED AND WILL DRAIN TO A SUMP TO BE TREATED INDEPENDENT OF THE SITE STORMWATER. THEREFORE, CONTACT AREAS ARE NOT INCLUDED IN THE STORM WATER SYSTEM PRESENTED ON THIS PLAN.
7. THIS PLAN INTENDS TO DEMONSTRATE THE BASIC FACILITIES REQUIRED TO CONTAIN STORMWATER WHILE IN THE OPERATION PHASE (FOLLOWING CONSTRUCTION) AND DOES NOT INTEND TO INDENTIFY ALL DRAINAGE AND STORMWATER FACILITIES/DETAILS. THIS PLAN SHALL NOT BE USED FOR CONSTRUCTION.

REV	DATE	DESCRIPTION	APPR
1			
2			
3			
4			
5			
6			
7			

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY BF
DRAWN BY RCF
CHECKED BY PL
DATE 9/3/2008

PROJECT ENGINEER
REG NUMBER EXP DATE
PROJECT NUMBER 17212
CADD STANDARDS

BOYLE ENGINEERING
BOYLE ENGINEERING
3500 S.W. Corporate Parkway
Palm City, Florida 34990
T 772-286-3883 F 772-286-3925
BPR & FBPE License No's 2005 & LB7622
www.boyleaecom.com

FLORIDA POWER & LIGHT
RIVIERA BEACH ENERGY CENTER

FIGURE B-2.5
OPERATION DRAINAGE PLAN

DRAWING 17212 DRAINAGE PLAN (OPERATION)
SHEET B
OF SHEETS

DWG: P:\17212\Permit\SPA\Exhibits\17212 DRAINAGE PLAN (OPERATION).dwg Layout Name: OPERATION – Plotted by: Fecka, Ben Date: 1/29/2009 – 10:19 AM
XREFS: 17212 XREF EXT IMAGES

APPENDIX 10.2.3

HAZARDOUS WASTE DISPOSAL APPLICATION/PERMIT

NOTE: No Federal or State application or permit for hazardous waste disposal is required for the Project.

APPENDIX 10.2.4

SECTION 10 OR 404 APPLICATIONS/PERMITS

NOTE: No Section 10 or 404 permit under the Rivers and Harbors Act and Clean Water Act is required for the Project. The Project may require maintenance dredging as described below. No other dredging will be required.

The construction of RBEC will require the following: 1) repair of existing seawall; 2) repair of stormwater outfalls; 3) intake/discharge structure repair; 4) maintenance dredging of the manatee embayment area; and 5) construction of a temporary manatee heating system. FPL intends to repair an existing, functioning seawall including placing fill on the landward side of the seawall. The seawall repair will also qualify for a Nationwide Permit from the U.S. Army Corps of Engineers (USACE) (NWP #3, Maintenance or NWP #13, Bank Stabilization). FPL intends to repair or refurbish existing stormwater outfalls or install new outfalls to support RBEC. These activities qualify for an USACE Nationwide Permit (NWP #7, Outfall Structure and Associated Intake Structures.

FPL intends to conduct repair, refurbishment, and maintenance work on the existing intake and discharge structures for Units 1 through 4. The intake structure for Units 1 and 2 will be temporarily incorporated into the manatee heating system. After construction is complete, the intake and discharge structures for Units 1 and 2 will be closed off at the existing seawall and backfilled. The intake and discharge structures for Units 3 and 4 will remain and be incorporated into RBEC. The repair, refurbishment, or replacement of equipment related to the intake and discharge structures for Units 3 and 4 qualifies for a USACE Nationwide Permit (NWP #7, Outfall Structure and Associated Intake Structures and/or NWP# 3, Maintenance).

FPL will also conduct maintenance dredging within the manatee embayment during the Project construction period to restore the area to its historical design depth and enhance the area as a manatee refuge. Maintenance dredging of the manatee embayment qualifies for a USACE Nationwide Permit (NWP #3, Maintenance).

The manatee heating system intake pumps will be installed on the existing Units 1 and 2 intake structure. Suction pipes or vertical pumps will be placed into the intake wells to supply water to electric heaters. After being warmed in the electric heaters, the warm water will be discharged into the manatee embayment area adjacent to the existing Units 3 and 4 seal well structures where the warm water is currently discharged for the manatees. Installation of the manatee heating system qualifies for an USACE Nationwide Permit (NWP #7, Outfall Structures and Associated Intake Structures).

APPENDIX 10.2.5

AIR CONSTRUCTION PERMIT APPLICATION

AIR CONSTRUCTION PERMIT APPLICATION FOR THE FPL RIVIERA BEACH ENERGY CENTER PALM BEACH COUNTY, FLORIDA

Prepared For:

Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408

Prepared By:

Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500

January 2009

0838-7633

APPLICATION FOR
AIR CONSTRUCTION PERMIT

Department of
Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- To establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial, revised, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: **Florida Power & Light Company**	
2. Site Name: **Riviera Beach Energy Center (RBEC)**	
3. Facility Identification Number: **001546**	
4. Facility Location... Street Address or Other Locator: **200-300 Broadway** City: **Riviera Beach** County: **Palm Beach** Zip Code: **33404**	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: **Barbara Linkiewicz, Director of Environmental Licensing**
2. Application Contact Mailing Address... Organization/Firm: **Florida Power & Light Company** Street Address: **700 Universe Blvd.** City: **Juno Beach** State: **Florida** Zip Code: **33408**
3. Application Contact Telephone Numbers... Telephone: **(561) 691-7518** ext. Fax: **(561) 691-7070**
4. Application Contact E-mail Address: **Barbara.P.Linkiewicz@FPL.com**

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	3. PSD Number (if applicable):
2. Project Number(s):	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

This application for air permit is being submitted to obtain: (Check one)

Air Construction Permit

☒ Air construction permit.

☐ Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).

☐ Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

☐ Initial Title V air operation permit.

☐ Title V air operation permit revision.

☐ Title V air operation permit renewal.

☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.

☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

☐ Air construction permit and Title V permit revision, incorporating the proposed project.

☐ Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

☐ I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

Application for an air construction permit to convert the existing Riviera Beach Plant to a 3-on-1 combined-cycle facility. The attached Air Report provides detailed information regarding the proposed project. The combustion turbines (CTs) being considered for this application include the Mitsubishi Power Systems (MPS) "G" Class CTs and the Siemens Power Generation, Inc. "H" Class CTs. The MPS "G" Class CTs consist of the 501G1, 501G1PLUS, and 501G3.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
1A - 1C	Three MPS 501G Class CTs/HRSGs or equivalent	AC1A	
	- OR -		
1A - 1C	Three Siemens H CTs/HRSGs	AC1A	
	- AND -		
2	Auxiliary Boiler	AC1A	
3	Fuel Gas Heater	AC1A	
4	Emergency Diesel Generators	AC1A	
5	Compressor Station	AC1A	
6	Fire Pump Engine	AC1A	
7	Temporary Construction Boiler	AC1A	

Application Processing Fee

Check one: ☐ Attached - Amount: $_____ ☒ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
   Randall R. LaBauve, Vice President

2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: **Florida Power & Light Company**
   Street Address: **700 Universe Blvd.**
   City: **Juno Beach** State: **FL** Zip Code: **33408**

3. Owner/Authorized Representative Telephone Numbers...
   Telephone: **(561) 691-7001** ext. Fax: **(561) 691-7070**

4. Owner/Authorized Representative E-mail Address: **Randall.R.LaBauve@FPL.com**

5. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.

   Signature Date: Feb. 12, 2009

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name:

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):
   - ☐ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.
   - ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
   - ☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.
   - ☐ The designated representative at an Acid Rain source, CAIR source, or Hg Budget source.

3. Application Responsible Official Mailing Address...
   Organization/Firm:
   Street Address:
   City: State: Zip Code:

4. Application Responsible Official Telephone Numbers...
   Telephone: ( ) ext. Fax: ( )

5. Application Responsible Official E-mail Address:

6. Application Responsible Official Certification:

I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

_____ _____
Signature Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **Scott Osbourn**
   Registration Number: **57557**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates Inc.****
   Street Address: **5100 West Lemon Street, Suite 114**
   City: **Tampa** State: **FL** Zip Code: **33609**
3. Professional Engineer Telephone Numbers...
   Telephone: **(813) 287-1717** ext. Fax: **(813) 287-1716**
4. Professional Engineer E-mail Address: **sosbourn@golder.com**
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☒, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature 2/2/09 Date

(seal)

SCOTT OSBOURN LICENSE NO. 57557 STATE OF FLORIDA PROFESSIONAL ENGINEER

* **Attach any exception to certification statement.**
****Board of Professional Engineers Certificate of Authorization #00001670.**

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **523.1** North (km) **3149**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **28/28/10** Longitude (DD/MM/SS) **80/45/51**	
3. Governmental Facility Code: **O**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **49**	6. Facility SIC(s): **4911**
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: **Jeff Smith, Plant General Manager**
2. Facility Contact Mailing Address... Organization/Firm: **Florida Power & Light Company** Street Address: **200-300 Broadway** City: **Riviera Beach** State: **FL** Zip Code: **33404**
3. Facility Contact Telephone Numbers: Telephone: **(561) 845-3103** ext. Fax: **(561) 845-3145**
4. Facility Contact E-mail Address:

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) ext. Fax: ( )
4. Facility Primary Responsible Official E-mail Address:

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☐ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☐ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☐ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☒ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment: **The proposed project is not subject to PSD for any pollutant. CT and HRSG Duct Burners are subject to NSPS Subpart KKKK.**	

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM	**A**	**N**
PM_{10}	**A**	**N**
VOC	**A**	**N**
SO_2	**A**	**N**
NO_x	**A**	**N**
CO	**A**	**N**

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility-Wide Cap [Y or N]? (all units)	3. Emissions Unit ID's Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap
7. Facility-Wide or Multi-Unit Emissions Cap Comment:					

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☒ Attached, Document ID: See Air Report ☐ Previously Submitted, Date:_____
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☒ Attached, Document ID: See Air Report ☐ Previously Submitted, Date:_____
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☒ Attached, Document ID: See Air Report ☐ Previously Submitted, Date:_____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: ☒ Attached, Document ID: See Air Report ☐ Not Applicable (existing permitted facility)
2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL): ☒ Attached, Document ID: See Air Report
3. Rule Applicability Analysis: ☒ Attached, Document ID: See Air Report
4. List of Exempt Emissions Units: ☐ Attached, Document ID:_____ ☒ Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification: ☐ Attached, Document ID:_____ ☒ Not Applicable
6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable
7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units: ☐ Attached, Document ID:_____ ☒ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities: (Required for initial/renewal applications only) ☐ Attached, Document ID:_____ ☐ Not Applicable (revision application)
2. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought) ☐ Attached, Document ID:_____ ☐ Not Applicable (revision application with no change in applicable requirements)
3. Compliance Report and Plan: (Required for all initial/revision/renewal applications) ☐ Attached, Document ID:_____ Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.
4. List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only) ☐ Attached, Document ID:_____ ☐ Equipment/Activities Onsite but Not Required to be Individually Listed ☐ Not Applicable
5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only) ☐ Attached, Document ID:_____ ☐ Not Applicable
6. Requested Changes to Current Title V Air Operation Permit: ☐ Attached, Document ID:_____ ☐ Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program

1. Acid Rain Program Forms:

   Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):
   ☒ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☐ Not Applicable (not an Acid Rain source)

   Phase II NO_X Averaging Plan (DEP Form No. 62-210.900(1)(a)1.):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable

   New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable

2. CAIR Part (DEP Form No. 62-210.900(1)(b)):
   ☒ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☐ Not Applicable (not a CAIR source)

3. Hg Budget Part (DEP Form No. 62-210.900(1)(c)):
   ☒ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☐ Not Applicable (not a Hg Budget unit)

Additional Requirements Comment

Although both the CAIR and Hg Budget Part boxes are checked above, these programs are currently under litigation and the ultimate applicability to this project remains uncertain.

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
   Three CT/HRSGs; may be MPS 501G Class or equivalent or Siemens H Class CTs.

3. Emissions Unit Identification Number: **1A, 1B, and 1C**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
C	**2011**	**2013**	**49**

8. Federal Program Applicability: (Check all that apply)

   ☒ Acid Rain Unit
   ☐ CAIR Unit
   ☐ Hg Budget Unit

9. Package Unit:
   Manufacturer: **Mitsubishi Power Systems (MPS) or Siemens** Model Number: **MPS Frame G or equivalent, Siemens H**

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    Combined cycle unit will have a nominal capacity of 1,250 MW consisting of 3 CT/HRSG trains.

EMISSIONS UNIT INFORMATION
Section [1]
Units 1A-1C, CT/HRSGs

Emissions Unit Control Equipment/Method: Control **1** of **2**

1. Control Equipment/Method Description: **Natural Gas: Combined Cycle - SCR**
2. Control Device or Method Code: **139**

Emissions Unit Control Equipment/Method: Control **2** of **2**

1. Control Equipment/Method Description: **Distillate Fuel Oil:** **Water Injection** **Combined Cycle - SCR**
2. Control Device or Method Code: **25, 28**

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

B. EMISSIONS UNIT CAPACITY INFORMATION
(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:		
2. Maximum Production Rate:		
3. Maximum Heat Input Rate:	million Btu/hr	
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	**24** hours/day **52** weeks/year	**7** days/week **8,760** hours/year
6. Operating Capacity/Schedule Comment: **See Tables A-1 501G Class and A-1 SH for maximum heat input when firing natural gas; and Tables A-5 501G Class and A-5 SH for maximum heat input when firing ultra low sulfur light oil.**		

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **Exhausts through the HRSG stack.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **149** feet	7. Exit Diameter: **See Air Report** Feet
8. Exit Temperature: **See Air Report**°F	9. Actual Volumetric Flow Rate: **See Air Report** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: Feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude… Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **See Tables 2-1A, 2-2A, 2-1B, and 2-2B for the stack parameters associated with each CT when firing natural gas and ultra low sulfur light oil.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment **1** of **2**

1. Segment Description (Process/Fuel Type): **Distillate (No. 2) Fuel Oil [Ultra Low Sulfur (0.0015%) Light Oil]**		
2. Source Classification Code (SCC): **20100101**	3. SCC Units: **1,000 Gallons Used**	
4. Maximum Hourly Rate: **17.8**	5. Maximum Annual Rate: **16,753**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.0015**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **131**
10. Segment Comment: **Million British Thermal Units (Btu) per SCC unit = 130.5 (rounded to 131). Based on 7.1 pounds per gallon (lb/gal); LHV = 18,387 Btu/lb ISO conditions. Max hourly rate based on 35°F, max annual rate based on 59°F and 1,000 hours per year (hr/yr) operation per CT. Based on MPS 501G Units. See Air Permit Application Report for further details on MPS G and Siemens H models.**		

Segment Description and Rate: Segment **2** of **2**

1. Segment Description (Process/Fuel Type): **Natural Gas**		
2. Source Classification Code (SCC): **20100201**	3. SCC Units: **Million cubic feet**	
4. Maximum Hourly Rate: **2.7**	5. Maximum Annual Rate: **22,965**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **918**
10. Segment Comment: **Based on 918 Btu/cf (LHV). Max hourly rate based on 35°F. Max annual rate based on 59°F and 8,760 hr/yr operation. Based on MPS 501G Units. See Air Permit Application Report.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM			**EL**
PM_{10}			**EL**
SO_2			**EL**
NO_x	**25, 28, 139**		**EL**
CO			**EL**
VOC			**EL**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Particulate Matter Total - PM**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **See Air Report** lb/hour **See Air Report** tons/year		4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year		
6. Emission Factor: **See Air Report** Reference:		7. Emissions Method Code:
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years	
10. Calculation of Emissions: **See Air Report, Appendix B for baseline emissions. Tables 2-1A, 2-2A, and 2-3A for MPS 501G Class and Tables 2-1B, 2-2B, and 2-3B for Siemens H; and Appendix A.**		
11. Potential, Fugitive, and Actual Emissions Comment:		

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **See Air Report; Table 4-1**	4. Equivalent Allowable Emissions: **See Air Report** lb/hour **See Air Report** tons/year
5. Method of Compliance: **See Air Report, Table 4-1**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Particulate Matter - PM_{10}**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **See Air Report** lb/hour **See Air Report** tons/year		4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year		
6. Emission Factor: **See Air Report** Reference:		7. Emissions Method Code:
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years	
10. Calculation of Emissions: **See Air Report, Appendix B for baseline emissions. Tables 2-1A, 2-2A, and 2-3A for MPS 501G Class and Tables 2-1B, 2-2B, and 2-3B for Siemens H; and Appendix A.**		
11. Potential, Fugitive, and Actual Emissions Comment:		

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **See Air Report; Table 4-1**	4. Equivalent Allowable Emissions: **See Air Report** lb/hour **See Air Report** tons/year
5. Method of Compliance: **See Air Report, Table 4-1**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Sulfur Dioxide - SO_2**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **See Air Report** lb/hour **See Air Report** tons/year		4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year		
6. Emission Factor: **See Air Report** Reference:		7. Emissions Method Code:
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years	
10. Calculation of Emissions: **See Air Report, Appendix B for baseline emissions. Tables 2-1A, 2-2A, and 2-3A for MPS 501G Class and Tables 2-1B, 2-2B, and 2-3B for Siemens H; and Appendix A.**		
11. Potential, Fugitive, and Actual Emissions Comment:		

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **See Air Report; Table 4-1**	4. Equivalent Allowable Emissions: **See Air Report** lb/hour **See Air Report** tons/year
5. Method of Compliance: **See Air Report, Table 4-1**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Nitrogen Oxides - NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **See Air Report** lb/hour **See Air Report** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See Air Report** Reference:	7. Emissions Method Code:
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **See Air Report, Appendix B for baseline emissions. Tables 2-1A, 2-2A, and 2-3A for MPS 501G Class and Tables 2-1B, 2-2B, and 2-3B for Siemens H; and Appendix A.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **See Air Report; Table 4-1**	4. Equivalent Allowable Emissions: **See Air Report** lb/hour **See Air Report** tons/year
5. Method of Compliance: **See Air Report, Table 4-1**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Carbon Monoxide - CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **See Air Report** lb/hour **See Air Report** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See Air Report** Reference:	7. Emissions Method Code:
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **See Air Report, Appendix B for baseline emissions. Tables 2-1A, 2-2A, and 2-3A for MPS 501G Class and Tables 2-1B, 2-2B, and 2-3B for Siemens H; and Appendix A.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **See Air Report; Table 4-1**	4. Equivalent Allowable Emissions: **See Air Report** lb/hour **See Air Report** tons/year
5. Method of Compliance: **See Air Report, Table 4-1**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Volatile Organic Compounds - VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **See Air Report** lb/hour **See Air Report** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See Air Report** Reference:	7. Emissions Method Code:
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **See Air Report, Appendix B for baseline emissions. Tables 2-1A, 2-2A, and 2-3A for MPS 501G Class and Tables 2-1B, 2-2B, and 2-3B for Siemens H; and Appendix A.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **See Air Report; Table 4-1**	4. Equivalent Allowable Emissions: **See Air Report** lb/hour **See Air Report** tons/year
5. Method of Compliance: **See Air Report, Table 4-1**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation **1** of **2**

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **FDEP Rule 62-296.320(4)(b)1, F.A.C. requires 20 percent opacity. Excess emissions provided by Rule 62-210.700(1).**	

Visible Emissions Limitation: Visible Emissions Limitation **2** of **2**

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Proposed as emission limit for PM/PM_{10}.**	

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **1** of **2**

1. Parameter Code: **EM**	2. Pollutant(s): **NO_x**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **CEM required pursuant to 40 CFR, Part 75. NO_x monitoring includes diluent monitor (O_2 or CO_2).**	

Continuous Monitoring System: Continuous Monitor **2** of **2**

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☒ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☐ Attached, Document ID: _____ ☒ Not Applicable

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): ☒ Attached, Document ID: **See Air Report** ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☒ Attached, Document ID: **See Air Report** ☐ Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☒ Attached, Document ID: **See Air Report** ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☐ Attached, Document ID: _____
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements Comment

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION
Section [2]
Auxiliary Boiler

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
   Auxiliary Boiler

3. Emissions Unit Identification Number: **2**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
C	**2011**	**2013**	**49**

8. Federal Program Applicability: (Check all that apply)
   ☐ Acid Rain Unit
   ☐ CAIR Unit
   ☐ Hg Budget Unit

9. Package Unit:
   Manufacturer: **Nebraska Boiler or equivalent** Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

EMISSIONS UNIT INFORMATION
Section [2]
Auxiliary Boiler

Emissions Unit Control Equipment/Method: Control **1** of **1**

1. Control Equipment/Method Description: **Low NOx burners**
2. Control Device or Method Code: **205**

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

B. EMISSIONS UNIT CAPACITY INFORMATION
(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:		
2. Maximum Production Rate:		
3. Maximum Heat Input Rate: **99.77** million Btu/hr		
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**500** hours/year
6. Operating Capacity/Schedule Comment:		

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code:	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code:	6. Stack Height: **60** feet	7. Exit Diameter: **2.75** Feet
8. Exit Temperature: **296**°F	9. Actual Volumetric Flow Rate: **29,325** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: Feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude… Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **See Table 2-4 in Air Permit Application Report.**		

EMISSIONS UNIT INFORMATION
Section [2]
Auxiliary Boiler

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment **1** of **1**

1. Segment Description (Process/Fuel Type): **Natural gas**		
2. Source Classification Code (SCC):	3. SCC Units: **MMscf**	
4. Maximum Hourly Rate: **0.095**	5. Maximum Annual Rate: **47.5**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,055**
10. Segment Comment: **Maximum annual rate based on 500 hr/yr operation.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**Fuel Quality**		**EL**
PM_{10}	**Fuel Quality**		**EL**
SO_2	**Fuel Quality**		**EL**
NO_x	**205**		**EL**
CO	**Good Combustion**		**EL**
VOC	**Good Combustion**		**EL**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Particulate Matter Total - PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.70** lb/hour **0.17** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.007 lb/MMBtu** Reference: **Emissions based on AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **0.007 lb/MMBtu x 99.77 MMBtu/hr = 0.698 lb/hr = 0.7 lb/hr** **0.7 lb/hr x 500 hr / 2,000 lb = 0.17 TPY**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **10% Opacity**	4. Equivalent Allowable Emissions: **0.70** lb/hour **0.17** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Particulate Matter - PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.70** lb/hour **0.17** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.007 lb/MMBtu** Reference: **Emissions based on AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **0.007 lb/MMBtu x 99.77 MMBtu/hr = 0.698 lb/hr = 0.7 lb/hr** **0.7 lb/hr x 500 hr / 2,000 lb = 0.17 TPY**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **10% Opacity**	4. Equivalent Allowable Emissions: **0.70** lb/hour **0.17** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Sulfur Dioxide - SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.54** lb/hour **0.14** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **2 grains S/100 scf gas** Reference: **Emissions based on AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions:	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 grains S/100 scf gas**	4. Equivalent Allowable Emissions: **0.54** lb/hour **0.14** tons/year
5. Method of Compliance: **Fuel Sampling and Analysis**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Nitrogen Oxides - NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **4.99** lb/hour **1.25** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.050 lb/MMBtu** Reference: **Emissions based on AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **0.050 lb/MMBtu x 99.77 MMBtu/hr = 4.988 lb/hr = 4.99 lb/hr** **4.99 lb/hr x 500 hr / 2,000 lb = 1.25 TPY**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.050 lb/MMBtu**	4. Equivalent Allowable Emissions: **4.99** lb/hour **1.25** tons/year
5. Method of Compliance: **EPA Method 7e**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Carbon Monoxide - CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **7.98** lb/hour **2.0** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.080 lb/MMBtu** Reference: **Emissions based on AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **0.08 lb/MMBtu x 99.77 MMBtu/hr = 7.98 lb/hr** **7.98 lb/hr x 500 hr / 2,000 lb = 2.0 TPY**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.080 lb/MMBtu**	4. Equivalent Allowable Emissions: **7.98** lb/hour **2.0** tons/year
5. Method of Compliance: **EPA Method 10**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Volatile Organic Compounds - VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.52** lb/hour **0.13** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.005 lb/MMBtu** Reference: **Emissions based on AP-42**	7. Emissions Method Code:
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **0.0052 lb/MMBtu x 99.77 MMBtu/hr = 0.52 lb/hr** **0.52 lb/hr x 500 hr / 2,000 lb = 0.13 TPY**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.005 lb/MMBtu	4. Equivalent Allowable Emissions: 0.52 lb/hour 0.13 tons/year
5. Method of Compliance: EPA Method 25A; Initial only	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation **1** of **2**

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **FDEP Rule 62-296.320(4)(b)1, F.A.C., requires 20% opacity. Excess emissions provided by Rule 62-210.700(1) F.A.C.**	

Visible Emissions Limitation: Visible Emissions Limitation **2** of **2**

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Proposed as emission limit for PM/PM_{10}.**	

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☒ Attached, Document ID: **See Air Report** ☐ Not Applicable

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): ☒ Attached, Document ID: **See Air Report** ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☒ Attached, Document ID: **See Air Report** ☐ Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☒ Attached, Document ID: **See Air Report** ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☐ Attached, Document ID: _____
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements Comment

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION
Section [3]
Fuel Gas Heater

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
   Natural Gas Fuel Heater(s)

3. Emissions Unit Identification Number: **3**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
C	**2011**	**2013**	**49**

8. Federal Program Applicability: (Check all that apply)
   ☐ Acid Rain Unit
   ☐ CAIR Unit
   ☐ Hg Budget Unit

9. Package Unit:
   Manufacturer: **Hanover Compression Company or equivalent** Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    See Air Permit application report.

EMISSIONS UNIT INFORMATION
Section [3]
Fuel Gas Heater

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

B. EMISSIONS UNIT CAPACITY INFORMATION
(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:		
2. Maximum Production Rate:		
3. Maximum Heat Input Rate: **10** million Btu/hr		
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:		

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:		2. Emission Point Type Code: **1**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **30** feet	7. Exit Diameter: **1** Feet
8. Exit Temperature: **500**°F	9. Actual Volumetric Flow Rate: **4,950** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: Feet
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude… Latitude (DD/MM/SS) Longitude (DD/MM/SS)
15. Emission Point Comment: **See Table 2-6 in Air Permit Application Report.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment **1** of **1**

1. Segment Description (Process/Fuel Type): **Natural gas**		
2. Source Classification Code (SCC):	3. SCC Units: **1,000,000 SCF**	
4. Maximum Hourly Rate: **0.01**	5. Maximum Annual Rate: **83.03**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,055**
10. Segment Comment: **Maximum annual rate based on 8,760 hr/yr operation.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO			**EL**
PM/PM_{10}	**Fuel Quality**		**EL**
NO_x			**EL**
SO_2	**Fuel Quality**		**EL**
VOC			**EL**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Carbon Monoxide - CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.8** lb/hour **3.49** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.08 lb/MMBtu** Reference: **Emissions based on AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **0.08 lb/MMBtu x 10 MMBtu/hr = 0.8 lb/hr** **0.8 lb/hr x 8,760 hr/yr / (2,000 lb/ton) = 3.49 tons per year**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.08 lb/MMBtu	4. Equivalent Allowable Emissions: 0.8 lb/hour 3.49 tons/year
5. Method of Compliance: Manufacturer Certification	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Nitrogen Oxides - NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.95** lb/hour **4.2** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.095 lb/MMBtu** Reference: **Emissions based on AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **0.095 lb/MMBtu x 10 MMBtu/hr = 0.95 lb/hr** **0.95 lb/hr x 8,760 hr/yr / (2,000 lb/ton) = 4.2 tons per year**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.095 lb/MMBtu**	4. Equivalent Allowable Emissions: **0.95** lb/hour **4.2** tons/year
5. Method of Compliance: **Manufacturer Certification**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Sulfur Dioxide - SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.054** lb/hour **0.237** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **2 gr / 100 SCF** Reference:	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions:	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 gr / 100 SCF**	4. Equivalent Allowable Emissions: **0.054** lb/hour **0.237** tons/year
5. Method of Compliance: **Fuel vendor information**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Particulate Matter - PM/PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.02** lb/hour **0.079** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.002 lb/MMBtu** Reference: **Emissions based on AP-42**	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **0.002 lb/MMBtu x 10 MMBtu/hr = 0.02 lb/hr** **0.02 lb/hr x 8,760 hr/yr / (2,000 lb/ton) = 0.079 tons per year**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **0.02** lb/hour **0.079** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Volatile Organic Compounds - VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.05** lb/hour **0.228** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.005 lb/MMBtu** Reference: **Emissions based on AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **0.005 lb/MMBtu x 10 MMBtu/hr = 0.05 lb/hr** **0.05 lb/hr x 8,760 hr/yr / (2,000 lb/ton) = 0.228 tons per year**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.005 lb/MMBtu	4. Equivalent Allowable Emissions: 0.05 lb/hour 0.228 tons/year
5. Method of Compliance: Natural gas	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation **1** of **1**

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Excess emissions provided by Rule 62-210.700.**	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☒ Attached, Document ID: **See Air Report** ☐ Not Applicable

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): ☒ Attached, Document ID: **See Air Report** ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☐ Attached, Document ID: _____
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements Comment

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION
Section [4]
Emergency Diesel Generator

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

   Emergency generators (2) to supply power in the event power is not available.

3. Emissions Unit Identification Number: **4**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
C	**2011**	**2013**	**49**

8. Federal Program Applicability: (Check all that apply)

   ☐ Acid Rain Unit
   ☐ CAIR Unit
   ☐ Hg Budget Unit

9. Package Unit:
   Manufacturer: **Caterpillar** Model Number: **3516BTA**

10. Generator Nameplate Rating: **2.25** MW

11. Emissions Unit Comment:
    Two 2,250-kW emergency generators (or equivalent). Information based on Caterpillar, 2,250 kW Diesel Generator Set.

EMISSIONS UNIT INFORMATION
Section [4]
Emergency Diesel Generator

Emissions Unit Control Equipment/Method: Control **1** of **1**

1. Control Equipment/Method Description: **Good combustion practices - No. 2 fuel oil-fired.**
2. Control Device or Method Code: **N/A**

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

B. EMISSIONS UNIT CAPACITY INFORMATION
(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:		
2. Maximum Production Rate:		
3. Maximum Heat Input Rate: **21.01** million Btu/hr		
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**160** hours/year
6. Operating Capacity/Schedule Comment: **The emergency generators will normally be operated 1 to 2 hours per month for testing and maintenance. The emergency generators will meet the requirements of 40 CFR Part 60 Subpart IIII.**		

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **30** feet	7. Exit Diameter: **1.0** Feet
8. Exit Temperature: **916**°F	9. Actual Volumetric Flow Rate: **17,463** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: Feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude… Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **See Table 2-5 in Air Permit Application Report.**		

EMISSIONS UNIT INFORMATION
Section [4]
Emergency Diesel Generator

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment **1** of **1**

1. Segment Description (Process/Fuel Type): **Diesel fuel combustion**		
2. Source Classification Code (SCC):	3. SCC Units: **1,000 gallons**	
4. Maximum Hourly Rate: **0.156**	5. Maximum Annual Rate: **24.9**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.0015**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **135.1**
10. Segment Comment: **Maximum annual rate based on 160 hr/yr operation.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO			**EL**
PM/PM_{10}			**EL**
NO_x			**EL**
SO_2	**Fuel Quality**		**EL**
VOC			**EL**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Carbon Monoxide - CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **60.0** lb/hour **4.8** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **8.5 grams per horsepower-hour (g/hp-hr)** Reference:	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **Emissions are for one generator.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **8.5 g/hp-hr**	4. Equivalent Allowable Emissions: **60.0** lb/hour **4.8** tons/year
5. Method of Compliance: **Manufacturer certification of Subpart IIII standards.**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Nitrogen Oxides - NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **48.7** lb/hour **3.9** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **6.9 g/hp-hr** Reference:	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **Annual emissions for one generator.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **6.9 g/hp-hr**	4. Equivalent Allowable Emissions: **48.7** lb/hour **3.9** tons/year
5. Method of Compliance: **Manufacturer certification of Subpart IIII standards.**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Sulfur Dioxide - SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.03** lb/hour **0.003** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0015% S fuel oil** Reference: **FPL, 2008**	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **Annual emissions are for one generator.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0015% S fuel oil**	4. Equivalent Allowable Emissions: **0.03** lb/hour **0.003** tons/year
5. Method of Compliance: **Fuel vendor information**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Particulate Matter - PM/PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **2.8** lb/hour **0.23** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.4 g/hp-hr** Reference:	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **Annual emissions are for one generator.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.4 g/hp-hr**	4. Equivalent Allowable Emissions: **2.8** lb/hour **0.23** tons/year
5. Method of Compliance: **Manufacturer certification of Subpart IIII Standards.**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Volatile Organic Compounds - VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **7.1** lb/hour **0.56** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **1.0 g/hp-hr** Reference:	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **Annual emissions are for one generator.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.0 g/hp-hr**	4. Equivalent Allowable Emissions: **7.1** lb/hour **0.56** tons/year
5. Method of Compliance: **Manufacturer certification of Subpart IIII Standards.**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation **1** of **1**

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **FDEP Rule 62-296.320(4)(b)1, F.A.C. requires 20 percent opacity. Excess emissions provided by Rule 62-210.700.**	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☒ Attached, Document ID: **See Air Report** ☐ Not Applicable

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1.	Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): ☒ Attached, Document ID: **See Air Report** ☐ Not Applicable
2.	Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☐ Attached, Document ID: _____ ☒ Not Applicable
3.	Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1.	Identification of Applicable Requirements: ☐ Attached, Document ID: _____
2.	Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☐ Not Applicable
3.	Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☐ Not Applicable
4.	Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements Comment

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
   Compressor Engines

3. Emissions Unit Identification Number: **5**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
C	**2011**	**2013**	**49**

8. Federal Program Applicability: (Check all that apply)
   ☐ Acid Rain Unit
   ☐ CAIR Unit
   ☐ Hg Budget Unit

9. Package Unit:
   Manufacturer: **Caterpillar - 4 Stroke Lean-Burn** Model Number: **G3516 (7-units)**

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    Includes 7 units rated at 1,340 hp.

EMISSIONS UNIT INFORMATION
Section [5]
Compressor Station

Emissions Unit Control Equipment/Method: Control **1** of **1**

1. Control Equipment/Method Description: **Oxidation Catalyst**
2. Control Device or Method Code: **039**

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

B. EMISSIONS UNIT CAPACITY INFORMATION
(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:		
2. Maximum Production Rate:		
3. Maximum Heat Input Rate: **10.11** million Btu/hr		
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:		

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:		2. Emission Point Type Code: **1**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **40** feet	7. Exit Diameter: **1.0** Feet
8. Exit Temperature: **854**°F	9. Actual Volumetric Flow Rate: **7,651** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: Feet
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude… Latitude (DD/MM/SS) Longitude (DD/MM/SS)
15. Emission Point Comment: **See Table 2-8 in the Air Permit Application Report.**		

EMISSIONS UNIT INFORMATION
Section [5]
Compressor Station

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment **1** of **1**

1. Segment Description (Process/Fuel Type): **Natural gas**		
2. Source Classification Code (SCC):	3. SCC Units: **MMscf**	
4. Maximum Hourly Rate: **0.0099**	5. Maximum Annual Rate: **86.83**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Maximum hourly and annual are per unit. Annual rate based on 8,760 hr/yr operation.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO	**039**		**EL**
PM/PM_{10}			**EL**
NO_x			**EL**
SO_2			**EL**
VOC	**039**		**EL**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Carbon Monoxide - CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.28** lb/hour **1.23** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.1 g/hp-h (with Oxidation Catalyst @ 95% control)** Reference: **Manufacturer's Specifications**	7. Emissions Method Code:
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **See Air Report; Table 2-8**	
11. Potential, Fugitive, and Actual Emissions Comment: **Emissions presented per unit.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.10 g/hp-h**	4. Equivalent Allowable Emissions: **0.28** lb/hour **1.23** tons/year
5. Method of Compliance: **Manufacturer certification**	
6. Allowable Emissions Comment (Description of Operating Method): **Emissions presented per unit.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Nitrogen Oxides - NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **4.43** lb/hour **19.41** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **1.5 g/hp-hr** Reference: **Manufacturer's Specifications**	7. Emissions Method Code:
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **See Air Report; Table 2-8**	
11. Potential, Fugitive, and Actual Emissions Comment: **Emissions presented per unit.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.5 g/hp-hr**	4. Equivalent Allowable Emissions: **4.43** lb/hour **19.41** tons/year
5. Method of Compliance: **Manufacturer certification**	
6. Allowable Emissions Comment (Description of Operating Method): **Emissions presented per unit.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Sulfur Dioxide - SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.06** lb/hour **0.25** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **2 grains/100 scf** Reference: **FPL, 2008**	7. Emissions Method Code:
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **See Air Report, Table 2-8**	
11. Potential, Fugitive, and Actual Emissions Comment: **Emissions are presented per unit.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 grains/100 scf**	4. Equivalent Allowable Emissions: **0.06** lb/hour **0.25** tons/year
5. Method of Compliance: **Fuel vendor information**	
6. Allowable Emissions Comment (Description of Operating Method): **Emissions are presented per unit.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Particulate Matter - PM/PM$_{10}$**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.101** lb/hour **0.44** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0099 lb/MMBtu** Reference: **Manufacturers Specificaitons**	7. Emissions Method Code:
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **See Air Report; Table 2-8**	
11. Potential, Fugitive, and Actual Emissions Comment: **Emissions are presented per unit.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **10% Opacity**	4. Equivalent Allowable Emissions: **0.101** lb/hour **0.44**tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Emissions are presented per unit.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Volatile Organic Compounds - VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.46** lb/hour **2.01** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.16 g/hp-hr (50% control with oxidation catalyst)** Reference: **Emissions based on EPA AP-42**	7. Emissions Method Code:
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **See Air Report; Table 2-8**	
11. Potential, Fugitive, and Actual Emissions Comment: **Emissions are presented per unit.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.16 g/hp-hr**	4. Equivalent Allowable Emissions: **0.46** lb/hour **2.01** tons/year
5. Method of Compliance: **Manufacturer certification**	
6. Allowable Emissions Comment (Description of Operating Method): **Emissions are presented per unit.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation **1** of **2**

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **FDEP Rule 62-296.320(4)(b)1, F.A.C. requires 20 percent opacity. Excess emissions provided by Rule 62-210.700.**	

Visible Emissions Limitation: Visible Emissions Limitation **2** of **2**

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Proposed for PM/PM_{10} emissions.**	

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☒ Attached, Document ID: **See Air Report** ☒ Not Applicable

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1.	Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): ☒ Attached, Document ID: **See Air Report** ☐ Not Applicable
2.	Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☐ Attached, Document ID: _____ ☒ Not Applicable
3.	Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications – N/A

1.	Identification of Applicable Requirements: ☐ Attached, Document ID: _____
2.	Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☐ Not Applicable
3.	Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☐ Not Applicable
4.	Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements Comment

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION
Section [6]
Diesel Fire Pump Engine

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

   Diesel fire pump engine for emergency usage.

3. Emissions Unit Identification Number: **4**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
C	**2011**	**2013**	**49**

8. Federal Program Applicability: (Check all that apply)

   ☐ Acid Rain Unit
   ☐ CAIR Unit
   ☐ Hg Budget Unit

9. Package Unit:
   Manufacturer: **TBD** Model Number: **TBD**

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    One diesel fire pump engine rated at 300 hp. Manufacturer and model number to be determined (TBD).

EMISSIONS UNIT INFORMATION
Section [6]
Diesel Fire Pump Engine

Emissions Unit Control Equipment/Method: Control **1** of **1**

1. Control Equipment/Method Description: **Good combustion practices - No. 2 fuel oil-fired.**
2. Control Device or Method Code: **N/A**

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

B. EMISSIONS UNIT CAPACITY INFORMATION
(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:		
2. Maximum Production Rate:		
3. Maximum Heat Input Rate: **2.32** million Btu/hr		
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**80** hours/year
6. Operating Capacity/Schedule Comment: **The diesel fire pump engine will normally be operated 1 to 2 hours per month for testing and maintenance. The fire pump engine will meet the requirements of 40 CFR Part 60 Subpart IIII.**		

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **17** feet	7. Exit Diameter: **0.79** Feet
8. Exit Temperature: **744**°F	9. Actual Volumetric Flow Rate: **1,750** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: Feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude… Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **See Table 2-7 in Air Permit Application Report.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment **1** of **1**

1. Segment Description (Process/Fuel Type): **Diesel fuel combustion**		
2. Source Classification Code (SCC):	3. SCC Units: **1,000 gallons**	
4. Maximum Hourly Rate: **0.017**	5. Maximum Annual Rate: **1.38**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.0015**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **135.1**
10. Segment Comment: **Maximum annual rate based on 80 hr/yr operation.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO			**EL**
PM/PM_{10}			**EL**
NO_x			**EL**
SO_2	**Fuel Quality**		**EL**
VOC			**EL**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Carbon Monoxide - CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **1.7** lb/hour **0.07** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **2.6 grams per horsepower-hour (g/hp-hr)** Reference:	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **Emissions are for one engine.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2.6 g/hp-hr**	4. Equivalent Allowable Emissions: **1.7** lb/hour **0.07** tons/year
5. Method of Compliance: **Manufacturer certification of Subpart IIII standards.**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Nitrogen Oxides - NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **4.5** lb/hour **0.18** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **6.8 g/hp-hr** Reference:	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **Annual emissions for one engine.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **6.8 g/hp-hr**	4. Equivalent Allowable Emissions: **4.5** lb/hour **0.18** tons/year
5. Method of Compliance: **Manufacturer certification of Subpart IIII standards.**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Sulfur Dioxide - SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.004** lb/hour **0.00014** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0015% S fuel oil** Reference: **FPL, 2008**	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **Annual emissions are for one engine.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0015% S fuel oil**	4. Equivalent Allowable Emissions: **0.0036** lb/hour **0.00014** tons/year
5. Method of Compliance: **Fuel vendor information**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Particulate Matter - PM/PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.26** lb/hour **0.011** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.4 g/hp-hr** Reference:	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **Annual emissions are for one engine.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.4 g/hp-hr**	4. Equivalent Allowable Emissions: **0.26** lb/hour **0.011** tons/year
5. Method of Compliance: **Manufacturer certification of Subpart IIII Standards.**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Volatile Organic Compounds - VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.66** lb/hour **0.026** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **1.0 g/hp-hr** Reference:	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **Annual emissions are for one engine.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.0 g/hp-hr**	4. Equivalent Allowable Emissions: **0.66** lb/hour **0.026** tons/year
5. Method of Compliance: **Manufacturer certification of Subpart IIII Standards.**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation **1** of **1**

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **FDEP Rule 62-296.320(4)(b)1, F.A.C. requires 20 percent opacity. Excess emissions provided by Rule 62-210.700.**	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Air Report** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☒ Attached, Document ID: **See Air Report** ☐ Not Applicable

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): ☒ Attached, Document ID: **See Air Report** ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☐ Attached, Document ID: _____
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements Comment

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION
Section [7]
Temporary Construction Boiler

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

   Temporary Construction Boiler (to be used during construction period only).

3. Emissions Unit Identification Number: **2**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
C		**October 1, 2008 through December 31, 2008**	**49**

8. Federal Program Applicability: (Check all that apply)

   ☐ Acid Rain Unit
   ☐ CAIR Unit
   ☐ Hg Budget Unit

9. Package Unit:
   Manufacturer: **Nebraska Boiler or equivalent** Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

EMISSIONS UNIT INFORMATION
Section [7]
Temporary Construction Boiler

Emissions Unit Control Equipment/Method: Control **1** of **1**

1. Control Equipment/Method Description: **Low NOx burners**
2. Control Device or Method Code: **205**

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _____ of _____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

B. EMISSIONS UNIT CAPACITY INFORMATION
(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:		
2. Maximum Production Rate:		
3. Maximum Heat Input Rate: **110** million Btu/hr		
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**150** hours/year
6. Operating Capacity/Schedule Comment:		

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code:	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code:	6. Stack Height: **19** feet	7. Exit Diameter: Feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: Feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude… Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **This temporary emission unit will only be used during the project construction period. Once the CCEC commences commercial operation, this unit will no longer be operated.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment **1** of **1**

1. Segment Description (Process/Fuel Type): **Natural gas**		
2. Source Classification Code (SCC):	3. SCC Units: **MMscf**	
4. Maximum Hourly Rate: **0.104**	5. Maximum Annual Rate: **15.64**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,055**
10. Segment Comment: **Maximum annual rate based on 500 hr/yr operation.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**Fuel Quality**		**NS**
PM_{10}	**Fuel Quality**		**NS**
SO_2	**Fuel Quality**		**EL**
NO_x	**205**		**EL**
CO	**Good Combustion**		**NS**
VOC	**Good Combustion**		**NS**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Particulate Matter Total - PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.77** lb/hour **0.19** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.007 lb/MMBtu** Reference: **Emissions based on AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **0.007 lb/MMBtu x 110 MMBtu/hr =0.77 lb/hr** **0.77 lb/hr x 500 hr / 2,000 lb = 0.019 TPY**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **10% Opacity**	4. Equivalent Allowable Emissions: **0.77** lb/hour **0.19** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Particulate Matter - PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.77** lb/hour **0.19** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.007 lb/MMBtu** Reference: **Emissions based on AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **0.007 lb/MMBtu x 110 MMBtu/hr =0.77 lb/hr** **0.77 lb/hr x 500 hr / 2,000 lb = 0.19 TPY**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **10% Opacity**	4. Equivalent Allowable Emissions: **0.77** lb/hour **0.19** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Sulfur Dioxide - SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.6** lb/hour **0.15** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **2 grains S/100 scf gas** Reference: **Emissions based on AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions:	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 grains S/100 scf gas**	4. Equivalent Allowable Emissions: **0.6** lb/hour **0.15** tons/year
5. Method of Compliance: **Fuel Sampling and Analysis**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Nitrogen Oxides - NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **5.5** lb/hour **1.38** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.050 lb/MMBtu** Reference: **Emissions based on AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **0.050 lb/MMBtu x 110 MMBtu/hr = 5.5 lb/hr** **5.5 lb/hr x 500 hr / 2,000 lb = 1.38 TPY**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.050 lb/MMBtu**	4. Equivalent Allowable Emissions: **5.5** lb/hour **1.38** tons/year
5. Method of Compliance: **EPA Method 7e or Vendor Certification**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Carbon Monoxide - CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **8.8** lb/hour **2.20** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.080 lb/MMBtu** Reference: **Emissions based on AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **0.080 lb/MMBtu x 110 MMBtu/hr = 8.8 lb/hr** **8.8 lb/hr x 500 hr / 2,000 lb = 2.20 TPY**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: 8.8 lb/hour 2.20 tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **Volatile Organic Compounds - VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.55** lb/hour **0.14** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.005 lb/MMBtu** Reference: **Emissions based on AP-42**	7. Emissions Method Code:
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **0.005 lb/MMBtu x 110 MMBtu/hr = 0.55 lb/hr** **0.55 lb/hr x 500 hr / 2,000 lb = 0.14 TPY**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: 0.55 lb/hour 0.14 tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation **1** of **2**

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **FDEP Rule 62-296.320(4)(b)1, F.A.C., requires 20% opacity. Excess emissions provided by Rule 62-210.700(1) F.A.C.**	

Visible Emissions Limitation: Visible Emissions Limitation **2** of **2**

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Proposed as emission limit for PM/PM_{10}.**	

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See EU 2** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See EU 2** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See EU 2** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☒ Attached, Document ID: **See EU 2** ☐ Not Applicable

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1.	Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): ☒ Attached, Document ID: **See EU 2** ☐ Not Applicable
2.	Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☒ Attached, Document ID: **See EU 2** ☐ Not Applicable
3.	Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☒ Attached, Document ID: **See EU 2** ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1.	Identification of Applicable Requirements: ☐ Attached, Document ID: _____
2.	Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☐ Not Applicable
3.	Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☐ Not Applicable
4.	Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements Comment

AIR CONSTRUCTION PERMIT
APPLICATION REPORT

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LIST OF ACRONYMS

°C	degrees Celsius
°F	degrees Fahrenheit
$\mu g/m^3$	micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AERMOD	American Meteorological Society and U.S. Environmental Protection Agency Regulatory Model
AOR	Annual Operating Report
AQRV	air quality-related value
BACT	Best Available Control Technology
BPIP	Building Profile Impact Program
Btu/lb	British thermal unit per pound
CAA	Clean Air Act
CEM	continuous emissions monitoring
cf/yr	cubic foot per year
CFR	Code of Federal Regulations
CO	carbon monoxide
CT	combustion turbine
DLN	dry low-NO_x
EPA	U.S. Environmental Protection Agency
F.A.C.	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FPL	Florida Power & Light
g/bhp-hr	grams per brake horsepower-hour
g/s	grams per second
GEP	Good Engineering Practice
gr/100 scf	grains per 100 standard cubic feet
HAP	hazardous air pollutant
HHV	high heating value
hp	horsepower
hr/yr	hours per year
HRSG	heat recovery steam generator
HSH	highest, second-highest
KPBI	Palm Beach International Airport
km	kilometer
lb/hr	pound per hour
lb/MMBtu	pound per million British thermal unit
lb/MW-hr	pound per megawatt-hour
LHV	low heating value

m	meter
MACT	Maximum Available Control Technology
MMBtu/hr	million British thermal units per hour
MMcf/hr	million cubic feet per hour
MPS	Mitsubishi Power Systems
MW	megawatt
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_x	nitrogen oxide
NP	National Park
NSPS	New Source Performance Standards
NSR	New Source Review
NWA	National Wildlife Area
NWS	National Weather Service
O_2	oxygen
PM	particulate matter
PM_{10}	particulate matter less than 10 microns
ppb	parts per billion
ppm	parts per million
ppmvd	parts per million by volume dry
PSD	Prevention of Significant Deterioration
psia	pound per square inch absolute
psig	pound per square inch gauge
QA/QC	quality assurance/quality control
RBEC	Riviera Beach Energy Center
SAM	sulfuric acid mist
scf/yr	standard cubic foot per year
SCR	selective catalytic reduction
SCRAM	Support Center for Regulatory Air Models
SER	significant emission rate
SO_2	sulfur dioxide
TPY	tons per year
TSP	total suspended particulate
TTN	Technology Transfer Network
USGS	U.S. Geological Survey
WCEC	West County Energy Center

1.0 INTRODUCTION

Florida Power & Light Company's (FPL's) existing Riviera Plant consists of two nominal 300-megawatt (MW) fossil-fuel fired steam generating units. Units 1 and 2 started operating in 1946 and 1953, respectively. Both units were permanently retired and removed from the Site. The commercial in-service dates for Units 3 and 4 were 1962 and 1963, respectively, and they have remained in service since that time. The units are authorized pursuant to Florida Department of Environmental Protection (FDEP) Final Title V Permit No. 09900042-004-AV to operate on natural gas, No. 6 fuel oil, and No. 2 fuel oil. Each unit has a heat input of 3,050 million British thermal units per hour (MMBtu/hr) on oil and 3,260 MMBtu/hr on natural gas. The air emissions from each unit are exhausted through two separate 298-foot stacks. The general location of the existing Plant is shown in Figure 1-1.

FPL proposes to convert the existing Riviera Plant into a modern, highly efficient, lower-emission next-generation clean energy center using the latest combined cycle technology. The converted Plant, referred to as the Riviera Beach Energy Center (RBEC), will consist of a nominal 1,250-MW "3-on-1" combined cycle unit. RBEC will be located within the existing Site boundaries.

There will be significant benefits associated with RBEC. The converted Plant will be more energy efficient and provide cleaner energy to FPL's customers. The converted Plant will have a nominal generating capacity of 1,250 MW at a location where a nominal 600 MW is now generated. RBEC will use at least 33 percent less fuel for an equivalent amount of energy production than the existing Plant. Moreover, RBEC will be capable of producing about 100 percent more power based on anticipated summer capacities.

With the converted Plant, there will also be significant net reductions in air emissions due to the retirement of Units 3 and 4. For example, actual emissions of sulfur dioxide (SO_2), particulate matter (PM), and nitrogen oxides (NO_x) emissions will be reduced by more than 90 percent. In addition, there will be significant benefits in ambient air quality as a result of these emission reductions.

Decommissioning and dismantlement of the existing generation units will be required prior to the construction of RBEC. Therefore, there will be no overlap of operation between the existing units and the converted Plant, which is anticipated to have an in-service date of June 2014.

This Air Construction Permit Application consists of the retirement of the existing Units 3 and 4 and conversion of the existing Plant into one nominal 1,250-MW "3-on-1" combined cycle unit. The "3-on-1" unit will consist of three nominal 250-MW advanced combustion turbines (CTs) and three heat recovery steam generators (HRSGs), which will utilize the waste heat from the CTs to produce steam to be utilized in a single steam turbine generator. The CTs being considered for the converted Plant include the Mitsubishi Power Systems (MPS) "G" Class or equivalent MPS CTs. The MPS "G" Class CTs consist of the 501G (M501G1 as authorized for the West County Energy Center), the updated MPS "G" Class CTs referred to as "G3" (501G3), and the MPS 501G1PLUS and the Siemens Power Generation, Inc. "H" Class CT. The information presented in this application for the MPS 501 "G" Class envelopes the performance and emissions for the three MPS CTs and equivalent MPS CTs. Duct burners are proposed for each HRSG and are fired during peak demand periods to achieve the total nominal generating capacity. Duct firing will be limited to an equivalent of 2,880 hours per CT per year at the maximum firing rate.

Each CT will utilize evaporative cooling for inlet air cooling. Evaporative cooling systems achieve adiabatic cooling using water in the form of water evaporated from a treated paper material. The evaporated water extracts the latent heat of vaporization from the inlet air stream when the water droplet is converted to water vapor. Heat is removed at a rate of 1,075 British thermal units per pound (Btu/lb) of water. The result is a cooler, more dense and moisture-laden air stream. This allows additional power to be produced. The CTs will use natural gas as the primary fuel with ultra low-sulfur distillate "light oil" used as a backup fuel for up to the equivalent of 1,000 hours per year (hr/yr) per CT at baseload conditions. The HRSG duct burners will fire natural gas only. Gas for RBEC will be transported to the Site via pipeline. No onsite storage will be provided for natural gas. Gas compressors will be installed on the Site to raise the gas pressure to the appropriate level for the CTs. The natural gas heat content is typically about 21,000 Btu/lb [lower heating value (LHV)] with a maximum sulfur content of 2 grains per 100 standard cubic feet (gr/100 scf) of gas. The heat content of ultra low-sulfur light oil is typically about 18,400 Btu/lb (LHV) with a maximum sulfur content of 0.0015 percent by weight. Ultra low-sulfur light oil will be delivered to the Site by truck or pipeline and will be stored in a new fuel oil storage tank.

U.S. Environmental Protection Agency (EPA's) Prevention of Significant Deterioration (PSD) regulations are promulgated under 40 Code of Federal Regulations (CFR), Part 51.166. Florida's PSD regulations are codified in Rules 62-212.400, Florida Administrative Code (F.A.C.) and have been approved by EPA. The Florida PSD regulations incorporate the requirements of EPA's PSD

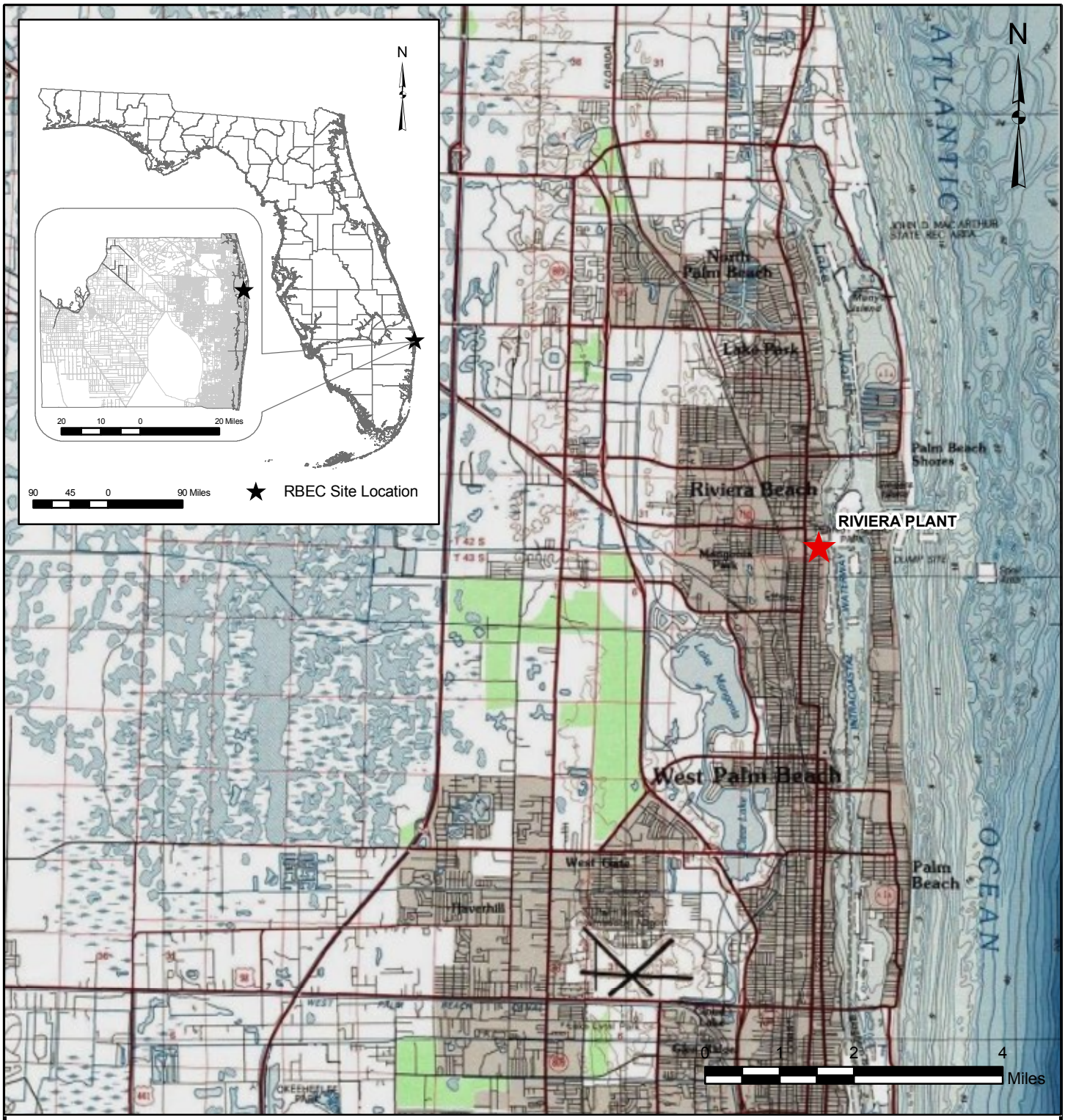
regulations. Under these requirements, the existing Riviera Plant is classified as an existing major facility. A modification to an existing major facility that results in a significant net emissions increase equal to or exceeding the significant emissions rates (SER) listed in the State of Florida regulations under Section 62-212.400, Table 62-212.400-2, F.A.C., is classified as a major modification and will be subject to the PSD preconstruction permitting program for those pollutants that exceed the PSD SERs.

The procedures for determining applicability of the PSD permitting program to RBEC are specified in Rule 62-212.400(2), F.A.C. For each regulated pollutant, PSD is triggered as a result of a modification at an existing facility if the difference between the projected actual emissions and the baseline actual emissions equals or exceeds the SER for that pollutant, as defined at Rule 62-210.200(243), F.A.C.

As discussed previously, there will be significant reductions in air emissions for the converted Plant. The net changes in air emissions, as presented in Section 2, will not exceed the PSD significant emission rates for any of the criteria pollutants subject to PSD review. Therefore, pursuant to Florida Rule 62-212.400, PSD review is not applicable for any air pollutants for the Project.

This Air Construction Permit Application Report is divided into six major sections. This Application is being filed for the purpose of establishing federally-enforceable emission limitations that insure the Project will not result in a significant net increase in emissions of any regulated air pollutant, in accordance with FDEP's federally-approved minor source air construction permit program under Florida's federally-required State Implementation Plan:

- Section 2.0 presents a description of RBEC, including air emissions and stack parameters.
- Section 3.0 provides a review of the regulatory analysis conducted, including PSD and nonattainment requirements, applicable to RBEC.
- Section 4.0 includes the control technology review.
- Section 5.0 discusses the ambient air monitoring analysis.
- Section 6.0 presents a summary of the air modeling approach and results used in assessing compliance of the existing and converted Plants with ambient air quality standards (AAQS).



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FPL		SCALE	AS SHOWN
		DATE	1/21/2009
		DESIGN	RCM
		GIS	NRL
FILE No.	08387633RA035	CHECK	RCM
PROJECT No.	083-87633 REV. 2	REVIEW	KFK

LOCATION OF THE FPL RIVIERA PLANT IN PALM BEACH COUNTY, FLORIDA

FPL
RIVIERA BEACH ENERGY CENTER

FIGURE 1-1

Map Document: P:\GIS\PROJECTS\2008\083-87633_FPL_CCEC_RBEC_Conversion\Riviera\RA_SCA\ActiveMapDocuments\08387633RA035_AirAppndxSiteLocation.mxd / Modified 1/21/2009 11:39:00 AM / Plotted 1/27/2009 4:11:23 PM by rlamar

2.0 PROJECT DESCRIPTION

2.1 Site Description

The existing FPL Riviera Plant Site (Site), located primarily within the City of Riviera Beach with a small portion in the City of West Palm Beach, is southwest of the Lake Worth Inlet and Peanut Island and across the Intracoastal Waterway from Palm Beach, Florida, and will serve as the Site for RBEC. The Site is situated east of U.S. Highway 1, south of the Port of Palm Beach, north of 59th Street, and west of Lake Worth Lagoon (Intracoastal Waterway). Figure 2-1 presents the Site plan for RBEC.

2.2 Proposed Combustion Turbines

RBEC will be configured as a 3-on-1 combined cycle unit. The CTs (any of the four models under consideration) will use dry low-NO_x (DLN) combustion technology when firing natural gas and water injection when firing light oil to minimize NO_x formation. Selective catalytic reduction (SCR) will be installed in each HRSG to further reduce emissions of NO_x. Natural gas will be used as the primary fuel and light oil will be used as a backup fuel. Light oil usage will be limited to the equivalent of 1,000 hr/yr per CT at full load.

The generating capacity of a combined cycle plant is affected by ambient temperature, with increased temperature resulting in less efficient electric production. Greater overall fuel consumption will occur at lower ambient temperatures. For the purpose of calculating maximum hourly fuel use quantities representative of a nominal 1,250-MW combined cycle unit, the following specific operating conditions were used for the CTs (see Appendix A):

- 35 degrees Fahrenheit (°F) dry-bulb turbine inlet temperature,
- 14.67 pound per square inch absolute (psia) barometric pressure, and
- 20,909-Btu/lb and 918 Btu/scf heating value (LHV) of natural gas and 18,387-Btu/lb and 129,900 Btu/gallon heating value (LHV) for ultra low-sulfur light oil.

The maximum heat input ranges from 2,421 MMBtu/hr (LHV) to 2,509 MMBtu/hr (LHV) for the CTs being considered for RBEC when firing natural gas (100-percent capacity, 35°F). The corresponding maximum fuel usage ranges from about 2.6 million to 2.7 million cubic feet per hour (MMcf/hr) of natural gas. Maximum potential fuel usage at 59°F turbine inlet temperature would

range from about 6.6×10^{10} to 6.9×10^{10} cubic feet per year (cf/yr) of natural gas for three CTs for each of the four different model types under consideration.

The HRSG duct burners associated with each CT/HRSG train will have a maximum firing rate of 475 MMBtu/hr [high heating value (HHV)] or 428 MMBtu/hr (LHV). The HRSG duct burner maximum heat input rate will be the same for each CT being considered for the converted Plant. The maximum annual fuel usage for the duct burners is based on 2,880 hr/yr per HRSG at this heat input. The maximum potential annual fuel usage for the duct burners is calculated to be about 4 billion standard cubic feet per year (scf/yr).

Ultra low-sulfur light oil use will be limited to the equivalent of 1,000 hr/yr per CT at full load. The maximum fuel use is up to 17,500 gallons/hr/CT at 59°F turbine inlet and would require an annual usage of about 52 million gallons for three CTs each operating for 1,000 hours and a turbine inlet temperature of 59°F.

2.3 Proposed Source Emission Units and Stack Parameters

RBEC's air emission units are:

- 3 CT/HRSGs, with duct burners when firing natural gas;
- Fuel heater;
- Emergency generators;
- Auxiliary boiler (for the MPS 501G CTs only);
- Fire pump engine;
- Fuel oil storage tank; and
- Compressor station.

Each of these emission units is discussed in the following paragraphs.

Performance, estimated maximum hourly emissions and exhaust information representative of each CT/HRSG option operating at base-load conditions (100-percent load) in combined cycle mode are presented in Tables 2-1 and 2-2 for natural gas and light oil firing, respectively. Tables 2-1 and 2-2 are presented as versions "A" and "B", which are representative of the MPS 501G or equivalent and Siemens H Class CT models, respectively. Tables 2-1A and 2-1B also include emissions and exhaust information for duct firing. The data are presented for a turbine inlet temperature of 59°F. The

performance and emissions data for the other operating conditions are given in Appendix A for turbine inlet temperatures of 35°F, 59°F, 75°F, and 95°F and various operating conditions (100-percent load and 75-percent load operation applicable for each CT Class).

Maximum potential annual emissions for the CTs/HRSGs for regulated air pollutants are based on an ambient temperature of 59°F. To produce the maximum annual emissions, it is assumed that each CT/HRSG would operate for 8,760 hours. Of the 8,760 operating hours, an average of 7,760 hr/yr are assumed to be natural gas-firing with 2,880 hours fired at 100-percent load with maximum duct firing. For the remaining average of 1,000 hr/yr, it is assumed that the CTs are operated on light oil with the exception of VOC emissions for the MPS 501G CTs.

For VOC emissions for the MPS 501G CTs, a plant-wide emission cap of 99.1 TPY is proposed (i.e., a net increase of 39.7 TPY) to ensure the Project will not result in a significant net increase in VOC emissions. Given the conservative nature of the emission estimates (100 percent capacity factors for all emission units; 59°F turbine inlet) and the potential variability of operating conditions, FPL proposes a plant-wide VOC emission cap. To retain maximum operating flexibility due to this conservatism, it is possible that in any given year, all of the CTs could fire oil for an equivalent of 1,000 hr/yr and the compressors could operate without limitations, yet total VOC emissions would still be below the proposed emission cap. Since for every hour of CT oil firing, the compressor station would operate less, there would be lower actual emissions from the compressor station. For the purposes of comparison with the significant emission rate, the VOC emissions for RBEC are capped at 99.1 TPY (see Table 2-9A). However, individual emission units in this summary table (i.e., the CTs and compressor engines) are presented at their maximum potential emissions. Because of the conservative nature of the emission estimates, FPL believes that actual RBEC emissions would be below a VOC plant-wide emission cap even if 1,000 hr/yr per CT of oil firing were realized. FPL proposes to implement a plant-wide VOC emission cap and to track and report annual VOC emissions from RBEC in accordance with 40 CFR 52.21(b)(33), which is adopted and incorporated by reference in Rule 62-204.800, F.A.C.

Since the ultra low-sulfur content (0.0015 percent) light oil has lower fuel sulfur content than that assumed for natural gas (2 gr/100 scf), the maximum annual SO_2 and sulfuric acid mist (SAM) emissions are based on 8,760 hours of operation firing natural gas. Tables 2-3A and 2-3B present the maximum potential annual emissions for the range of operating conditions for each CT Class being considered for RBEC.

A process flow diagram of the proposed CT/HRSG configuration, operating at base load conditions with a compressor inlet temperature of 59°F, is presented in Figure 2-2.

During combustion, two primary types of NO_x are formed: fuel NO_x and thermal NO_x. Fuel NO_x emissions are formed through the oxidation of a portion of the nitrogen contained in the fuel. Thermal NO_x emissions are generated through the oxidation of a portion of the nitrogen contained in the combustion air. NO_x formation can be limited by lowering combustion temperatures (through water or steam injection) and/or staging combustion (a reducing atmosphere followed by an oxidizing atmosphere, known as dry NO_x control). Emissions of NO_x for the CTs, equipped with SCR control systems are proposed at concentrations of 2.0 parts per million-dry conditions (ppmvd), corrected to 15-percent oxygen (O_2) or less when firing natural gas and 8 ppmvd corrected to 15-percent O_2 or less when firing ultra low-sulfur light oil.

Carbon monoxide (CO) is formed by incomplete combustion of fuel. High combustion temperatures, adequate excess air, and good fuel/air mixing during combustion will minimize CO formation. CO formation is limited by ensuring complete efficient combustion of the fuel in the turbines. Recent improvements in CT combustor technology allow for both reduced NO_x emissions and low CO emissions.

The proposed CO emission rates for the MPS CTs when firing natural gas are 4.1 ppmvd corrected to 15-percent O_2 at baseload operation and 7.6 ppmvd corrected to 15-percent O_2 with maximum duct firing. For the Siemens H CTs, the proposed CO emission rates when firing natural gas are 5 ppmvd corrected to 15-percent O_2 at baseload operation and 7.2 ppmvd corrected to 15-percent O_2 with maximum duct firing.

The proposed CO emission rates for oil-firing at baseload conditions are 8 ppmvd corrected to 15-percent O_2 for the MPS CTs and 10 ppmvd corrected to 15-percent O_2 for the Siemens H CTs.

SO_2 emission rates are controlled and minimized by the very low sulfur content in the fuels, which will be a maximum of 2 grains sulfur/100 scf for natural gas and 0.0015-percent sulfur by weight for ultra low-sulfur light oil.

An auxiliary boiler will be used with the MPS 501G1 and MPS 501G1PLUS CTs, as necessary, for startup. The combustor requires steam for combustor cooling, which normally comes from the

HRSG. The limited-use auxiliary boiler will have a maximum heat input of 99.8 MMBtu/hr firing natural gas. Table 2-4 presents performance and emissions information for the auxiliary boiler.

RBEC will be equipped with two, 100-percent capability, 2,250-kW emergency generators firing ultra low-sulfur light oil. These emergency generators will be used when electric power is not available. This primarily would occur during catastrophic events such as hurricanes. Table 2-5 contains emissions and manufacturer's information for the emergency generators proposed for the converted Plant. Normally these emergency generators would be operated 1 to 2 hours per month for maintenance and reliability testing.

RBEC will include one natural gas-fired fuel heater and a spare. These heaters will utilize a heat transfer fluid for heating the natural gas and be fired with only natural gas. These heaters will have a maximum heat input rate of 10 MMBtu/hr or less and will be used as necessary to heat natural gas above the dew point. Only one fuel heater will be necessary for the operation of RBEC. Table 2-6 contains performance and emissions information for the fuel heaters.

RBEC will be equipped with a 300-horsepower (hp) fire pump engine using ultra low-sulfur light oil. This engine will be used when necessary during catastrophic events such as fires. Table 2-7 presents emissions and manufacturer's information for the fire pump engine proposed for the converted Plant. Normally, this fire pump engine would be operated only 1 to 2 hours per month for maintenance and reliability testing.

RBEC may also include a gas compressor station at the Site to increase pressure from the existing FGT lateral to the CTs. The gas compressor station would include up to 7 gas compressors, which will be fired by natural gas and be equipped with oxidation catalysts to reduce the emissions of CO and VOCs. Table 2-8 presents performance and emissions information for the gas compressors.

Ultra low-sulfur light oil will be either trucked or barged to the Site and stored in a new fuel oil tank at the Site. This tank is a vertical fixed roof design, with a rated storage capacity of approximately 6.3 million gallons (150,000 barrels). Appendix A provides performance and emissions information for the fuel oil storage tank.

2.4 Annual Emissions for the Converted Plant Including Emission Reductions from the Existing Plant

The maximum annual potential emissions for RBEC include air emissions from the CT/HRSGs, fuel heater, emergency generators, auxiliary boiler, fire pump engine, fuel oil storage tank and gas compressor station. Tables 2-9A and 2-9B present the maximum annual potential RBEC emissions with the MPS 501G or equivalent and Siemens H CTs, respectively. These tables address the criteria pollutants, as required under new source review.

In addition, maximum annual potential hazardous air pollutants (HAPs) emissions are presented in Table 2-10 for the MPS 501G and Siemens H CTs. Additional detail on the HAP emission calculations is also presented in Appendix A. RBEC will not be a major source of HAP emissions, since maximum potential emissions are not projected to exceed 10 tons per year (TPY) of a single HAP, nor exceed 25 TPY for all HAPs.

Annual emissions were based on maximum emissions for baseload operation and ambient temperatures of 59°F. The maximum emissions are based on 7,760 hours firing natural gas and 1,000 hours per year firing oil, except for VOC emissions for the MPS 501G CTs, as discussed earlier, in Section 2.3 for which a plant-wide VOC emission cap is proposed. Natural gas firing includes 2,880 hours with maximum duct firing. The potential emissions are based on the 59°F turbine inlet temperature at 100-percent load condition since it represents a conservative average when the annual average temperatures are slightly higher than 70°F.

Tables 2-9A and 2-9B compare the net emission changes due to the Project, reflecting the maximum RBEC emissions as well as the emission reductions from retirement of the existing Riviera Plant, to the PSD significant emission rates. The PSD significant emission rates are the emission thresholds to determine if PSD review will be required for modifications to major sources. The historical actual emissions for the existing Riviera Plant that are presented in these tables were determined pursuant to FDEP PSD Rules, specifically Rule 62-212.400 (2)(a)1., F.A.C. Five years (2003 through 2007) of historical emission data were evaluated to determine historical actual emissions using the highest 2-year average emissions for each pollutant. Historical actual emissions are based on past Annual Operating Reports (AORs), which are presented in a series of tables in Appendix B for each unit for each year. In Tables 2-9A and 2-9B, the net emission changes (i.e., projected maximum potential emissions minus historical actual emissions) are compared to the PSD significant emission rates. If the PSD significant emission rate for a pollutant is not exceeded by this comparison, PSD review is

not required for that pollutant. This Application is being filed for the purpose of establishing federally-enforceable emission limitations that insure RBEC will not result in a significant net increase in emissions of any regulated air pollutant, in accordance with FDEP's federally-approved minor source air construction permit program under Florida's federally-required State Implementation Plan. As stated earlier in this report, FPL proposes to implement a plant-wide VOC emission cap with the MPS 501G CTs and to track and report annual VOC emissions from RBEC in accordance with 40 CFR 52.21(b)(33), which is adopted and incorporated by reference in Rule 62-204.800, F.A.C.

As shown in these tables, there are significant emission reductions for most pollutants. For SO_2, PM, particulate matter less than 10 microns (PM_{10}), and NO_x, annual emissions will be reduced by more than 90 percent with the converted Plant. Although annual VOC emissions will increase slightly, the change will be less than the PSD significant emission rate.

The net emission reductions for SO_2, NO_x, and PM_{10} as a result of the converted Plant are also graphically depicted in Figures 2-3 and 2-4. Figure 2-3 provides a graphical comparison of historical actual annual emissions (i.e., TPY) from the existing Riviera Plant with the projected maximum potential emissions resulting from RBEC. Figure 2-4 compares the maximum potential emission rates for RBEC with historical actual emission rates based on the amount of energy produced [i.e., a comparison on a pound per megawatt hour (lb/MW-hr) basis].

Significant reductions are shown to result from the converted Plant for emissions of SO_2, NO_x, and PM_{10}. This is in spite of the fact that historical actual emissions are based on a capacity factor of just over 40 percent, while projected emissions for RBEC are based on a 100 percent capacity factor. In addition, the converted Plant will have a nominal generating capacity of 1,250 MW at a location where a nominal 600 MW is now generated. The plant will use at least 33 percent less fuel for an equivalent amount of energy production. Moreover, it will be capable of producing about 100 percent more power based on anticipated summer capacities.

Based on this evaluation, the net emission changes for the converted Plant are less than the PSD significant emission rates for all pollutants. As such, PSD review is not required for RBEC. Nevertheless, as discussed in Section 4.0, the air emission controls are representative of best available control technology (BACT) emission limits that have been determined under PSD regulations for other similar combined cycle units [e.g., PSD-FL-396, July 30, 2008, for West County Energy Center (WCEC) Unit 3].

2.5 Site Layout, Structures, and Stack Sampling Facilities

A plot plan of RBEC is presented in Figure 2-1 for the 3-on-1 combined cycle configuration. North-south and east-west profiles of the CT/HRSG train are presented in Figures 2-5 and 2-6, respectively. The dimensions of the buildings and structures are presented in Section 6.0. Stack sampling facilities will be constructed in accordance with Rule 62-297.310(6), F.A.C.

2.6 Excess Emissions

The startup and shutdown and fuel changes in combined cycle operation will require an excess emission allowance greater than the 2 hours provided under the FDEP rules. During cold startup, the operating load of the CTs is limited by the amount of steam that can be accepted by the steam turbine. This will result in excess emissions. The same excess emission allowance is requested for RBEC that was authorized for the WCEC Project. The combined cycle units associated with these facilities have similar steam turbines that receive steam during startup (i.e., nominal 500 MW). The proposed condition follows:

> *"Excess Emissions Allowed: As specified in this condition, excess emissions resulting from startup, shutdown, oil-to-gas fuel switches and documented malfunctions are allowed provided that operators employ the best operational practices to minimize the amount and duration of emissions during such incidents. A "documented malfunction" means a malfunction that is documented within 1 working day of detection by contacting the Compliance Authority by telephone, facsimile transmittal, or electronic mail. For each gas turbine/HRSG system, excess emissions resulting from startup, shutdown, or documented malfunctions shall not exceed 2 hours in any 24-hour period except for the following specific cases.*
>
> *a. For cold startup of the steam turbine system, excess emissions from any gas turbine/HRSG system shall not exceed eight (8) hours in any 24-hour period. Cold startup of the steam turbine system shall be completed within 12 hours. A cold "startup of the steam turbine system" is defined as startup of the 3-on-1 combined cycle system following a shutdown of the steam turbine lasting at least 48 hours. {Permitting Note: During a cold startup of the steam turbine system, each gas turbine/HRSG system is sequentially brought on line at low load to gradually increase the temperature of the steam-electrical turbine and prevent thermal metal fatigue. Note that shutdowns and documented malfunctions are separately regulated in accordance with the requirements of this condition.}*
>
> *b. For shutdown of the steam turbine system, excess emissions from any gas turbine/HRSG system shall not exceed three hours in any 24-hour period.*
>
> *c. For cold startup of a gas turbine/HRSG system, excess emissions shall not exceed 4 hours in any 24-hour period. "Cold startup of a gas turbine/HRSG system" is defined as a startup after the pressure in the high-pressure steam*

drum falls below 450 pound per square inch gauge (psig) for at least a 1-hour period.

d. For fuel switching excess emissions shall not exceed 2 hours in any 24-hour period.

Ammonia injection shall begin as soon as operation of the gas turbine/HRSG system achieves the operating parameters specified by the manufacturer. As authorized by Rule 62-210.700(5), F.A.C., the above conditions allow excess emissions only for specifically defined periods of startup, shutdown, fuel switching, and documented malfunction of the gas turbines. [Design; Rules 62-212.400(BACT) and 62-210.700, F.A.C.]"

2.7 Siemens H CT Commissioning

The regulatory requirement for initial compliance determinations for NSPS units is as follows:

Initial compliance tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of the unit.

The proposed model turbine would be the first Siemens H turbine designed and manufactured for 60Hz operation. During commissioning of the Siemens H CTs for the Project, the first CT in the 3-on-1 configuration will undergo comprehensive commissioning and validation tests using a separate exhaust stack. This commissioning will require an extension of the requirements for initial testing of the first gas turbine to allow for an initial test period of up to three months. This first gas turbine will then be shut down for a month, undergo an inspection outage, and then may receive some new combustion components to be prepared for combined cycle operation. The entire 3-on-1 block will then go into normal startup activities that will be on the order of up to 180 days. Therefore, the maximum testing period required is three months, which would be in addition to normal start-up activities. Following testing, a short outage would occur for inspection and removal of the temporary stack, installation of the HRSG transition duct, then resumption of normal commissioning tests.

2.8 Construction Boiler

A temporary auxiliary boiler, rated at approximately 110 MMBtu/hr, will be brought onsite for use only during the construction of RBEC. The boiler will provide steam for HRSG cleaning and associated steam blows. The boiler will be fired with natural gas only and is expected to operate for no more than 150 hours per year. The boiler will be permanently shut down and removed once the RBEC commences commercial operation. As this boiler will have no affect on the total project

emissions once commercial operation commences, its emissions are not included in any of the project emissions summary tables. However, the boiler is fully described as Emission Unit 7 in the attached air application forms.

TABLE 2-1A
STACK, OPERATING, AND EMISSION DATA FOR THE COMBUSTION TURBINES/HRSGS AND DUCT BURNERS -NATURAL GAS COMBUSTION, MPS 501G CLASS CT

		Operating and Emission Data [a] for Ambient Temperature							
		Combustion Turbine/ HRSG				Combustion Turbine/ HRSG/ Duct Burner			
Parameter		**35 °F**	**59 °F**	**75 °F**	**95 °F**	**35 °F**	**59 °F**	**75 °F**	**95 °F**
CT/HRSG Stack Data (feet)					Compressors				
Height		149	149	149	149	149	149	149	149
Diameter		22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
100 Percent Load									
Temperature (^oF)		196	195	195	195	186	185	185	184
Velocity (ft/sec)		63.1	60.9	59.1	57.3	62.6	60.3	58.6	56.7
Maximum Hourly Emissions per CT									
SO_2	lb/hr	15.6	15.0	14.5	14.0	18.3	17.6	17.1	16.6
PM/PM_{10}	lb/hr	8.1	7.4	7.2	6.9	11.7	11.0	10.8	10.5
NO_x	lb/hr	20.1	19.3	18.7	18.0	23.6	22.8	22.1	21.5
CO	lb/hr	25.1	24.1	24.0	23.0	54.5	52.7	52.0	50.3
VOC (as methane)	lb/hr	4.2	4.1	4.0	3.8	6.6	6.4	6.2	6.0
Sulfuric Acid Mist	lb/hr	3.0	2.9	2.8	2.7	4.0	3.8	3.7	3.6
75 Percent Load									
Temperature (^oF)		184	185	186	187	NA	NA	NA	NA
Velocity (ft/sec)		50.4	48.7	47.4	46.0	NA	NA	NA	NA
Maximum Hourly Emissions per CT									
SO_2	lb/hr	12.0	11.5	11.1	10.6	NA	NA	NA	NA
PM/PM_{10}	lb/hr	6.2	6.0	5.9	5.8	NA	NA	NA	NA
NO_x	lb/hr	15.5	14.8	14.3	13.7	NA	NA	NA	NA
CO	lb/hr	48.0	45.5	44.0	42.0	NA	NA	NA	NA
VOC (as methane)	lb/hr	3.2	3.1	3.0	2.9	NA	NA	NA	NA
Sulfuric Acid Mist	lb/hr	2.34	2.23	2.16	2.06	NA	NA	NA	NA

[a] Refer to Appendix A for detailed information on basis of pollutant emission rates and operating data. Duct firing is assumed for 100% operating load. No duct firing is assumed for loads less than 100%.

Sources: MPS, 2008; Golder, 2008.

TABLE 2-1B
STACK, OPERATING, AND EMISSION DATA FOR THE COMBUSTION TURBINES/HRSGS AND DUCT BURNERS -NATURAL GAS COMBUSTION, SIEMENS H CT

		Operating and Emission Data [a] for Ambient Temperature							
		Combustion Turbine/ HRSG				Combustion Turbine/ HRSG/ Duct Burner			
Parameter		**35 °F**	**59 °F**	**75 °F**	**95 °F**	**35 °F**	**59 °F**	**75 °F**	**95 °F**
CT/HRSG Stack Data (feet)									
Height		149	149	149	149	149	149	149	149
Diameter		22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
100 Percent Load									
Temperature (^oF)		196	195	195	195	186	185	185	184
Velocity (ft/sec)		61.3	59.0	57.0	54.9	60.8	58.5	56.5	54.3
Maximum Hourly Emissions per CT									
SO_2	lb/hr	15.1	14.4	13.9	13.3	17.7	17.1	16.5	16.0
PM/PM_{10}	lb/hr	13.3	13.0	12.2	11.7	17.0	16.4	15.8	15.3
NO_x	lb/hr	20.0	19.1	18.4	17.6	23.5	22.6	21.9	21.1
CO	lb/hr	30.0	29.0	28.0	27.0	49.0	48.0	47.0	46.0
VOC (as methane)	lb/hr	5.1	4.8	4.7	4.5	7.4	7.2	7.0	6.8
Sulfuric Acid Mist	lb/hr	2.9	2.8	2.7	2.6	3.8	3.7	3.6	3.5
75 Percent Load									
Temperature (^oF)		184	185	186	187	NA	NA	NA	NA
Velocity (ft/sec)		49.3	47.3	45.8	43.9	NA	NA	NA	NA
Maximum Hourly Emissions per CT									
SO_2	lb/hr	12.1	11.4	10.9	10.2	NA	NA	NA	NA
PM/PM_{10}	lb/hr	11.0	11.0	9.9	9.4	NA	NA	NA	NA
NO_x	lb/hr	16.1	15.0	14.4	13.5	NA	NA	NA	NA
CO	lb/hr	49.0	46.0	44.0	41.0	NA	NA	NA	NA
VOC (as methane)	lb/hr	4.1	3.8	3.6	3.4	NA	NA	NA	NA
Sulfuric Acid Mist	lb/hr	2.36	2.21	2.11	1.99	NA	NA	NA	NA

[a] Refer to Appendix A for detailed information on basis of pollutant emission rates and operating data. Duct firing is assumed for 100% operating load. No duct firing is assumed for loads less than 100%.

Source: Siemens, 2008; CT Performance Data; Golder, 2008.

TABLE 2-2A
STACK, OPERATING, AND EMISSION DATA FOR THE COMBUSTION TURBINES/HRSGS - ULTRA LOW-SULFUR LIGHT OIL COMBUSTION, MPS 501G CLASS CT

		Operating and Emission Data [a] for Ambient Temperature			
		Combustion Turbine/ HRSG			
Parameter		**35 °F**	**59 °F**	**75 °F**	**95 °F**
CT/HRSG Stack Data (feet)					
Height		149	149	149	149
Diameter		22	22	22	22
100 Percent Load					
Temperature (^oF)		359	357	355	354
Velocity (ft/sec)		79.4	75.6	72.9	69.6
Maximum Hourly Emissions per CT					
SO_2	lb/hr	3.8	3.6	3.4	3.2
PM/PM_{10}	lb/hr	38.8	36.7	35.3	33.4
NO_x	lb/hr	77.1	72.6	69.6	65.9
CO	lb/hr	47.0	44.2	43.0	40.1
VOC (as methane)	lb/hr	20.1	18.9	18.1	17.2
Lead	lb/hr	0.033	0.031	0.029	0.028
Sulfuric Acid Mist	lb/hr	0.74	0.69	0.67	0.63
75 Percent Load					
Temperature (^oF)		350	348	346	345
Velocity (ft/sec)		75.9	73.0	70.9	68.2
Maximum Hourly Emissions per CT					
SO_2	lb/hr	3.0	2.8	2.7	2.6
PM/PM_{10}	lb/hr	37.7	36.1	34.9	33.3
NO_x	lb/hr	60.0	57.0	54.9	52.5
CO	lb/hr	228.3	217.0	209.0	200.0
VOC (as methane)	lb/hr	26.1	24.8	23.9	22.8
Lead	lb/hr	0.025	0.024	0.023	0.022
Sulfuric Acid Mist	lb/hr	0.58	0.55	0.53	0.50

[a] Refer to Appendix A for detailed information on basis of pollutant emission rates and operating data.

Sources: MPS, 2008; Golder, 2008.

TABLE 2-2B
STACK, OPERATING, AND EMISSION DATA FOR THE COMBUSTION TURBINES/HRSGS - ULTRA LOW-SULFUR LIGHT OIL COMBUSTION, SIEMENS H CT

		Operating and Emission Data [a] for Ambient Temperature			
		Combustion Turbine/ HRSG			
Parameter		**35 °F**	**59 °F**	**75 °F**	**95 °F**
CT/HRSG Stack Data (feet)					
Height		149	149	149	149
Diameter		22	22	22	22
100 Percent Load					
Temperature (^oF)		359	357	355	354
Velocity (ft/sec)		77.8	73.5	70.5	66.6
Maximum Hourly Emissions per CT					
SO_2	lb/hr	3.9	3.7	3.5	3.3
PM/PM_{10}	lb/hr	0.0	0.0	0.0	0.0
NO_x	lb/hr	85.3	80.0	76.2	71.4
CO	lb/hr	65.0	61.0	58.0	54.0
VOC (as methane)	lb/hr	7.4	7.0	6.6	6.2
Lead	lb/hr	0.036	0.034	0.032	0.030
Sulfuric Acid Mist	lb/hr	0.77	0.72	0.69	0.64
75 Percent Load					
Temperature (^oF)		350	348	346	345
Velocity (ft/sec)		61.9	59.2	57.2	54.6
Maximum Hourly Emissions per CT					
SO_2	lb/hr	3.2	3.0	2.9	2.7
PM/PM_{10}	lb/hr	30.0	30.0	30.0	30.0
NO_x	lb/hr	69.1	64.8	61.9	58.1
CO	lb/hr	53.0	49.0	47.0	44.0
VOC (as methane)	lb/hr	6.0	5.6	5.4	5.1
Lead	lb/hr	0.029	0.028	0.026	0.025
Sulfuric Acid Mist	lb/hr	0.63	0.59	0.56	0.53

[a] Refer to Appendix A for detailed information on basis of pollutant emission rates and operating data.

Source: Siemens, 2008; CT Performance Data; Golder, 2008.

TABLE 2-3A
SUMMARY OF MAXIMUM POTENTIAL ANNUAL EMISSIONS FOR THE CTS/HRSG, MPS 501G CLASS CT

	Maximum Hourly Emissions (lb/hr) [a]			Maximum Emissions (tons/year)					
	Combined Cycle (CC)			Operating Scenario	Operating Hours				
				CC/ NG 100 % Load	8,760	7,760	5,880	5,030	4,880
Fuel:	NG	NG	Oil	CC/ DB /NG100 % Load	0	1,000	2,880	2,880	2,880
Temp & Load:	59 °F, 100%	59 °F, 100% w/DB	59 °F, 100%	CC/OIL 100 % Load [b]	0	0	0	850	1,000
Pollutant				**TOTAL**	**8,760**	**8,760**	**8,760**	**8,760**	**8,760**
One Combustion Turbine									
SO_2	15.0	17.6	3.6		65.6	66.9	69.5	64.6	63.7
PM/PM_{10}	7.4	11.0	36.7		32.5	34.3	37.7	50.2	52.4
NO_x	19.3	22.8	72.6		84.6	86.3	89.6	112.2	116.2
CO	24.1	52.7	44.2		105.6	119.8	146.7	155.2	156.7
VOC (as methane)	4.1	6.4	18.9		17.9	19.0	21.2	27.5	28.6
Sulfuric Acid Mist	2.9	3.8	0.7		12.8	13.2	14.1	13.1	13.0
HAPs	1.16	1.37	2.87		5.1	5.2	5.4	6.1	6.2
Lead	0.00	0.00	0.031		0.0	0.0	0.0	0.013	0.015
Three Combustion Turbines									
SO_2	44.9	52.9	11		197	201	208	194	191
PM/PM_{10}	22.3	33.1	110		97.6	103.0	113.1	150	157
NO_x	57.9	68.3	218		254	259	269	337	349
CO	72.3	158	133		317	359	440	466	470
VOC (as methane)	12.2	19.1	56.8		53.6	57.1	63.5	82.5	85.8
Sulfuric Acid Mist	8.7	11.5	2.1		38.3	39.7	42.2	39.4	38.9
HAPs	3.48	4.11	8.62		15.26	15.57	16.16	18.3	18.7
Lead	0.00	0.00	0.092		0.000	0.000	0.000	0.039	0.046

[a] Based on 59 ^{o}F ambient inlet air temperature .

[b] Based on oil-firing up to: 1,000 hours (maximum).

Sources: MPS, 2008; Golder, 2008.

TABLE 2-3B

SUMMARY OF MAXIMUM POTENTIAL ANNUAL EMISSIONS FOR THE CTS/HRSG, SIEMENS H CTS

	Maximum Hourly Emissions (lb/hr) [a]			Maximum Emissions (TPY)					
	Combined Cycle (CC)			Operating Scenario	Operating Hours				
				CC/ NG 100 % Load	8,760	7,760	5,880	4,880	5,280
Fuel:	**NG**	**NG**	**Oil**	CC/ DB /NG100 % Load	0	1,000	2,880	2,880	2,480
Temp & Load:	**59 °F, 100%**	**59 °F, 100% w/DB**	**59 °F, 100%**	CC/ OIL 100 % Load [b]	0	0	0	1,000	1,000
Pollutant				TOTAL	8,760	8,760	8,760	8,760	8,760
One Combustion Turbine									
SO_2	14.4	17.1	3.7		63.3	64.6	67.1	61.7	61.2
PM/PM_{10}	13.0	16.4	0.0		56.9	58.6	61.8	55.3	54.6
NO_x	19.1	22.6	80.0		83.7	85.5	88.8	119.2	118.5
CO	29.0	48.0	61.0		127.0	136.5	154.4	170.4	166.6
VOC (as methane)	4.8	7.2	7.0		21.2	22.4	24.6	25.7	25.2
Sulfuric Acid Mist	2.8	3.7	0.7		12.3	12.8	13.6	12.6	12.4
HAPs	1.12	1.33	2.99		4.9	5.0	5.2	6.1	6.1
Lead	0.00	0.00	0.034		0.0	0.0	0.0	0.017	0.017
Three Combustion Turbines									
SO_2	43.3	51.3	11		190	194	201	185	184
PM/PM_{10}	39.0	49.2	0		170.8	175.9	185.5	166	164
NO_x	57.4	67.9	240		251	257	266	358	356
CO	87.0	144	183		381	410	463	511	500
VOC (as methane)	14.5	21.7	21.0		63.6	67.2	73.9	77.1	75.7
Sulfuric Acid Mist	8.4	11.2	2.2		36.9	38.3	40.9	37.7	37.2
HAPs	3.36	3.98	8.96		14.70	15.01	15.60	18.4	18.3
Lead	0.00	0.00	0.101		0.000	0.000	0.000	0.050	0.050

[a] Based on 59 ^{o}F ambient inlet air temperature .

[b] Based on oil-firing up to 1,000 hours (maximum).

Sources: Siemens, 2008; Golder, 2008.

TABLE 2-4
PERFORMANCE, STACK PARAMETERS, AND EMISSIONS
FOR THE AUXILIARY BOILER

Parameter	Auxiliary Boiler
Performance	
Heat Input (MMBtu/hr-HHV)[a]	99.77
Fuel	Natural gas
Heat Content (HHV-Btu/scf)	1,055
Fuel Usage (scf/hr-boiler)	94,569
Rating (lb steam/hr-boiler)[a]	85,000
Maximum Hours per Year	500
Maximum Fuel Usage (scf/yr)	47,284,360
Exhaust Flow[a]	
Mass Flow (lb/hr)	88,066
Molecular Weight	27.62
Moisture (%)	18.17
Stack Parameters[a]	
Diameter (ft)	2.75
Height (ft)	60
Temperature (^{o}F)	296
Velocity (ft/sec)	82
Flow (acfm)	29,325
Emissions	
SO_2 -Basis (grains S/100 scf-gas) [b]	2
(lb/hr)	0.54
(tpy)	0.14
NO_x - (lb/MMBtu) [a]	0.050
(lb/hr)	4.99
(tpy)	1.25
CO - (lb/MMBtu) [a]	0.080
(lb/hr)	7.98
(tpy)	2.00
VOC - (lb/mmBtu) [c]	0.005
(lb/hr)	0.52
(tpy)	0.13
PM/PM10 - (lb/mmBtu) [c]	0.007
(lb/hr)	0.70
(tpy)	0.17

[a] Nebraska Boiler (2005); Golder Associates, (2005); Values are typical.

[b] Typical maximum sulfur content for natural gas

[c] Emissions based on EPA, 1996 (AP-42, Tables 1.4-1 and 1.4-2).

TABLE 2-5
PERFORMANCE AND EMISSION DATA FOR THE EMERGENCY GENERATORS

Parameter		Emergency Generator
Performance		
Number of Units		2
Rating (kW)		2,250
Rating (hp)		3,200
Fuel		Diesel
Fuel Heat content (Btu/lb) (HHV)		19,300
Fuel density (lb/gal)		7.0
Heat input (MMBtu/hr) (HHV)		21.01
Fuel usage (gallons/hr)		155.5
Maximum operation (hours)		160
Maximum fuel usage (gallons/yr)		24,880
Emissions		
SO_2 -	Basis (%S)	0.0015%
	Conversion of S to SO_2	100
	Molecular weight SO_2/ S (64/32)	2
	Emission rate (lb/hr)	0.03
	(tpy)- one unit	0.003
	(tpy)- total units	0.005
NO_x -	Basis (g/hp-hr)	6.9
	Emission rate (lb/hr)	48.7
	(tpy)- one unit	3.89
	(tpy)- total units	7.79
CO -	Basis (g/hp-hr)	8.5
	Emission rate (lb/hr)	60.0
	(tpy)- one unit	4.80
	(tpy)- total units	9.59
VOC -	Basis (g/hp-hr)	1.0
	Emission rate (lb/hr)	7.1
	(tpy)- one unit	0.56
	(tpy)- total units	1.13
PM/PM_{10} -	Basis (g/hp-hr)	0.4
	Emission rate (lb/hr)	2.8
	(tpy)- one unit	0.23
	(tpy)- total units	0.45

Sources: FPL, Golder; 2008.

TABLE 2-6
PERFORMANCE, STACK PARAMETERS, AND EMISSIONS FOR THE NATURAL GAS FUEL HEATER

	Natural Gas Heater
Performance[a]	
Fuel Usage (scf/hr-gas)	9,479
Heat Input (MMBtu/hr-HHV)	10.00
Hours per Year	8,760
Maximum Fuel Usage (MMscf/yr)	83.03
Number of Units	1
Stack Parameters (typical)	
Diameter (ft)	1
Height (ft)	30
Temperature (^{o}F)	500
Velocity (ft/sec)	53
Flow (acfm)	4,950
Emissions	
SO_2 -Basis (grains S/100 scf-gas)[b]	2
(lb/hr)	0.054
(lb/MMBtu)	0.0054
(tpy) - one unit	0.24
(tpy) - total units	0.24
NO_x - (lb/MMscf)[c]	100
(lb/hr)	0.95
(lb/MMBtu)	0.095
(tpy) - one unit	4.2
(tpy) - total units	4.2
CO - (lb/MMscf)[c]	84
(lb/hr)	0.80
(lb/MMBtu)	0.080
(tpy) - one unit	3.49
(tpy) - total units	3.49
VOC - (lb/MMscf)[c]	5.5
(lb/hr)	0.05
(lb/MMBtu)	0.005
(tpy) - one unit	0.23
(tpy) - total units	0.23
PM/PM10 - (lb/MMscf)[d]	1.9
(lb/hr)	0.02
(lb/MMBtu)	0.002
(tpy) - one unit	0.079
(tpy) - total units	0.079

Note: Project will also have spare heater.

[a] Based on 10 MMBtu/hr (HHV) indirect gas heaters from Hanover Compression Company or equivalent.

[b] Typical maximum for natural gas.

[c] EPA, AP-42 Table 1.4-1 using small boilers < 100 MMBtu.hr and Table 1.4-2.

[d] EPA, AP-42 Table 1.4-2 Filterable PM.

TABLE 2-7
ESTIMATED PERFORMANCE AND EMISSION DATA FOR THE FIRE PUMP ENGINE

Parameter		Fire Pump Engine
Performance		
Number		1
Rating (hp)		300
Fuel		Diesel
Fuel Heat content (Btu/lb) (HHV)		19,300
Fuel density (lb/gal)		7.0
Heat input (MMBtu/hr)[a] (HHV)		2.32
Fuel usage (gallons/hr)		17.2
Maximum operation (hours)		80
Maximum fuel usage (gallons/yr/unit)		1,376
Maximum fuel usage (gallons/yr)		1,376
Stack Parameters		
Number of Stacks		1
Exhaust Flow (cfm)		1,750
Stack Velocity (ft/sec)		60
Exhaust Temperature (^oF)		744
Stack Height (ft)		17
Stack Diameter (ft)		0.79
Emissions		
SO_2 -	Basis (%S)	0.0015%
	Conversion of S to SO_2	100
	Molecular weight SO_2/ S (64/32)	2
	Emission rate (lb/hr)	0.0036
	(tpy/diesel engine)	0.00014
	(tpy)	0.00014
NO_x -	Basis (g/hp-hr)[b]	6.8
	Emission rate (lb/hr)	4.50
	(tpy/diesel engine)	0.180
	(tpy)	0.180
CO -	Basis (g/hp-hr)[b]	2.6
	Emission rate (lb/hr)	1.7
	(tpy/diesel engine)	0.069
	(tpy)	0.069
VOC -	Basis (g/hp-hr)[b]	1.0
	Emission rate (lb/hr)	0.66
	(tpy/diesel engine)	0.026
	(tpy)	0.026
PM/PM_{10} -	Basis (g/hp-hr)[b]	0.4
	Emission rate (lb/hr)	0.26
	(tpy/diesel engine)	0.011
	(tpy)	0.011

[a] 2000 gpm fire pump; 300 ft head NFPA 20 Certified; Fairbanks Morse Fire Pumps, 2008

[b] Emissions based on 40 CFR Part 60 Subpart IIII.

TABLE 2-8
PERFORMANCE AND EMISSION DATA FOR THE GAS COMPRESSORS

Parameter				
Performance				
Engine Make/Model	Caterpillar/ G3516	Total	Caterpillar/ G3516	Total
Number of Units	1	7	1	7
Engine Configuration	4 Stroke Lean-Burn		4 Stroke Lean-Burn	
Design Rating (hp) - provided	1,340	9,380	1,340	9,380
Fuel	Natural Gas		Natural Gas	
Fuel Heat Content (Btu/scf) (HHV)	1,020		1,020	
Engine Heat Rate (Btu/hp-hr) - provided	7,545		7,545	
Heat input (MMBtu/hr) (HHV)	10.11	70.77	10.11	70.77
Maximum operation (hours)/engine	7,910		8,760	
Maximum Fuel Usage (MMscf/hr)	0.0099	0.0694	0.0099	0.0694
Maximum Fuel Usage (MMscf/yr)	78.40	548.8	86.83	607.8
Stack Parameters				
Height (ft)	40		40	
Diameter (ft)	1.00		1	
Temperature (^{o}F)	854		854	
Flow (acfm)	7,651		7651	
Velocity (ft/sec)	162.4		162.4	
Emissions				
SO_2 - Basis (grains/100 scf)	2		2	
Conversion of S to SO_2	100		100	
Ratio Molecular weight SO_2/ S (64/32)	2		2	
Emission rate (lb/hr)	0.057	0.40	0.057	0.40
(tpy)	0.224	1.57	0.248	1.74
NO_x - Basis (g/hp-hr) [a]	1.5		1.5	
Emission rate (lb/hr)	4.43	31.02	4.43	31.02
(tpy)	17.53	122.7	19.41	135.9
CO - Basis (g/hp-hr)- Uncontrolled [a]	1.90		1.90	
- Controlled	0.10		0.10	
Control- oxidation catalyst: efficiency	95%		95%	
Emission rate (lb/hr)	0.28	1.96	0.28	1.96
(tpy)	1.11	7.77	1.23	8.60
VOC - Basis (g/hp-hr)- Uncontrolled [a]	0.31		0.31	
- Controlled	0.16		0.16	
Control- oxidation catalyst: efficiency	50%		50%	
Emission rate (lb/hr)	0.46	3.21	0.46	3.21
(tpy)	1.81	12.68	2.01	14.04
PM/PM_{10} - Basis (lb/MMBtu) [b]	0.00999		0.00999	
Emission rate (lb/hr)	0.101	0.71	0.101	0.71
(tpy)	0.40	2.80	0.44	3.10

Sources: FPL, 2008; Golder; 2008.

[a] Manufacturer's specification

[b] Based on EPA AP-42, Volume I, August 2000. Table 3.2-2, Uncontrolled Emission Factors for 4-Stroke Lean-Burn Engines.

TABLE 2-9A
SUMMARY OF MAXIMUM POTENTIAL ANNUAL EMISSIONS FOR THE RBEC CONVERSION PROJECT, MPS 501G CLASS CTS

	RBEC Conversion Project Maximum Potential Annual Emissions (TPY)								Netting Calculations		
Pollutant	3 CTs/HRSGs with Duct Burners [b]	Auxiliary Boiler [c]	2 Emergency Generators	1 Natural Gas Heater	7 Gas Compressors	Fuel Oil Storage Tank	Fire Pump Engine	TOTAL	Maximum 2-Year Average from Existing Units [a] (TPY)	Change (TPY)	PSD Significant Emission Rate (TPY)
SO_2	208	0.14	0.005	0.24	1.74	NA	0.00014	210	10,999	-10,789	40
PM	157	0.17	0.45	0.08	3.10	NA	0.011	161	889	-728	25
PM_{10}	157	0.17	0.45	0.08	3.10	NA	0.011	161	889	-728	15
NO_x	349	1.25	7.79	4.15	135.9	NA	0.18	498	3,752	-3,255	40
CO	470	2.00	9.59	3.49	8.6	NA	0.069	494	560	-66	100
VOC (as methane)	82.5 [d]	0.13	1.13	0.23	12.7	2.40	0.026	99.1	59.4	39.7	40
Sulfuric Acid Mist	42.2	Neg.	Neg.	Neg.	Neg.	NA	Neg.	42.2	489.2	-447	7
Lead	0.046	Neg.	Neg.	Neg.	Neg.	NA	Neg.	0.046	0.12	-0.071	0.6

[a] Based on actual emissions from Annual Operating Reports from 2003-2007.

[b] Based on oil-firing for 1,000 hr/yr, except for VOC.

[c] An auxiliary boiler is only required to supply steam to the MPS 501G1 CT during startup.

[d] VOC emissions reflect worst-case of 850 hr/yr of oil-firing and replacing the same number of hours for the compressors.

Note: Neg.= negligible; NA= not applicable

Source: Golder, 2008.

TABLE 2-9B
SUMMARY OF MAXIMUM POTENTIAL ANNUAL EMISSIONS FOR THE RBEC CONVERSION PROJECT, SIEMENS H CTS

	RBEC Conversion Project Maximum Potential Annual Emissions (TPY)							Netting Calculations		
Pollutant	**3 CTs/HRSGs with Duct Burners [b]**	**2 Emergency Generators**	**1 Natural Gas Heater**	**4 Gas Compressors**	**Fuel Oil Storage Tank**	**Fire Pump Engine**	**TOTAL**	**Maximum 2-Year Average from Existing Units [a] (TPY)**	**Change (TPY)**	**PSD Significant Emission Rate (TPY)**
SO_2	201	0.005	0.24	0.99	NA	0.00014	203	10,999	-10,797	40
PM	185	0.45	0.08	1.77	NA	0.011	188	889	-701	25
PM_{10}	185	0.45	0.08	1.77	NA	0.011	188	889	-701	15
NO_x	358	7.8	4.15	77.6	NA	0.18	447	3,752	-3,305	40
CO	511	9.6	3.49	4.9	NA	0.069	529	560	-30.5	100
VOC (as methane)	77.1	1.13	0.23	8.0	2.80	0.026	89.3	59.4	30.0	40
Sulfuric Acid Mist	40.9	Neg.	Neg.	Neg.	NA	Neg.	40.9	489	-448	7
Lead	0.050	Neg.	Neg.	Neg.	NA	Neg.	0.050	0.12	-0.066	0.6

[a] Based on actual emissions from Annual Operating Reports from 2003-2007.

[b] Based on oil-firing for: 1,000 hours.

Note: Neg.= negligible; NA= not applicable

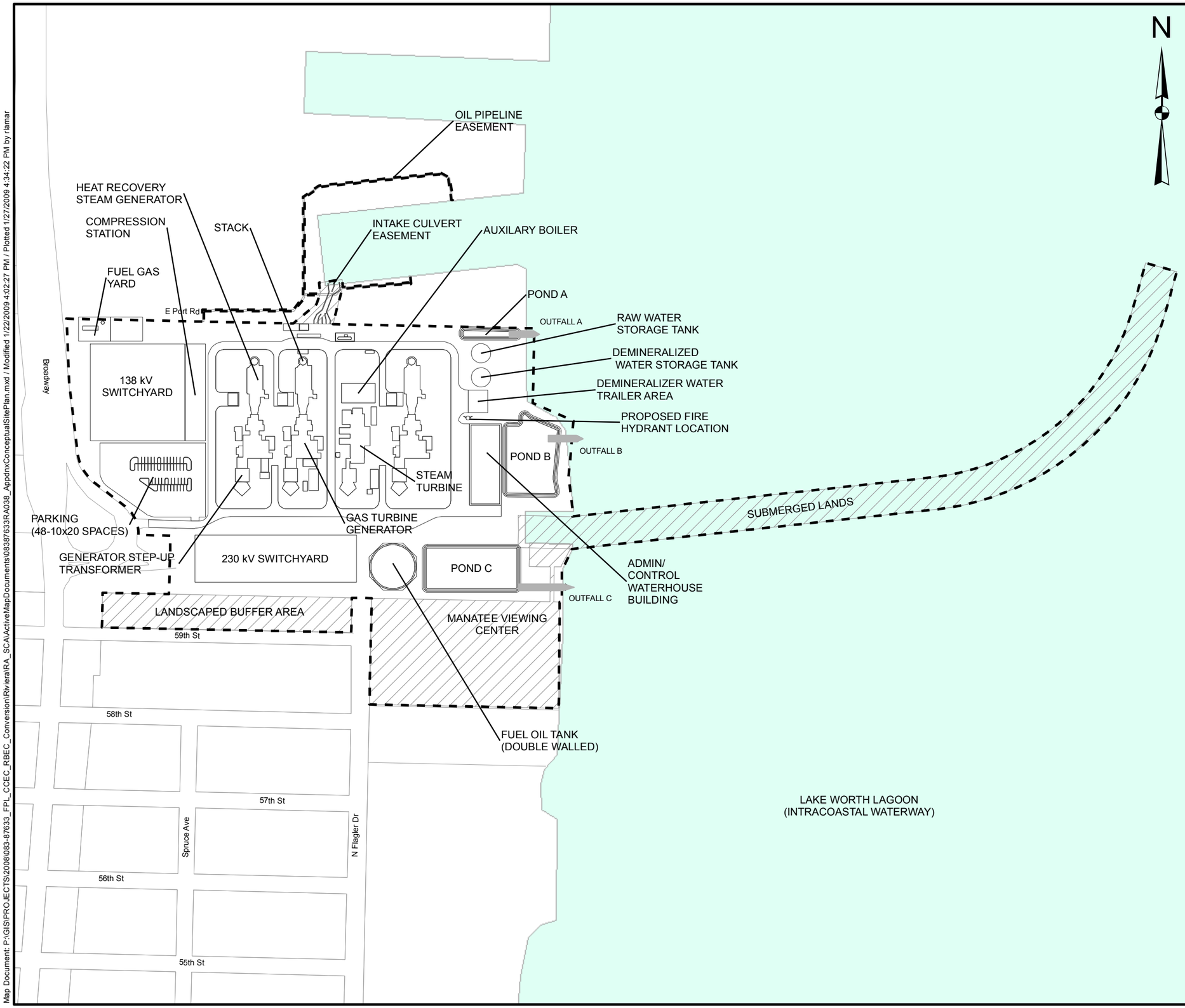
Source: Golder, 2008.

TABLE 2-10
SUMMARY OF MAXIMUM POTENTIAL ANNUAL HAP EMISSIONS FOR RBEC

	Maximum Potential Annual Emissions (TPY)								
Pollutant	**3 CTs/HRSGs with Duct Burners**	**Auxiliary Boiler**	**2 Emergency Generators**	**1 Natural Gas Heater**	**4 Gas Compressors**	**Fuel Oil Storage Tank**	**Fire Pump Engine**	**TOTAL**	**HAP Major Source Threshold (TPY)**
MPS 501G CTs									
Total HAPs	18.70	0.0021	0.005	0.004	0.65	NA	0.00014	19.36	25
Single HAP	7.92	0.0018	0.0003	0.003	0.47	NA	0.00001	8.39	10
Siemens H CTs									
Total HAPs	18.40	NA	0.005	0.004	0.65	NA	0.00014	19.06	25
Single HAP	7.71	NA	0.000	0.003	0.47	NA	0.00001	8.18	10

Note: NA= not applicable.

Source: Golder, 2008.



LEGEND

FPL Riviera Beach Energy Center (To Be Certified)

REFERENCES

1. FPL Riviera Beach Energy Center (to be certified), FPL, 2009.
2. Conceptual Site Plan, FPL drawing srw100002s1.dwg, 2008.
3. Stormwater, Boyle Engineering Corp. Post Development Detention Areas Siting Exhibit, 2008.

250 125 0 250 Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
RIVIERA BEACH ENERGY CENTER

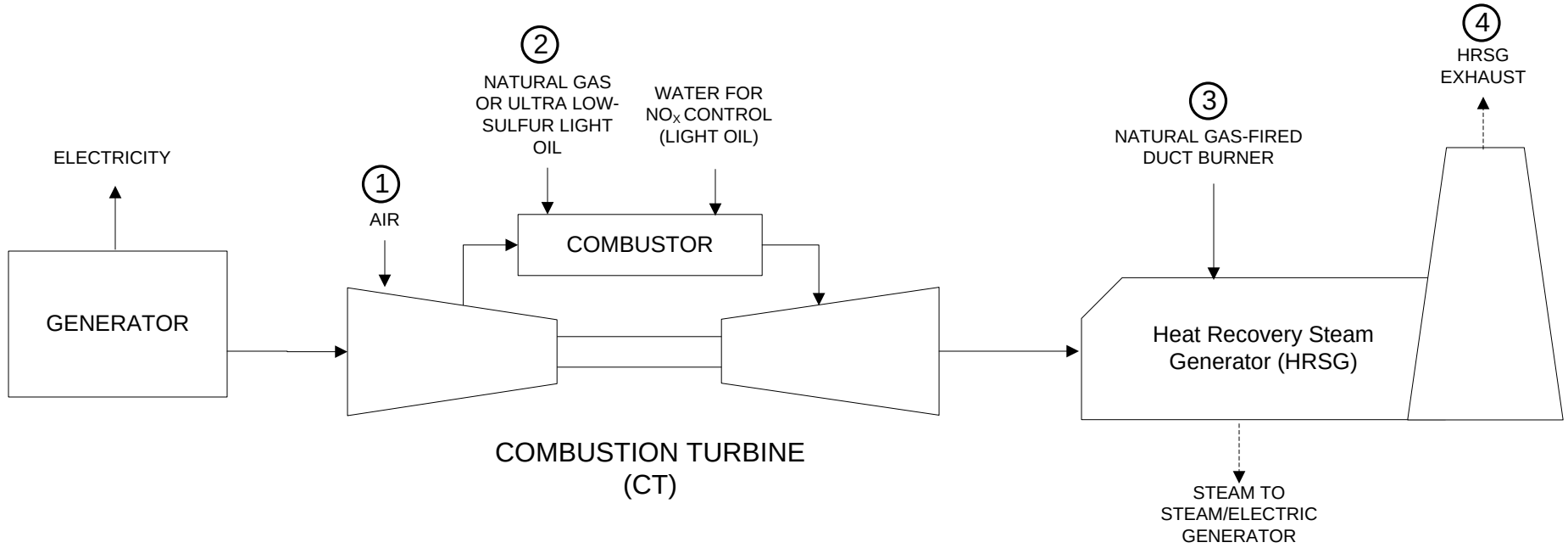
TITLE

CONCEPTUAL SITE PLAN

FPL

PROJECT No.		083-87633	FILE No.	08387633RA038
DESIGN	RCM	1/21/2009	SCALE: AS SHOWN	REV. 0
GIS	NRL	1/22/2009		
CHECK	RCM	1/22/2009		
REVIEW	KFK	1/27/2009		

FIGURE 2-1



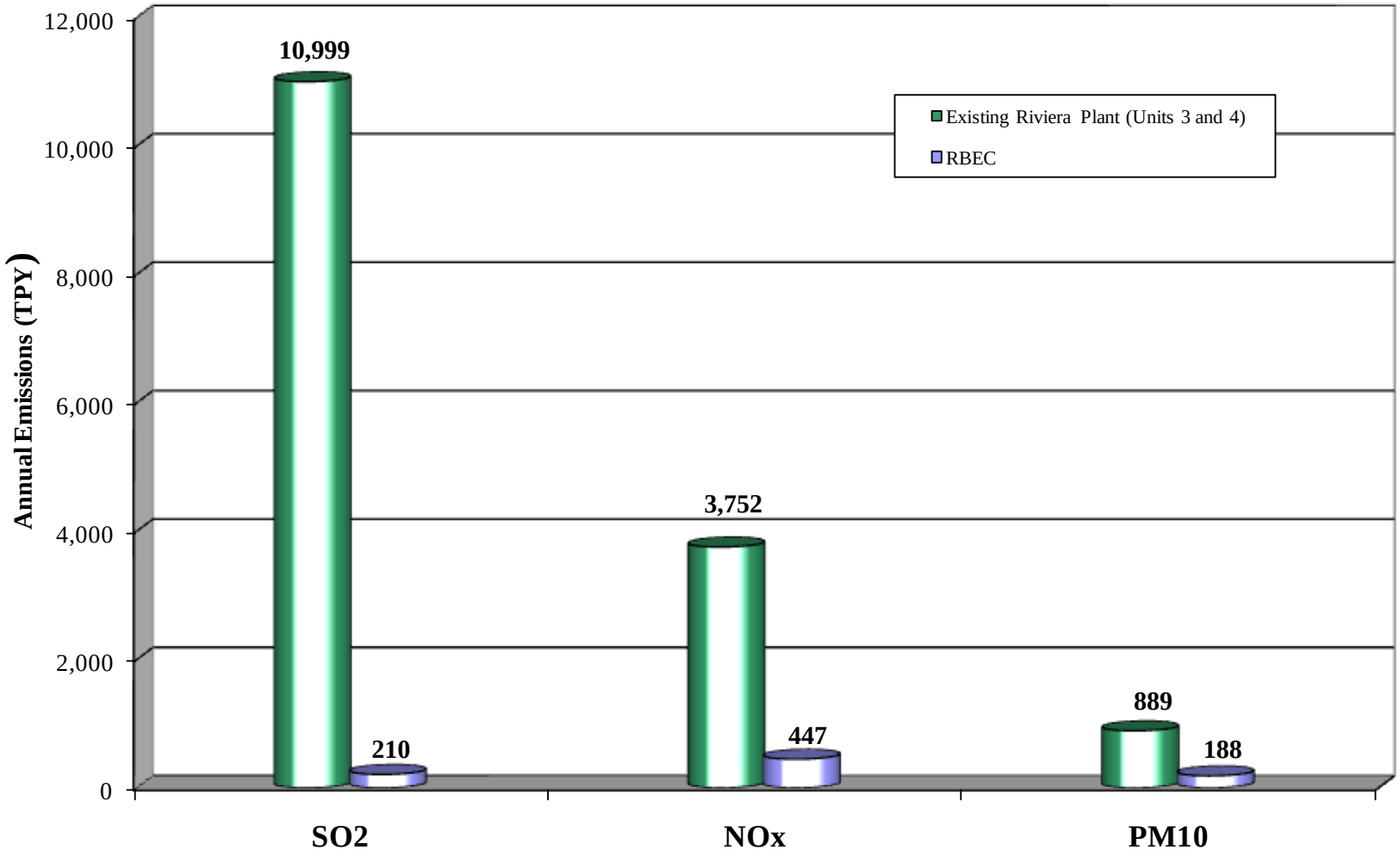
	Parameters	Units	Fuel	MPS 501G Class	Siemens H
1	Inlet Air	lb/hr	Gas	4,928,000	4,769,000
		lb/hr	Oil	4,948,500	4,814,400
2	CT Heat Input	MMBtu/hr (HHV)	Gas	2,671	2,577
		MMBtu/hr (HHV)	Oil	2,318	2,404
3	DB Heat Input	MMBtu/hr (HHV)	Gas (Only)	475	475
4	HRSG Velocity	ft/sec w/o DB	Gas	60.9	59.0
		ft/sec w/o DB	Oil	75.6	74
4	HRSG Temperature	^{o}F	Gas	195	195
		^{o}F	Oil	357	357
4	HRSG Stack Height	feet	Gas/Oil	149	149
4	HRSG Stack Diameter	feet	Gas/Oil	22	22

Figure 2-2. Process Flow Diagram for Each CT/HRSG Train
Baseload Operation, Turbine Inlet Temperature of 59°F
FPL Riviera Beach Energy Center, Palm Beach County, Florida
08387633/Riviera Beach/SCA/Draft/Appendix 10.2.5/Figure 2-2.vsd

Source: MPS, 2008; Golder, 2008.

Process Flow Legend
Solid/Liquid
Gas
Steam

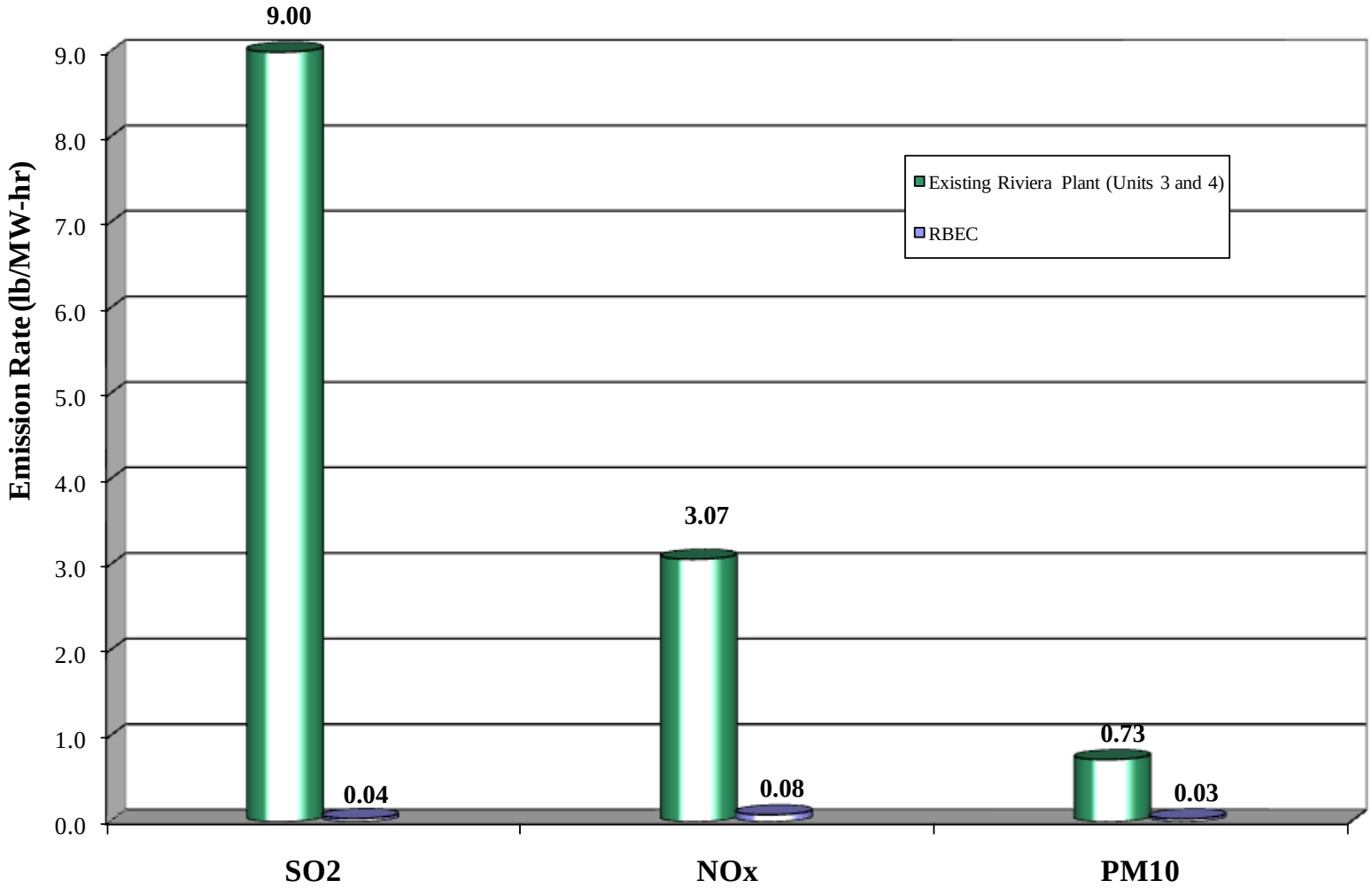
FPL



Notes: Emissions for Existing Riviera based on 2004 and 2005 operation and AOR data (43.1% capacity factor) .
Emissions for RBEC based on 100% capacity factor on firing natural gas and light oil; 7,760 hours on gas and 1,000 hours of o il at full load. Based on proposed performance and emission limits..
Nominal Capacity: existing Plant = 600 MW; RBEC = 1,250 MW

Figure 2-3
Comparison of Historical Actual SO_2, NO_x, and PM_{10} Annual Emissions (TPY) for the Existing Riviera Plant Compared to Projected Maximum Potential Annual Emissions (TPY) for RBEC
Fig 2-3.docx

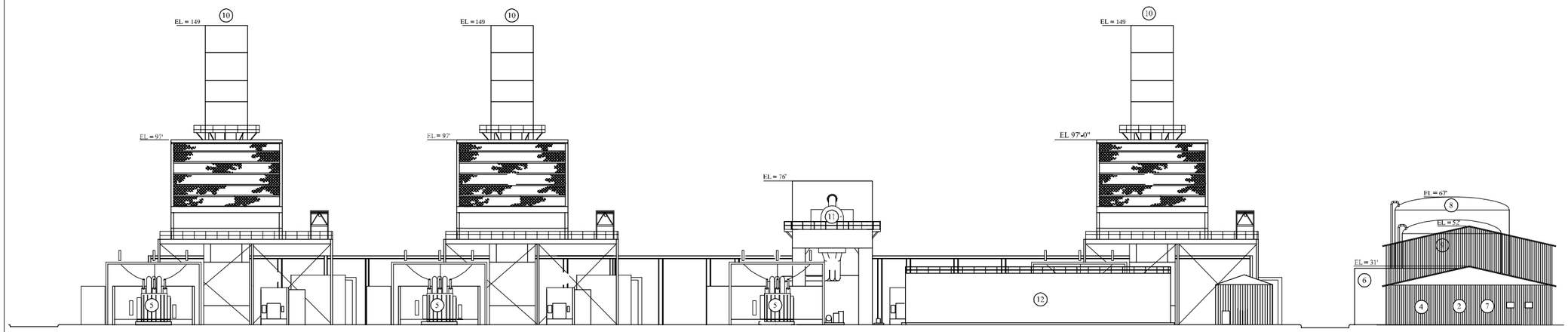
Source: Golder, 2008.



Notes: Emissions for Existing Riviera Plant based on 2004 and 2005 operation and AOR data (43.1% capacity factor).
Emissions for RBEC based on 100% capacity factor on firing natural gas and light oil; 7,760 hours on gas and 1,000 hours of oil at full load. Based on proposed performance and emission limits.
Nominal Capacity: existing = 600 MW; 3-on-1 = 1,250 MW

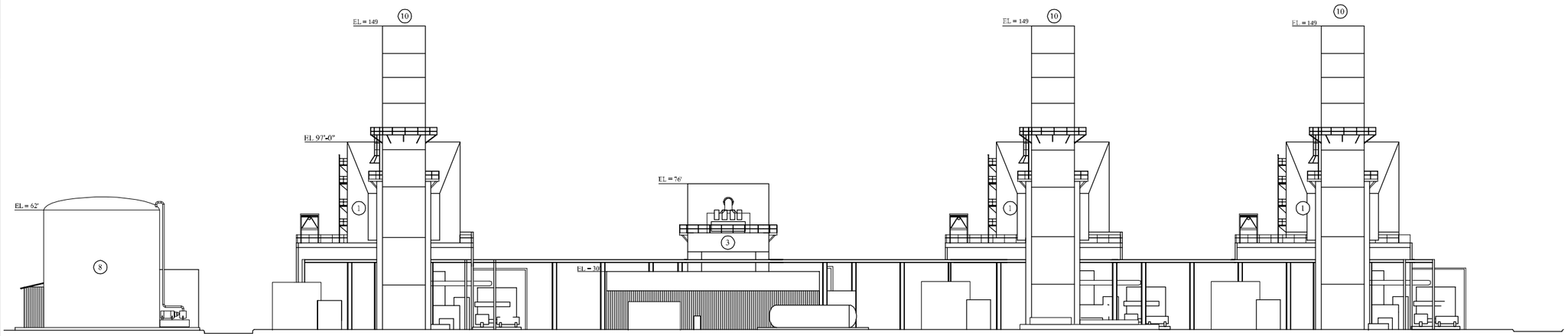
Figure 2-4
Comparison of Historical Actual SO_2, NO_x, and PM_{10} Emission Rates (lb/MW-hr) for the Existing Riviera Plant Compared to Projected Maximum Potential Emission Rates (lb/MW-hr) for RBEC
Fig 2-4.docx

Source: Golder, 2008.



SOUTH ELEVATION

LOOKING NORTH



NORTH ELEVATION

LOOKING SOUTH

30 0 15 30 45 60

SCALE

SCALE IN FEET

GENERAL NOTES

1. ALL SIZES AND ELEVATIONS ARE APPROXIMATE.
2. ANTICIPATED STACK HEIGHT NOT TO EXCEED 200'; DETERMINED BY ENVIRONMENTAL REGULATIONS.
3. ALL ACREAGES AND LOCATIONS OF STRUCTURES WITHIN THE SITE PLAN ARE APPROXIMATE AND CONCEPTUAL. THE ACREAGES AND LOCATIONS OF STRUCTURES WITHIN THE SITE PLAN MAY BE MODIFIED PURSUANT TO THE POWER PLANT SITING ACT, SECTION 403.501, FLORIDA STATUTES.
4. BUILDING PERMITS:
   ELECTRICAL POWER GENERATING FACILITIES ARE EXEMPT PER SECTION 403.510 AND 403.511, FLORIDA STATUTES AND SECTION 102.2(F), 2004 FLORIDA BUILDING CODE.

LEGEND

1. HEAT RECOVERY STEAM GENERATOR
2. ADMINISTRATION BUILDING
3. STEAM TURBINE
4. WAREHOUSE BUILDING
5. GENERATOR STEP-UP TRANSFORMER
6. DEMINERALIZER WATER TRAILER AREA
7. CONTROL ROOM
8. RAW WATER STORAGE TANK
9. DEMINERALIZED WATER STORAGE TANK
10. STACK
11. STEAM TURBINE GENERATOR
12. FUEL OIL TANK (DOUBLE WALLED)

REFERENCE DRAWINGS

1. SITE RELATED WORK - 3x1 COMBINED CYCLE - 501G
   GENERAL ARRANGEMENT - PLAN
   D013455-SRWL00001 SH01
2. SITE RELATED WORK - 3x1 COMBINED CYCLE - 501G
   EAST/WEST ELEVATION
   D013455-SRWL00003 SH01

PRELIMINARY

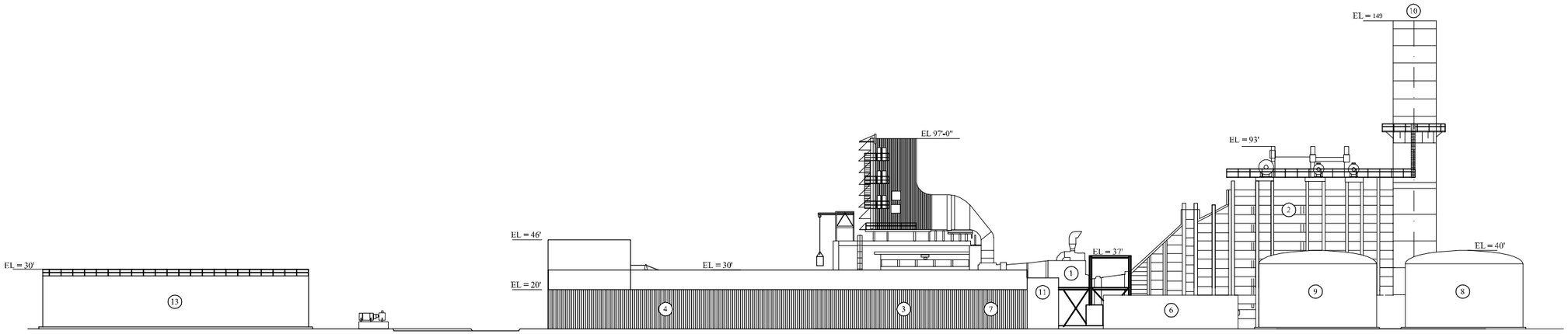
NOT FOR CONSTRUCTION

NO.	REVISIONS	DATE	DSNR	CHK	ENGR	APPR
A	ISSUE FOR COMMENT					

FPL

FIGURE 2-5
NORTH-SOUTH PROFILE OF COMBUSTION TURBINES AND HRSGS
RIVIERA BEACH ENERGY CENTER

DRAWN 040908 C JOHNSON	DESIGNED	CHECKED	CHECKED
APPROVED	CADD DRAWING NUMBER	SHEET	REV
APPROVED	D013455-SRWL00004	01	A



EAST ELEVATION

LOOKING WEST

WEST ELEVATION

LOOKING EAST

30 0 15 30 45 60

SCALE

SCALE IN FEET

LEGEND

1. GAS TURBINE AND GENERATOR
2. HEAT RECOVERY STEAM GENERATOR
3. ADMINISTRATION BUILDING
4. WAREHOUSE BUILDING
5. GENERATOR STEP-UP TRANSFORMER
6. DEMINERALIZER WATER TRAILER AREA
7. CONTROL ROOM
8. RAW WATER STORAGE TANK
9. DEMINERALIZED WATER STORAGE TANK
10. STACK
11. CT TURBINE ENCLOSURE
12. COMBUSTION TURBINE SFC
13. FUEL OIL TANK (DOUBLE WALLED)

GENERAL NOTES

1. ALL SIZES AND ELEVATIONS ARE APPROXIMATE.
2. ANTICIPATED STACK HEIGHT NOT TO EXCEED 200'; DETERMINED BY ENVIRONMENTAL REGULATIONS.
3. ALL ACREAGES AND LOCATIONS OF STRUCTURES WITHIN THE SITE PLAN ARE APPROXIMATE AND CONCEPTUAL. THE ACREAGES AND LOCATIONS OF STRUCTURES WITHIN THE SITE PLAN MAY BE MODIFIED PURSUANT TO THE POWER PLANT SITING ACT, SECTION 403.501, FLORIDA STATUTES.
4. BUILDING PERMITS:
   ELECTRICAL POWER GENERATING FACILITIES ARE EXEMPT PER SECTION 403.510 AND 403.511, FLORIDA STATUTES AND SECTION 102.2(F), 2004 FLORIDA BUILDING CODE.

REFERENCE DRAWINGS

1. SITE RELATED WORK - 3x1 COMBINED CYCLE - 501G
   GENERAL ARRANGEMENT - PLAN
   D013455-SRWL00001 SH01
2. SITE RELATED WORK - 3x1 COMBINED CYCLE - 501G
   NORTH SOUTH ELEVATION
   D013455-SRWL00004 SH01

PRELIMINARY

NOT FOR CONSTRUCTION

NO	REVISIONS	DATE	DSNR	CHK	ENGR	APPR
A	ISSUED FOR COMMENT					

FPL

FIGURE 2-6
EAST-WEST PROFILE OF COMBUSTION TURBINES AND HRSGS
RIVIERA BEACH ENERGY CENTER

DRAWN	DESIGNED	CHECKED	CHECKED
040905 C JOHNSON			

APPROVED	CADD DRAWING NUMBER	SHEET	REV
APPROVED	D013455-SRWL00003	01	A

3.0 AIR QUALITY REVIEW REQUIREMENTS AND APPLICABILITY

The following discussion pertains to federal, State, and local air regulatory requirements and their applicability to RBEC.

3.1 National, State, and Local AAQS

The existing applicable national and State of Florida local AAQS are presented in Table 3-1. Primary national AAQS were promulgated to protect the public health with an adequate margin of safety and secondary national AAQS were promulgated to protect the public welfare from any known or anticipated adverse effects associated with the presence of pollutants in the ambient air. Areas of the country in compliance with AAQS are designated as attainment areas. New sources to be located or modified sources located in or near these areas may be subject to more stringent air permitting requirements.

3.2 PSD Requirements

3.2.1 General Requirements

Under federally approved State of Florida PSD review requirements, all major new or modified sources of air pollutants regulated under the Clean Air Act (CAA) must be reviewed and a pre-construction permit issued.

PSD is applicable to a "major facility" and certain "modifications" that occur at a major facility. A major facility is defined as any 1 of 28 named source categories that have the potential to emit 100 TPY or more or any other stationary facility that has the potential to emit 250 TPY or more of any pollutant regulated under CAA. "Potential to emit" means the capability, at maximum design capacity, to emit a pollutant after the application of control equipment. Net emission increases from a modification at a major facility that exceed the PSD significant emission rates are also subject to PSD review.

EPA has promulgated regulations providing that certain increases above an air quality baseline concentration level of SO_2, PM_{10}, and nitrogen dioxide (NO_2) concentrations that would constitute significant deterioration. The EPA class designations and allowable PSD increments are presented in Table 3-1. The State of Florida has adopted the EPA class designations and allowable PSD increments for SO_2, PM_{10}, and NO_2.

PSD review is used to determine whether significant air quality deterioration will result from the new or modified facility. The State of Florida's PSD regulations are found in Rule 62-212.400, F.A.C. Major new facilities and major modifications are required to undergo the following analysis related to PSD for each pollutant emitted in significant amounts (see Table 3-2):

1. Control technology review;
2. Source impact analysis;
3. Air quality analysis (monitoring);
4. Source information; and
5. Additional impact analyses.

In addition to these analyses, a new major facility or major modification made to an existing major facility also must be reviewed with respect to Good Engineering Practice (GEP) stack height regulations. Discussions concerning each of these requirements for a new major facility or major modification are presented in the following sections. It is important to note that the emission reductions available from the retirement of the existing Plant allow the converted Plant to be a minor modification, exempt from PSD review (see Sections 2.4 and 3.5).

3.2.2 Control Technology Review

A new major facility or major modification must perform a control technology review, which requires that all applicable federal and State emission-limiting standards be met and that BACT be applied to control emissions from the source (Rule 62-212.400, F.A.C.). The BACT requirements are applicable to all regulated pollutants for which the increase in emissions from the facility or modification exceeds the significant emission rate (see Table 3-2).

BACT is defined in Rule 62-210.200(40), F.A.C., as:

> *(a) An emission limitation, including a visible emissions standard, based on the maximum degree of reduction of each pollutant emitted, which the Department, on a case-by-case basis, determines is achievable through application of production processes and available methods, systems and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of each such pollutant taking into account:*
>
> *1. Energy, environmental and economic impacts, and other costs;*
>
> *2. All scientific, engineering, and technical material and other information available to the Department; and*

3. The emission limiting standards or BACT determinations of Florida and any other State.

(b) If the Department determines that technological or economic limitations on the application of measurement methodology to a particular part of an emissions unit or facility would make the imposition of an emission standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reductions achievable by implementation of such design, equipment, work practice or operation.

(c) Each BACT determination shall include applicable test methods or shall provide for determining compliance with the standard(s) by means which achieve equivalent results.

(d) In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60, 61, and 63.

The BACT requirements are intended to ensure that the control systems incorporated in the design of a proposed facility reflect the latest in control technologies used in a particular industry and take into consideration existing and future air quality in the vicinity of the proposed facility. BACT must, as a minimum, demonstrate compliance with new source performance standards (NSPS) for a source (if applicable). An evaluation of the air pollution control techniques and systems, including a cost-benefit analysis of alternative control technologies capable of achieving a higher degree of emission reduction than the proposed control technology, is required. The cost-benefit analysis requires the documentation of the materials, energy, and economic penalties associated with the proposed and alternative control systems, as well as the environmental benefits derived from these systems. A decision on BACT is to be based on sound judgment, balancing environmental benefits with energy, economic, and other impacts (EPA, 1978).

3.2.3 Source Impact Analysis

A source impact analysis must be performed for a new major facility or major modification to a major source for each pollutant, subject to PSD review, for which net emissions exceed the significant emission rate (Table 3-2). The PSD regulations specifically provide for the use of atmospheric dispersion models in performing impact analyses, estimating baseline and future air quality levels, and determining compliance with AAQS and allowable PSD increments. Designated EPA models that are approved by FDEP normally must be used in performing the impact analysis. Specific applications for other than EPA-approved models require EPA's consultation and prior approval. Guidance for the use and application of dispersion models is presented in the EPA publication *Guideline on Air Quality Models (Revised)*. The source impact analysis for criteria pollutants to

address compliance with AAQS and PSD Class II increments may be limited to the new source if the impacts as a result of the new source are below significance impact levels, as presented in Table 3-1.

The EPA has proposed significant impact levels for Class I area. Although these levels have not been officially promulgated as part of the federal PSD regulations and may not be binding for States in performing PSD reviews, the levels serve as a guideline in assessing a source's impact in a Class I area. FDEP has accepted the use of these significant impact levels.

Various lengths of meteorological data records can be used for impact analysis. A 5-year period can be used with corresponding evaluation of highest, second-highest short-term concentrations for comparison to AAQS or PSD increments. The term "highest, second-highest" (HSH) refers to the highest of the second-highest concentrations at all receptors (i.e., the highest concentration at each receptor is discarded). The second-highest concentration is significant because short-term AAQS specify that the standard should not be exceeded at any location more than once a year. If fewer than 5 years of meteorological data are used in the modeling analysis, the highest concentration at each receptor normally must be used for comparison to air quality standards.

3.2.4 Air Quality Monitoring Requirements

In accordance with requirements of Rule 62-212.400(5)(f), F.A.C., PSD review for a new major facility or major modification must consider an analysis of continuous ambient air quality data in the area affected by the proposed major PSD source or major modification. For a new major facility or major modification, the affected pollutants are those that the facility potentially would emit above the significant emission rates.

Ambient air monitoring for a period of up to 1 year generally is appropriate to satisfy the PSD monitoring requirements. Data for a minimum of 4 months are required. Existing data from the vicinity of the proposed source may be used, if the data meet certain quality assurance requirements; otherwise, additional data may need to be gathered. Guidance in designing a PSD monitoring network is provided in *Ambient Monitoring Guidelines for Prevention of Significant Deterioration* (EPA, 1987a).

The regulations include an exemption that excludes or limits the pollutants for which an air quality analysis must be conducted. This exemption states that a proposed major stationary facility is exempt from the monitoring requirements with respect to a particular pollutant, if the emissions of the pollutant from the facility would cause, in any area, air quality impacts less than the *de minimis* levels

presented in Table 3-2 (Rule 62-212.400-3, F.A.C.). If a facility's predicted impacts are less than the *de minimis* levels, then preconstruction monitoring is not required.

3.2.5 Source Information/GEP Stack Height

Source information must be provided to adequately describe the proposed facility or major modification subject to PSD review.

The 1977 CAA Amendments require that the degree of emission limitation required for control of any pollutant cannot be affected by a stack height that exceeds GEP or any other dispersion technique. On July 8, 1985, EPA promulgated final stack height regulations (EPA, 1985a). Identical regulations have been adopted by FDEP (Rule 62-210.550, F.A.C.). GEP stack height is defined as the highest of:

1. 65 meters (m); or
2. A height established by applying the formula:

$$Hg = H + 1.5\,L$$

where:

Hg = GEP stack height,

H = Height of the structure or nearby structure, and

L = Lesser dimension (height or projected width) of nearby structure(s); or

3. A height demonstrated by a fluid model or field study.

"Nearby" is defined as a distance up to 5 times the lesser of the height or width dimensions of a structure or terrain feature, but not greater than 0.8 kilometers (km). Although GEP stack height regulations require that the stack height used in modeling for determining compliance with AAQS and PSD increments not exceed the GEP stack height, the actual stack height may be greater.

The stack height regulations also allow increased GEP stack height beyond that resulting from the above formula in cases where plume impaction occurs. Plume impaction is defined as concentrations measured or predicted to occur when the plume interacts with elevated terrain. Elevated terrain is defined as terrain that exceeds the height calculated by the GEP stack height formula.

3.2.6 Additional Impact Analysis

In addition to air quality impact analyses, State of Florida PSD regulations require analyses for applicable pollutants of the impairment to visibility and the impacts on soils and vegetation that

would occur as a result of a new major facility or major modification subject to PSD review [Rule 62-212.400(5)(e), F.A.C.]. Impacts as a result of general commercial, residential, industrial, and other growth associated with the source also must be addressed. These analyses are required for each pollutant emitted in significant amounts (see Table 3-2).

3.2.7 Air Quality Related Values

An Air Quality Related Value (AQRV) analysis is required for projects for those pollutants undergoing PSD review to assess the potential impact on AQRVs in PSD Class I areas. The nearest Class I areas to the Site are the Everglades National Park (NP), located about 120 km (72 miles) from the Site, and the Chassahowitzka National Wilderness Area (NWA), located about 326 km (196 miles) from the Site. The U.S. Department of the Interior in 1978 administratively defined AQRVs to be:

> *All those values possessed by an area except those that are not affected by changes in air quality and include all those assets of an area whose vitality, significance, or integrity is dependent in some way upon the air environment. These values include visibility and those scenic, cultural, biological, and recreational resources of an area that are affected by air quality.*
>
> *Important attributes of an area are those values or assets that make an area significant as a national monument, preserve, or primitive area. They are the assets that are to be preserved if the area is to achieve the purposes for which it was set aside (Federal Register, 1978).*

The AQRVs include visibility, freshwater and coastal wetlands, dominant plant communities, unique and rare plant communities, soils and associated periphyton, and the wildlife dependent on these communities for habitat. Rare, endemic, threatened, and endangered species of the NP and bioindicators of air pollution (e.g., lichens) must also be evaluated.

3.3 Nonattainment Rules

FDEP has nonattainment provisions (Rule 62-212.500, F.A.C.) that apply to all new major facilities or major modifications to major facilities located in a nonattainment area. In addition, for these facilities that are located in an attainment or unclassifiable area, the nonattainment review procedures apply if the source or modification is located within the area of influence of a nonattainment area. RBEC is located in Palm Beach County, which is classified as an attainment area for all criteria pollutants. Therefore, nonattainment New Source Review (NSR) requirements are not applicable.

3.4 Emission Standards

3.4.1 New Source Performance Standards

The NSPS are a set of national emission standards that apply to specific categories of new sources. As stated in the 1977 CAA Amendments, these standards "shall reflect the degree of emission limitation and the percentage reduction achievable through application of the best technological system of continuous emission reduction the Administrator determines has been adequately demonstrated."

RBEC will be subject to one or more NSPS. EPA recently promulgated new NSPS for Stationary Combustion Turbines that will commence construction after February 18, 2005. These NSPS, Subpart KKKK, will replace Subpart GG and Da for combustion turbines and duct burners, respectively, in combined cycle mode.

On October 15, 2003, EPA promulgated changes to 40 CFR Part 60, Subpart Kb that would exempt light oil tanks containing No. 2 light oil by virtue of its vapor pressure (FR Vol. 68, No. 199, Pages 59328-59333).

Combustion Turbine

NO_x and SO_2 emissions from all stationary CTs with a heat input at peak load equal to 10.7 gigajoules per hour (10 MMBtu/hr), based on the lower heating value of the fuel fired are limited per 40 CFR 60 Subpart KKKK. NO_x emissions for these proposed CTs (i.e., >850 MMBtu/hr) are limited by Subpart KKKK to 15 ppmvd corrected to 15-percent O_2 and 42 ppmvd corrected to 15-percent O_2 for gas and oil-firing, respectively. SO_2 emissions are limited to using a fuel with a sulfur content of no greater than 0.05 percent and 20 grains of sulfur per 100 standard cubic feet for oil and gas-firing, respectively. In addition to emission limitations, there are requirements for performance testing and monitoring in 40 CFR Subpart KKKK. There are also applicable notification, reporting, and recordkeeping requirements in the general provisions of 40 CFR Subpart A. These are summarized below:

40 CFR 60.7 Notification and Record Keeping

- *(a)(1) Notification of the date of construction - 30 days after such date.*
- *(a)(3) Notification of actual date of initial startup - within 15 days after such date.*
- *(a)(5) Notification of date which demonstrates CEM - not less than 30 days prior to date.*

60.7 (b) Maintain records of all startups, shutdowns, and malfunctions.

(c) Excess emissions reports – semi-annually by the 30th day following 6-month period (required even if no excess emissions occur).

(d) Maintain file of all measurements for 2 years.

60.8 Performance Tests

(a) Must be performed within 60 days after achieving maximum production rate, but no later than 180 days after initial startup.

(d) Notification of Performance tests at least 30 days prior to them occurring.

Duct Burner

As stated previously, the Subpart KKKK requirements have replaced the Subpart Da requirements for duct burners associated with a combined cycle project. NO_x emissions are limited to 54 parts per million (ppm) at 15 percent O_2 or 0.86 lb/MW for gas-firing.

Other Emission Units

NSPS are also applicable to the auxiliary boiler, fuel heaters, gas compressors, fire pump engine, and emergency generators. The EPA NSPS Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applies to the auxiliary boiler and fuel heaters. For the emergency generators, gas compressors and fire pump engine, NSPS Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, is applicable.

3.4.2 National Emission Standards for Hazardous Air Pollutants

EPA has promulgated maximum achievable control technology (MACT) standards under the National Emissions Standards for Hazardous Air Pollutants (NESHAPs) regulations. Maximum annual potential hazardous air pollutants (HAPs) emissions were presented earlier in Table 2-10 for the MPS 501G and Siemens H CTs. Additional detail on the HAP emission calculations is also presented in Appendix A. RBEC will not be a major source of HAP emissions, since maximum potential emissions are not projected to exceed 10 tons per year (TPY) of a single HAP, nor exceed 25 TPY for all HAPs. Therefore, with one exception, because RBEC is a minor source of HAPs, none of the MACT standards under the NESHAP regulations would apply. The exception would be 40 CFR 63, Subpart ZZZZ addressing reciprocating internal combustion engines (RICE). Under this rule, if the facility is not a major source of HAPs, it would still be categorized as an area source and be subject to the rule. However, the method of compliance under this provision would be to demonstrate

compliance with 40 CFR 60, Subpart IIII, which was previously cited in Subsection 3.4.2 under Other Emission Units.

3.4.3 Florida Rules

FDEP has adopted the EPA NSPS by reference in Rule 62-204.800(7): Subsection (b)39 for stationary gas turbines, Substation (6)(2) for the duct burners, and Subsection (b)16 for volatile organic liquid storage vessels. Therefore, the facility is required to meet the same emissions, performance testing, monitoring, reporting, and record keeping as those described in Section 3.4.1. FDEP has authority for implementing NSPS requirements in Florida.

3.4.4 Florida Air Permitting Requirements

The FDEP regulations require any new source to obtain an air permit prior to construction. Major new sources must meet the appropriate PSD and nonattainment requirements as discussed previously. Required permits and approvals for air pollution sources include NSR for nonattainment areas, PSD, NSPS, NESHAP, Permit to Construct, and Permit to Operate. The requirements for construction permits and approvals are contained in Rules 62-4.030, 62-4.050, 62-4.210, 62-210.300(1), and 62-212.400, F.A.C. Specific emission standards are set forth in Chapter 62-296, F.A.C.

This Application is being filed for the purpose of establishing federally-enforceable emission limitations that insure the Project will not result in a significant net increase in emissions of any regulated air pollutant, in accordance with FDEP's federally-approved minor source air construction permit program under Florida's federally-required State Implementation Plan

3.4.5 Local Air Regulations

Palm Beach County Health Department (PBCHD) is the air compliance authority for the County, implementing FDEP regulations. Since 1994, the PBCHD's Air Pollution Control Section has been delegated authority to review, process, and take appropriate action (i.e., exempt, issue, or deny) on most FDEP District-Level permits within the County. The PBCHD has been delegated authority for FDEP District-Level Permits through the Air Specific Operating Agreement (SOA) for most air pollution sources within Palm Beach County. However, permits for electrical power plants are issued by FDEP and not the PBCHD.

3.5 Source Applicability

3.5.1 Area Classification

RBEC is located in Palm Beach County, which has been designated by EPA and FDEP as an attainment area (includes unclassifiable) for all criteria pollutants. Palm Beach County and surrounding counties are designated as PSD Class II areas for SO_2, PM [total suspended particulate (TSP)], and NO_2. The nearest Class I area to the Site is the Everglades National Park (NP), located about 120 km (72 miles) from the Site, and Chassahowitzka National Wilderness Area (NWA), located about 326 km (196 miles) from the Site.

3.5.2 PSD Review

Pollutant Applicability

The emission reductions available from the retirement of the existing Units 3 and 4 classify RBEC as a minor modification of a major source. PSD review is not applicable since the net emissions do not exceed the PSD significant emission rates (see Tables 2-9A and 2-9B in Section 2.0 and Table 3-3). Since the existing units will be permanently retired, FPL will use emissions reductions from Units 3 and 4 to net out of PSD review for all PSD pollutants for the converted Plant. FPL proposes to implement a plant-wide VOC emission cap with the MPS 501G CTs and to track and report annual VOC emissions from RBEC in accordance with 40 CFR 52.21(b)(33), which is adopted and incorporated by reference in Rule 62-204.800, F.A.C. (Note: EPA no longer requires PSD review for HAPs from PSD review. The pollutants vinyl chloride, asbestos, and beryllium are no longer evaluated in PSD review because they are addressed through the NESHAP program).

Emission Standards

NO_x and SO_2 emissions from all stationary CTs with a heat input at peak load equal to 10.7 gigajoules per hour (10 MMBtu/hr), based on the lower heating value of the fuel fired are limited per 40 CFR 60 Subpart KKKK. NO_x emissions for these proposed CTs (i.e., >850 MMBtu/hr) are limited by Subpart KKKK to 15 ppmvd corrected to 15-percent O_2 and 42 ppmvd corrected to 15-percent O_2 for gas and oil-firing, respectively. SO_2 emissions are limited to using a fuel with a sulfur content of no greater than 0.05 percent and 20 grains of sulfur per 100 standard cubic feet for oil and gas-firing, respectively. These requirements are summarized in Section 4.2. In addition to emission limitations, there are requirements for performance testing and monitoring in 40 CFR Subpart KKKK. There are also applicable notification, reporting, and recordkeeping requirements in the general provisions of 40 CFR Subpart A. The proposed emissions for RBEC will be well below the specified limits (see Section 4.0).

NSPS are also applicable to the auxiliary boiler, fuel heater, gas compressors, fire pump engine, and emergency generators. The EPA NSPS Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applies to the auxiliary boiler and fuel heaters. For the emergency generators, gas compressors and fire pump engine, NSPS Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, is applicable.

RBEC will not be a major source of HAP emissions, since maximum potential emissions are not projected to exceed 10 TPY of a single HAP, nor exceed 25 TPY for all HAPs. Therefore, because RBEC is a minor source of HAPs, none of the MACT standards under the NESHAP regulations would apply. Although the NESHAPs Subpart YYYY does not apply to the converted Plant, information available from the equipment vendors indicate that RBEC will meet the proposed MACT of 91 parts per billion volume dry (ppbvd) corrected to 15-percent O_2 for formaldehyde.

Ambient Monitoring

For the converted Plant, the net emissions changes will be less than the PSD significant emission rates. As a result, an air quality monitoring impact analysis is not required by NSR under FDEP air regulations. As a supplement to the air permit application, air quality monitoring data are provided, which demonstrate that Palm Beach County is in attainment of the AAQS for all criteria pollutants. These data are presented in Section 5.0 of this application.

GEP Stack Height Impact Analysis

The GEP stack height regulations allow any stack to be at least 65 m (213 feet) high. The HRSG stacks will be 149 feet. These stack heights do not exceed the GEP stack height. However, as discussed in Section 6.0, Air Quality Modeling Approach, since the stack height is less than GEP, building downwash effects must be considered in the modeling analysis. As a result, the potential for downwash of the CT and duct burner emissions caused by nearby structures is included in the modeling analysis.

3.5.3 Local Air Regulations

As specified in Subsection 3.4.5, PBCHD does not have delegated authority to review, process, or take appropriate action over electrical power plant projects; therefore, permitting requirements for RBEC will comply with FDEP permitting requirements. RBEC will obtain a minor source air construction permit for which this application is applicable.

3.5.4 Other Clean Air Act Requirements

The 1990 CAA Amendments established a program to reduce potential precursors of acidic deposition. The Acid Rain Program was delineated in Title IV of the CAA Amendments and required EPA to develop the program. EPA's final regulations were promulgated on January 11, 1993, and included permit provisions (40 CFR 72), allowance system (Part 73), continuous emission monitoring (Part 75), excess emission procedures (Part 77), and appeal procedures (Part 78).

EPA's Acid Rain Program applies to all existing and new utility units, except those serving a generator less than 25 MW, existing simple cycle CTs, and certain non-utility facilities; units which fall under the program are referred to as affected units. The EPA regulations are applicable to RBEC for the purposes for obtaining a permit and allowances, as well as emission monitoring. New units are required to obtain permits under the program by submitting a complete application 24 months before the date on which the unit commences operation (e.g., first fire).

The permit would require the units to hold SO_2 emission allowances. Emission limitations established in the Acid Rain Program are presumed to be less stringent than BACT for new units. An allowance is a market-based financial instrument that is equivalent to 1 ton of SO_2 emissions. Allowances can be sold, purchased, or traded.

Continuous emission monitoring (CEM) for NO_x is required for gas fired and oil fired affected units. SO_2 monitoring is also required, although use of a CEM is optional. When an SO_2 CEM is selected to monitor SO_2 mass emissions, a flow monitor is also required. Alternately, SO_2 emissions may be determined using procedures established in Appendix D, 40 CFR Part 75 (flow proportional oil sampling or manual daily oil sampling). CO_2 emissions must also be determined either through a CEM (e.g., as a diluent for NO_x monitoring) or calculation. Alternate procedures, test methods, and quality assurance/quality control (QA/QC) procedures for CEM are specified (Part 75, Appendices A through I). The acid rain CEM requirements including QA/QC procedures are, in general, more stringent than those specified in the NSPS for Subpart KKKK. New units are required to meet the requirements by not later than 90 days after the unit commences commercial operation.

TABLE 3-1
NATIONAL AND STATE AAQS, ALLOWABLE PSD INCREMENTS, AND SIGNIFICANT IMPACT LEVELS

		National AAQS ($\mu g/m^3$) [a]			Significant Impact			
					PSD Increments ($\mu g/m^3$) [a]		Levels ($\mu g/m^3$) [b]	
Pollutant	**Averaging Time**	**Primary Standard**	**Secondary Standard**	**Florida AAQS [a] ($\mu g/m^3$)**	**Class I**	**Class II**	**Class I**	**Class II**
Particulate Matter [c] (PM_{10})	Annual Arithmetic Mean	NA	NA	50	4	17	0.2	1
	24-Hour Maximum	150	150	150	4	30	0.3	5
Particulate Matter [c] ($PM_{2.5}$)	Annual Arithmetic Mean	15	15	NA	NA	NA	NA	NA
	24-Hour Maximum	35	35	NA	NA	NA	NA	NA
Sulfur Dioxide	Annual Arithmetic Mean	80	NA	60	2	20	0.1	1
	24-Hour Maximum	365	NA	260	5	91	0.2	5
	3-Hour Maximum	NA	1,300	1,300	25	512	1.0	25
Carbon Monoxide	8-Hour Maximum	10,000	10,000	10,000	NA	NA	NA	500
	1-Hour Maximum	40,000	40,000	40,000	NA	NA	NA	2,000
Nitrogen Dioxide	Annual Arithmetic Mean	100	100	100	2.5	25	0.1	1
Ozone [d]	1-Hour Maximum [d]	NA	NA	235	NA	NA	NA	NA
	8-Hour Maximum [e]	147	147	NA	NA	NA	NA	NA
Lead	Calendar Quarter Arithmetic Mean	1.5	1.5	1.5	NA	NA	NA	NA

Note: Particulate matter (PM_{10}) = particulate matter with aerodynamic diameter less than or equal to 10 micrometers.
Particulate matter ($PM_{2.5}$) = particulate matter with aerodynamic diameter less than or equal to 2.5 micrometers.
NA = Not applicable, i.e., no standard exists or not promulgated yet.

[a] Short-term maximum concentrations are not to be exceeded more than once per year, except for PM_{10}, $PM_{2.5}$, and O_3 AAQS which are based on a number of expected exceedances.

[b] Maximum concentrations are not to be exceeded.

[c.] $PM_{2.5}$: 24-hour standard based on the 3-year averages of the 98th percentile values; annual standard based on 3-year average at community monitors. These standards must be implemented in the 2007-2008 timeframe. On October 17, 2006, EPA finalized the PM AAQS (71 FR 61236). The 24-hour $PM_{2.5}$ standard was changed to 35 $\mu g/m^3$. Annual PM_{10} standard was revoked by EPA. The FDEP has not yet adopted the revised PM_{10} or $PM_{2.5}$ standards.

[d] 1-hour standard of 0.12 ppm was revoked by EPA on June 15, 2005; FDEP has not yet adopted this change.

[e.] 8-hour standard was lowered by EPA from 0.08 to 0.075 ppm on March 27, 2008, achieved when the 3-year average of 99th percentile values is 0.075 ppm or less. FDEP had not yet adopted the revised standard.

Sources: Federal Register, Vol. 43, No. 118, June 19, 1978; 40 CFR 50; 40 CFR 52.21; Florida Chapter 62.204, F.A.C.
Golder, 2006.

TABLE 3-2

PSD SIGNIFICANT EMISSION RATES AND *DE MINIMIS* MONITORING CONCENTRATIONS

Pollutant	Regulated Under	Significant Emission Rate (TPY)	*De Minimis* Monitoring Concentration[a] ($\mu g/m^3$)
Sulfur Dioxide	NAAQS, NSPS	40	13, 24-hour
Particulate Matter [PM (TSP)]	NSPS	25	10, 24-hour
Particulate Matter (PM_{10})	NAAQS	15	10, 24-hour
Nitrogen Dioxide	NAAQS, NSPS	40	14, annual
Carbon Monoxide	NAAQS, NSPS	100	575, 8-hour
Volatile Organic Compounds (Ozone)	NAAQS, NSPS	40	100 TPY[b]
Lead	NAAQS	0.6	0.1, 3-month
Sulfuric Acid Mist	NSPS	7	NM
Total Fluorides	NSPS	3	0.25, 24-hour
Total Reduced Sulfur	NSPS	10	10, 1-hour
Reduced Sulfur Compounds	NSPS	10	10, 1-hour
Hydrogen Sulfide	NSPS	10	0.2, 1-hour
Mercury	NESHAP	0.1	0.25, 24-hour

Note: Ambient monitoring requirements for any pollutant may be exempted if the impact of the increase in emissions is below *de minimis* monitoring concentrations.

NAAQS = National Ambient Air Quality Standards.
NM = No ambient measurement method established; therefore, no *de minimis* concentration has been established.
NSPS = New Source Performance Standards.
NESHAP = National Emission Standards for Hazardous Air Pollutants.
$\mu g/m^3$ = micrograms per cubic meter.

[a] Short-term concentrations are not to be exceeded.
[b] No *de minimis* concentration; an increase in VOC or NO_x emissions of 100 TPY or more will require monitoring analysis for ozone.

Sources: 40 CFR 52.21; Rule 62-212.400.

TABLE 3-3

MAXIMUM EMISSION CHANGES DUE TO RBEC, INCLUDING EMISSION REDUCTIONS DUE TO THE EXISTING PLANT, COMPARED TO THE PSD SIGNIFICANT EMISSION RATES

Pollutant	Pollutant Emissions		
	Net Emission Changes[a]	Significant Emission Rate	PSD Review
Sulfur Dioxide	-10,797	40	No
Particulate Matter [PM (TSP)]	-701	25	No
Particulate Matter (PM_{10})	-701	15	No
Nitrogen Dioxide	-3,305	40	No
Carbon Monoxide	-30.5	100	No
Volatile Organic Compounds	39.7	40	No
Lead	-0.06	0.6	No
Sulfuric Acid Mist	-447	7	No
Total Fluorides	NEG	3	No
Total Reduced Sulfur	NEG	10	No
Reduced Sulfur Compounds	NEG	10	No
Hydrogen Sulfide	NEG	10	No
Mercury	NEG	0.1	No

Note: NEG = Negligible.

[a] A. Based on emissions from operating at base load at 59°F for all pollutants except SO_2:

- 100-percent load, natural gas – 4,880 hours
- 100-percent load with duct burners, natural gas – 2,880 hours
- 100-percent load, oil firing – 1,000 hours

B. SO_2 emissions based on operations at baseload at 59°F:

- 100-percent load, natural gas – 5,880 hours
- 100-percent load with duct burners, natural gas – 2,880 hours

Includes emissions from the fuel heater, emergency generators, auxiliary boiler, fire pump engine, fuel oil storage tank, and gas compressor station (see Tables 2-9A and B, which present the maximum potential emissions for RBEC) and emission reductions from the existing Plant.

C. For the MPS 501G CTs, a plant-wide VOC emission cap is proposed. See Sections 2.3 and 2.4

4.0 CONTROL TECHNOLOGY DESCRIPTION

4.1 Applicability

The PSD regulations require new major stationary sources or major modifications to existing major sources to undergo a control technology review for each pollutant that may potentially be emitted above significant amounts. As discussed in previous sections, PSD review is not required for RBEC and the control technology review requirements of the PSD regulations are not applicable. There are some NSPS regulations which are applicable. Notwithstanding, the emission levels and control technologies proposed for RBEC are consistent with emission levels established as BACT by the FDEP in recent projects. This section presents the proposed emission rates for each pollutant and each proposed emission unit.

4.2 Overview of Proposed Control Technology

The use of clean fuels (i.e., natural gas and ultra low-sulfur light oil), combustion controls, and air pollution control equipment will minimize air emissions and ensure compliance with applicable emission-limiting standards. Using clean fuels will minimize emissions of SO_2, PM/PM_{10}, and other fuel-bound contaminants. Combustion controls will minimize the formation of NO_x and the formation of CO and VOCs by combustor design. Further NO_x reduction will be achieved by SCR. The combination of these techniques has been determined to represent BACT on previous projects based on an evaluation of economic, energy, and environmental impacts. The following subsection presents a summary of the Air Pollution Control Technology proposed for RBEC.

EPA updated NSPS for Stationary Combustion Turbines that will commence construction after February 18, 2005. The Subpart KKKK requirements apply to units with a gross capacity of greater than 1 MW. The Subpart KKKK requirements applicable to combustion turbines greater than 30 MW apply to CT/HRSG trains associated with RBEC. The NO_x emissions are limited to 15 ppm corrected to 15-percent O_2 or 0.43 lb/MW-hr for gas-firing and 42 ppm corrected to 15-percent O_2 or 1.3 lb/MW-hr for light oil firing. For SO_2 emissions, Subpart KKKK requirements limit emissions to 0.9 lb/MW-hr or a potential total sulfur content equivalent to 0.06 pound per million British thermal units (lb/MMBtu) if multiple fuels are fired.

NSPS are also applicable to the auxiliary boiler, fuel heaters, emergency generators, and fire pump engine. The EPA NSPS Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applies to the auxiliary boilers and fuel heaters. For the emergency generators and fire pump engine, NSPS Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, is applicable.

The remainder of this section briefly describes those control technologies that are proposed for RBEC.

4.2.1 Nitrogen Oxides

The Project will result in a net emissions decrease of more than 3,000 TPY for NO_x emissions (i.e., 85-percent reduction from historical actual emissions). PSD review, including a BACT determination, is not applicable. However, the NO_x control technology and emission limits proposed for RBEC are equal to or more stringent than BACT determinations made in Florida and EPA Region IV for similarly designed projects. As proposed for the CTs, the use of DLN combustors and SCR has been established as BACT on combined cycle units with NO_x to low emission levels of 2.0 ppmvd corrected to 15-percent O_2 when firing natural gas and 8.0 ppmvd corrected to 15-percent O_2 when firing ultra low-sulfur light oil. These emission levels are equal to or lower than BACT determinations made in Florida and EPA Region IV for similarly designed projects. Similarly, the NO_x emission rates proposed for the auxiliary boiler, fuel heaters, emergency generators, and gas compressors have been established as BACT in previous PSD permits.

When firing natural gas, NO_x emissions will be controlled using DLN combustors. DLN combustor technology has been offered and installed by CT manufacturers to reduce NO_x emissions by inhibiting thermal NO_x formation through premixing fuel and air prior to combustion and providing pre-mix combustion to reduce flame temperatures. The DLN combustors have premixed fuel zones plus a standard diffusion flame pilot burner for startup. Low-NO_x levels are achieved by introducing fuel primarily to the pre-mix zones and reducing the amount of fuel being combusted from the pilot nozzle.

NO_x emissions will be further controlled by SCR systems when firing either natural gas or ultra low-sulfur light oil. SCR is a post-combustion process where NO_x in the gas stream is reacted with ammonia in the presence of a catalyst to form nitrogen and water. The reaction occurs typically between about 320 and 400 degrees Celsius (°C) (600 and 750°F). These temperatures occur within

the HRSG where the SCR catalyst and ammonia injection grid is installed. Ammonia will be stored onsite in tank(s). The SCR system will be designed for additional NO_x reduction. Flue gas NO_x emissions when firing natural gas will be reduced to 2.0 ppmvd, corrected to 15-percent O_2. When firing ultra low-sulfur light oil, SCR will reduce NO_x emissions by 80 percent or more to 8 ppmvd corrected to 15-percent O_2 or less.

The NO_x emissions from the auxiliary boiler, fuel heaters, emergency generators, fire pump engine, and gas compressors will be limited using combustion techniques. The auxiliary boiler will be equipped with low-NO_x burners to limit NO_x emissions to 0.05 lb/MMBtu. The fuel heaters will use combustion controls to limit NO_x emissions to 0.095 lb/MMBtu. The emergency generators will meet the NSPS Subpart IIII NO_x emission requirements of 6.9 grams per brake horsepower-hour (g/bhp-hr). The gas compressors will be lean burn engines with a maximum NO_x emission rate of 1.5 g/bhp-hr. The fire pump engine will have a maximum NO_x emission rate of 6.8 g/bhp-hr.

4.2.2 Carbon Monoxide

The Project will result in a net CO emissions decrease of about 30 tons per year (i.e., 5-percent decrease from historical actual emissions). PSD review, including a BACT determination, is not applicable. As proposed for this Project, the use combustion controls to limit CO emissions in the range proposed for natural gas and ultra low-sulfur light oil firing has been established as BACT.

The proposed emission rates are based upon the CTs being considered for the converted Plant. The CTs will utilize advanced combustion technology and the proposed emission rates are consistent with those established as BACT for these turbines. The proposed CO emission rates for the MPS 501G Class CTs when firing natural gas are 4.1 ppmvd corrected to 15-percent O_2 at baseload operation and 7.6 ppmvd corrected to 15-percent O_2 with maximum duct firing. When firing oil the CO emissions from the MPS 501G Class CTs or equivalent will be limited to 8 ppmvd corrected to 15-percent O_2. The Siemens H CTs CO emissions will be limited to 5 ppmvd corrected to 15-percent O_2 when firing natural gas at baseload operation and 7.2 ppmvd corrected to 15-percent O_2 when duct firing. For the Siemens H CTs when firing oil, the CO emissions will be limited to 10 ppmvd corrected to 15-percent O_2.

Combustion techniques will be used to limit the CO emissions from the auxiliary boiler, fuel heaters, fire pump engine, and emergency generators. Oxidation catalysts will be installed in the gas compressors to control CO emissions. The auxiliary boiler will be equipped with low-NO_x burners designed to limit CO emissions to 0.08 lb/MMBtu. The fuel heaters will use combustion controls to

limit CO emissions to 0.08 lb/MMBtu. The emergency generators will meet the NSPS Subpart IIII CO emission requirements of 8.5 g/bhp-hr. Each gas compressor will be equipped with an oxidation catalyst to reduce CO emissions by 95 percent and have an emission rate of 0.1 g/bhp-hr. The fire pump engine will have a CO emission rate of 2.6 g/bhp-hr.

The CO emission rates proposed for the auxiliary boiler, fuel heaters, and emergency generators have also been established as BACT in previous PSD permits (e.g., PSD-FL-354 for WCEC Units 3 and 4; PSD-FL-396 for WCEC Unit 3).

4.2.3 Sulfur Oxides (SO_2 and H_2SO_4 Mist)

The Project will result in net emissions decreases of more than 10,000 TPY for SO_2 emissions and 400 TPY for H_2SO_4 mist (i.e., more than 95-percent and 90-percent decreases, respectively, from historical actual emissions). PSD review, including a BACT determination, is not applicable. The only feasible control for the combined cycle unit, auxiliary boiler, fuel heaters, emergency generators, gas compressors, and fire pump engine is combustion of clean fuels. Natural gas and ultra low-sulfur light oil are the cleanest fuels available with maximum sulfur contents of 2 grains/100 scf for natural gas and 0.0015 percent sulfur for ultra low-sulfur light oil proposed for RBEC. Sulfuric acid mist (SAM) emissions will also be minimized by the use of low-sulfur fuels. SO_2 and SAM emission limits based on the use of natural gas and ultra low-sulfur light oil have been established as BACT in previous PSD permits.

4.2.4 Particulate Matter and Other Regulated Pollutants

The Project will result in a net emissions decrease of more than 700 TPY for PM/PM_{10} (i.e., more than 75-percent decrease from historical actual emissions). PSD review, including a BACT determination, is not applicable. The use of clean fuels, characterized by low PM and trace contaminant contents, and advanced combustion techniques result in minimal PM and PM_{10} emissions from the combined cycle unit, auxiliary boiler, fuel heaters, emergency generators, gas compressors, and fire pump engine. Emission limits based on the use of clean fuels (i.e., natural gas and ultra low-sulfur light oil) have been established as BACT for PM/PM_{10} emissions in previous PSD permits.

4.2.5 Volatile Organic Compound

The Project will result in a net emissions increase of less than 40 TPY for VOC with the converted Plant. For the MPS 501G CTs, FPL proposes to implement a plant-wide VOC emission cap to ensure

that the net increase will be less than 40 TPY. Therefore, PSD review, including a BACT determination, is not applicable. Combustion techniques will be used to limit the VOC emissions from the CTs/HRSG duct burners, auxiliary boiler, fuel heaters, emergency generators, gas compressors, and fire pump engine.

The CTs will utilize advanced combustion technology, and the proposed emission rates are consistent with those established as BACT for these turbines. The proposed VOC emission rates for the MPS 501G Class CTs or equivalent when firing natural gas are 1.2 ppmvd corrected to 15-percent O_2 at baseload operation and 1.6 ppmvd corrected to 15-percent O_2 with maximum duct firing. When firing oil, the VOC emissions from the MPS 501G Class CTs will be limited to 6 ppmvd corrected to 15-percent O_2. The Siemens H CTs VOC emissions will be limited to 1.5 ppmvd (corrected to 15-percent O_2) when firing natural gas at baseload operation and 1.9 ppmvd (corrected to 15-percent O_2) when duct firing. For the Siemens H CTs when firing oil, the VOC emissions will be limited to 2 ppmvd corrected to 15-percent O_2.

The auxiliary boiler is designed with proper combustion techniques to limit VOC emissions to 0.005 lb/MMBtu. The fuel heaters will use combustion controls to limit VOC emissions to 0.005 lb/MMBtu. The emergency generators will meet the NSPS Subpart IIII VOC emission requirements of 1 g/bhp-hr as total hydrocarbons. Each gas compressor will be equipped with an oxidation catalyst to reduce VOC emissions 50 percent and an emission rate of 0.16 g/bhp-hr. The fire pump engine will have a VOC emission rate of 1 g/bhp-hr.

TABLE 4-1
PROPOSED EMISSION LIMITS FOR CTS/HRSGS AND DUCT BURNERS FOR RBEC

Pollutant	CT(s)	Fuel	Operating Mode	Proposed Emission Limits	Compliance Methods
NO_x	G and H	Natural Gas	All	2 ppmvd at 15% O_2	Initial: EPA Methods- 7E or 20, Continuous: CEM 30-day rolling average
	G and H	ULSLO	All	8 ppmvd at 15% O_2	Initial: EPA Methods- 7E or 20, Continuous: CEM 30-day rolling average
CO	G	Natural Gas	CT Only	4.1 ppmvd at 15% O_2	Initial: EPA Method 10 (baseload)
		Natural Gas	CT & DB	7.6 ppmvd at 15% O_2	Initial: EPA Methods 10 (baseload and duct firing)
		ULSLO	CT Only	8 ppmvd at 15% O_2	Initial: EPA Method 10 (baseload)
	H	Natural Gas	CT Only	5 ppmvd at 15% O_2	Initial: EPA Method 10 (baseload)
		Natural Gas	CT & DB	7.2 ppmvd at 15% O_2	Initial: EPA Methods 10 (baseload and duct firing)
		ULSLO	CT Only	10 ppmvd at 15% O_2	Initial: EPA Method 10 (baseload)
VOC	G	Natural Gas	CT Only	1.2 ppmvd at 15% O_2	Initial Only: EPA Methods 18 or 25a (baseload)
		Natural Gas	CT & DB	1.6 ppmvd at 15% O_2	Initial Only: EPA Methods 18 or 25a (baseload and duct firing)
		ULSLO	CT Only	6 ppmvd at 15% O_2	Initial Only: EPA Methods 18 or 25a (baseload)
	H	Natural Gas	CT Only	1.5 ppmvd at 15% O_2	Initial Only: EPA Methods 18 or 25a (baseload)
		Natural Gas	CT & DB	1.9 ppmvd at 15% O_2	Initial Only: EPA Methods 18 or 25a (baseload and duct firing)
		ULSLO	CT Only	2 ppmvd at 15% O_2	Initial Only: EPA Methods 18 or 25a (baseload)
PM/PM_{10}	G and H	Natural Gas	CT, CT & DB	10% Opacity	Initial/Annual: EPA Method 9
	G and H	ULSLO	CT	10% Opacity	Initial/Annual: EPA Method 9
SO_2 and SAM	G and H	Natural Gas	CT, CT & DB	2 grains S/100 scf	Initial/Annual: 40 CFR Part 75 Fuel Sampling
	G and H	ULSLO	CT	0.0015% S	Initial/Annual: 40 CFR Part 75 Fuel Sampling

Note: CT = combustion turbine; G = MHI 501G Class CT; H = Siemens H CT; DB = duct burners; ULSLO = ultra low-sulfur light oil.

5.0 AMBIENT MONITORING ANALYSIS

If PSD review is required, FDEP's PSD regulations require that an air quality monitoring analysis be conducted for each criteria and non-criteria pollutant subject to regulation under the Act before a major stationary source or major modification at a major stationary source is constructed. Criteria pollutants are those pollutants for which AAQS have been established. Non-criteria pollutants are those pollutants that may be regulated by emission standards, for which AAQS have not been established. This analysis may be performed by the use of modeling and/or by monitoring the air quality. In addition, if EPA has not established an acceptable ambient monitoring method for the pollutant, monitoring is not required.

For RBEC, the net emissions changes will be less than the PSD significant emission rates. As a result, an air quality monitoring impact analysis is not required by new source review under FDEP air regulations. As a supplement to the Air Construction Permit Application, air quality monitoring data are provided, which demonstrate that Palm Beach County is in attainment of the AAQS for all criteria pollutants. A summary of the maximum pollutant concentrations representative of air quality in Palm Beach County from 2005 through 2008 is presented in Table 5-1. These data indicate that the maximum air quality concentrations measured in the region are well below applicable standards.

The monitoring data are also used to estimate background concentrations that are added to the maximum concentrations predicted for the existing Riviera Plant and RBEC to provide total air quality impacts that can be compared to the AAQS (see Section 6.1).

TABLE 5-1

SUMMARY OF MAXIMUM MEASURED SO_2, NO_2, PM_{10}, $PM_{2.5}$, O_3, AND CO CONCENTRATIONS
2005 THROUGH 2008

Pollutant/ AIRS Site No.	Location	County	Measurement Period Year	Measurement Period Months	Measured Concentration 1-Hour Highest	1-Hour 2nd Highest	3-Hour Highest	3-Hour 2nd Highest	8-Hour Highest	8-Hour 2nd Highest	8-Hour 3-year Average 4th Highest	24-Hour Highest	24-Hour 2nd Highest	Annual Average
Sulfur dioxide	**Florida AAQS**				**NA**	**NA**	**NA**	**0.5 ppm**	**NA**	**NA**	**NA**	**NA**	**0.1 ppm**	**0.02 ppm**
12-099-3004	Riviera Beach/ 1050 15th Street	Palm Beach	2008	Jan-Sep	NA	NA	0.004	0.004	NA	NA	NA	0.004	0.004	0.0017
			2007	Jan-Dec	NA	NA	0.004	0.004	NA	NA	NA	0.002	0.002	0.0010
			2006	Jan-Dec	NA	NA	0.003	0.002	NA	NA	NA	0.002	0.002	0.0011
			2005	Jan-Dec	NA	NA	0.003	0.003	NA	NA	NA	0.003	0.003	0.0012
Nitrogen dioxide	**Florida AAQS**				**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**0.053 ppm**
12-099-1004	Palm Beach/ 3700 Belvedere Road	Palm Beach	2008	Jan-Sep	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0075
			2007	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0080
			2006	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0096
			2005	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0086
PM_{10} [a]	**Florida AAQS**				**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**150 µg/m³**	**50 µg/m³**
12-099-0008	Belle Glade/ 38754 State Road 80	Palm Beach	2008	Jan-Sep	NA	NA	NA	NA	NA	NA	NA	79	49	19.5
			2007	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	60	37	16.5
			2006	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	52	42	20.1
			2005	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	41	38	17.6
12-099-2005	Delray Beach/ 225 South Congress Ave.	Palm Beach	2008	Jan-Sep	NA	NA	NA	NA	NA	NA	NA	60	48	23.3
			2007	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	67	43	23.6
			2006	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	54	49	25.9
			2005	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	79	60	23.5
$PM_{2.5}$ [a]	**Florida AAQS**				**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**(35 µg/m³)**	**(15 µg/m³)**
12-099-0008	Belle Glade/ 38754 State Road 80	Palm Beach	2008	Jan-Sep	NA	NA	NA	NA	NA	NA	NA	NA	17.1	6.67
			2007	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	NA	18.6	7.19
			2006	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	NA	7.2	4.90
			2005	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	NA	18.8	7.95
12-099-2005	Delray Beach/ 225 South Congress Ave.	Palm Beach	2008	Jan-Sep	NA	NA	NA	NA	NA	NA	NA	NA	17.6	7.34
			2007	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	NA	20.5	7.03
			2006	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	NA	17.0	7.76
			2005	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	NA	17.7	7.84
Ozone [b]	**Florida AAQS**				**NA**	**0.12 ppm**	**NA**	**NA**	**NA**	**NA**	**0.08 ppm**	**NA**	**NA**	**NA**
12-099-0009	Royal Palm Beach/ 980 Crestwood Blvd. N. Wastewater Treatment Plant	Palm Beach	2008	Jan-Sep	0.084	0.074	NA	NA	NA	NA	0.068	NA	NA	NA
			2007	Jan-Dec	0.068	0.066	NA	NA	NA	NA	0.066	NA	NA	NA
			2006	Jan-Dec	0.101	0.093	NA	NA	NA	NA	0.067	NA	NA	NA
			2005	Jan-Dec	0.080	0.079	NA	NA	NA	NA	0.066	NA	NA	NA
12-099-0020	Lantana/ 1199 Lantana Road AG Holley Hospital	Palm Beach	2008	Jan-Sep	0.105	0.070	NA	NA	NA	NA	0.066	NA	NA	NA
			2007	Jan-Dec	0.098	0.092	NA	NA	NA	NA	0.065	NA	NA	NA
			2006	Jan-Dec	0.095	0.086	NA	NA	NA	NA	0.057	NA	NA	NA
			2005	Jan-Dec	0.089	0.078	NA	NA	NA	NA	NA	NA	NA	NA
Carbon monoxide	**Florida AAQS**				**NA**	**35 ppm**	**NA**	**NA**	**NA**	**9 ppm**	**NA**	**NA**	**NA**	**NA**
12-099-1004	Palm Beach/ 3700 Belvedere Road	Palm Beach	2008	Jan-Sep	1.6	1.5	NA	NA	1.1	1.0	NA	NA	NA	NA
			2007	Jan-Dec	2.7	2.1	NA	NA	1.4	1.3	NA	NA	NA	NA
			2006	Jan-Dec	5.8	2.8	NA	NA	1.9	1.8	NA	NA	NA	NA
			2005	Jan-Dec	4.3	3.4	NA	NA	2.7	2.2	NA	NA	NA	NA

Note: NA = not applicable.
AAQS = ambient air quality standard.

[a] On October 17, 2006, EPA promulgated revised PM_{10} and $PM_{2.5}$ AAQS; the $PM_{2.5}$ AAQS had been promulgated on July 18, 1997. For PM_{10}, the annual standard was revoked and the 24-hour standard was retained. The 24-hour $PM_{2.5}$ standard was revised to 35 µg/m^3 based on the 3-year averages of the 98th percentile values. The annual $PM_{2.5}$ standard of 15 µg/m^3, 3-year averages at community monitors, was retained. As of August 2008, Florida DEP has not yet adopted the revised standards.

[b] On July 18, 1997, EPA promulgated revised AAQS for ozone. The O_3 standard was modified to be 0.08 ppm for the 8-hour average; achieved when the 3-year average of 99th percentile values is 0.08 ppm or less. On March 27, 2008, EPA revised the 8-hour average ozone AAQS to 0.075 ppm, effective May 27, 2008. The format of the standard remained the same as the previous promulgation. As of December 2008, Florida DEP has not yet adopted the revised standards.

6.0 AIR QUALITY IMPACT ANALYSIS

In general, RBEC will significantly improve air quality in the vicinity of the Site. RBEC will reduce actual emissions of air pollutants by more than 17,000 TPY from the existing operation or more than a 90-percent reduction, while improving the general air quality in the vicinity of the Site.

For the RBEC Project, the net emissions changes will be less than the PSD significant emission rates. As a result, an air quality impact analysis is not required by NSR under FDEP air regulations. However, as a supplement to the Air Construction Permit Application, air quality impacts were estimated for the existing Plant and RBEC in the vicinity of the Site for comparison to the AAQS. The general modeling approach followed EPA and FDEP modeling guidelines.

As shown in Table 6-1 and Figure 6-1, the maximum total air quality impacts for both the existing Units 3 and 4 and RBEC are predicted to be well below the AAQS and, therefore, comply with the AAQS. Total air quality impacts include the maximum impacts predicted for the existing Plant or RBEC added to background concentrations. Background concentrations are based on the maximum measured concentration from representative air quality data for the Site (see Section 5.0).

For SO_2, the predicted maximum total impacts for the existing Plant are about 80 percent or less of the AAQS. By comparison, predicted maximum total impacts for RBEC will be less than 10 percent of the AAQS.

For PM_{10}, the predicted maximum total impacts for the existing Plant are less than about 60 percent of the AAQS. By comparison, the predicted maximum total impacts for RBEC will be 55 percent or less of the AAQS. However, as shown in Table 6-1, the predicted maximum impacts for RBEC are less than 50 percent of those from the existing Plant. Background concentrations are the major contributors to the maximum total air quality impacts.

For NO_2 and CO, the predicted maximum total air quality impacts are also primarily due to background concentrations. For both the existing Plant and RBEC, the predicted maximum total NO_2 impacts are about 35 percent or less of the AAQS. The maximum NO_2 impacts for RBEC are predicted along the Site boundary nearest the compressor station, with more than 50 percent due to background concentration. The predicted maximum total CO impacts are predicted to be 30 percent or less of the AAQS, with more than 95 percent due to background concentration.

6.1 Air Modeling Analysis Approach

6.1.1 Air Modeling Scenarios

Several air quality analyses were performed to assess the maximum impacts for the existing Plant and RBEC. For the existing Plant, air quality impacts were predicted for the existing Units 3 and 4, which were added to non-modeled background concentrations (see Section 6.1.8) to produce total air quality impacts. These impacts were then compared to the AAQS for SO_2, NO_2, PM_{10}, and CO.

Similarly, RBEC air quality impacts were predicted for each of the CT vendors and other air emission units for RBEC, such as the fuel heater, gas compressor station, and auxiliary boiler, to produce total air quality impacts, which were then compared to the AAQS for SO_2, NO_2, PM_{10}, and CO.

6.1.2 General Modeling Approach

In general, when model predictions are used to determine compliance with AAQS, current policies stipulate that the highest annual and the HSH short-term (i.e., 24 hours or less) concentrations are compared to the applicable AAQS when using 5 years of meteorological data for the analysis. The HSH concentration is calculated each year for a receptor field by:

1. Eliminating the highest concentration predicted at each receptor;
2. Identifying the second-highest concentration at each receptor; and
3. Selecting the highest concentration among these second-highest concentrations.

The HSH approach is consistent with AAQS, which generally allows a short-term average concentration to be exceeded once per year at each receptor.

The AAQS analysis performed for the Project is a source analysis that evaluates whether the concentrations from sources will comply with the AAQS. These concentrations include the modeled impacts from sources at the Site added to a background concentration. The background concentration accounts for sources not included in the modeling analysis.

6.1.3 Model Selection

The selection of air quality models to calculate air quality impacts for the existing Riviera Plant and RBEC must be based on the models' ability to simulate impacts in the vicinity of the Site. The American Meteorological Society and EPA Regulatory Model (AERMOD) dispersion model was

used to evaluate the pollutant impacts due to the proposed sources at RBEC. AERMOD (Version 07026) is available on the EPA's Internet web site, Support Center for Regulatory Air Models (SCRAM), within the Technology Transfer Network (TTN). A listing of AERMOD model features is presented in Table 6-2.

The EPA and FDEP recommend that AERMOD be used to predict pollutant concentrations at receptors located within 50 km from a source. AERMOD calculates hourly concentrations based on hourly meteorological data. AERMOD is applicable for most analyses since it is recognized as containing the latest scientific algorithms for simulating plume behavior in all types of terrain.

AERMOD was used to predict the maximum pollutant concentrations due to the existing Plant and converted Plant in nearby areas surrounding the Site.

For modeling analyses that will undergo regulatory review, such as determining compliance with AAQS, the following model features are recommended by EPA for rural mode and are referred to as the regulatory default options in AERMOD:

1. Final plume rise at all receptor locations;
2. Stack-tip downwash;
3. Buoyancy-induced dispersion;
4. Default wind speed profile coefficients for rural mode;
5. Default vertical potential temperature gradients; and
6. Calm wind processing.

The EPA regulatory default options were used to address maximum impacts.

6.1.4 Meteorological Data

Meteorological data used in AERMOD to determine air quality impacts consisted of a concurrent 5-year period of hourly surface weather observations and upper air sounding data collected from the National Weather Service (NWS) stations located at the Palm Beach International (KPBI) and Miami International Airports, respectively. The 5-year period of the meteorological data was from 2001 through 2005. The NWS office at KPBI is located approximately 10 km (6 miles) north-northwest of the Site and is the closest primary weather station to the study area considered to have meteorological data representative of the Site.

Since the KPBI meteorological station is only 10 km from the Site and the terrain between the two sites is mostly flat, the wind direction and wind speed frequencies that are experienced at KPBI are considered to be very similar to that experienced at the Site. As such, the KPBI wind direction and wind speed frequencies are considered to be representative of the Site.

A comparison of the average land use parameters at KPBI and the Site was performed using the AERSURFACE program. AERSURFACE reads land use files developed by the U.S. Geological Survey (USGS) and provides average land use values for albedo, Bowen Ratio, and surface roughness within a specified radius based on EPA guidance (i.e., 10 km for albedo and Bowen Ratio; 1 km for surface roughness). The average land uses values of each site were estimated as follows:

Average land use around KPBI:

- Albedo – 0.16;
- Bowen ratio – 0.821; and
- Surface roughness – 0.106 m.

Average land use around the Site:

- Albedo – 0.14;
- Bowen ratio – 0.36; and
- Surface roughness – 0.36 m.

As indicated, the average albedos for the two sites are considered similar. However, the Bowen ratio and surface roughness values for certain areas around the Plant are somewhat different, particularly over water near the Site. Therefore, while the wind direction and wind speed frequencies are considered quite representative of the Site, the Bowen ratio and surface roughness values at KPBI are considered to be less representative for certain directions than that at the Site. It should be noted that in spite of the very flat terrain that is characteristic of south Florida, such differences in land use within even 30 km, are not uncommon or unexpected in this area. Since all of south Florida's major airports are located within the fringe of the large urbanized area, the average Bowen ratio and surface roughness at these areas can be greater than those found in similar areas, but located closer to large water bodies, such as the Site. Consequently, unless a project site is very close to where surface observations are measured, the two sites are not necessarily going to share all of the same meteorological and land use characteristics.

As such, the KPBI meteorological data were selected for the Site, and, in spite of some data differences noted previously, the KPBI data are considered the most representative and are readily

available for modeling of the Site. It should be noted that the KPBI meteorological data have been approved by the FDEP and used for numerous air modeling studies submitted as part of air construction permits approved for sources located in Palm Beach County.

To assess the potential effect that the differences in land use values between the KPBI and Site may have on the maximum predicted concentrations in the vicinity of the Site, the KPBI meteorological data were processed with the land use values developed for the Site. An air modeling analysis was then performed using these data and the results compared with those predicted using the KPBI land use values. The results of this analysis are presented in Appendix C.

These results indicate that, for the Site, incorporation of the Site's land use parameters in the air modeling analysis result in predicted air quality impacts that are similar to those predicted with the KPBI land use parameters.

6.1.5 Emission Inventory

Existing FPL Units – The emissions and stack parameters for the existing Units 3 and 4 at the Riviera Plant are presented in Table 6-3. As discussed in Section 1.0, Units 3 and 4 will be retired prior to RBEC operation.

The operating data for exit gas flow rate and temperature are based on stack tests performed for both units in 2007. Because the operating data were similar for each unit, the values for each unit were averaged together to produce one value for flow rate and temperature for both units. The flow rate was adjusted from the heat input rate from the stack test to the maximum heat input for each unit.

The pollutant emission rates were based on the maximum rate allowed by the permit for each unit (Permit No. 0990042-004-AV,), EPA AP-42 emission factors for combustion of fuel oil, or, in the case of SO_2, the maximum historical sulfur content of 1 percent used over the last 5 years (equivalent to about 1.1 lb/MMBtu). It should be noted that, the existing units have SO_2 emission limits of 1.9 lb/MMBtu for the 3-hour average and 1.3 lb/MMBtu for the 24-hour average.

RBEC Sources – Summaries of the criteria pollutant emission rates, physical stack and stack operating parameters for the CTs for RBEC that were used in the air modeling analysis are presented in Tables 2-1 and 2-2, as well as Appendix A.

The maximum air quality impacts for RBEC were predicted for a range of possible operating conditions. The emission and stack operating parameters for the CTs are presented for two operating loads and 35°F, 59°F, and 95°F ambient temperatures for the CTs firing both natural gas and oil. A total of 12 modeling scenarios were considered for combined cycle configurations with the CTs operating in the following conditions:

- CTs firing natural gas for ambient temperatures of 35°F, 59°F, and 95°F at:
  - 100 percent operating load, including duct-firing; and
  - 75 percent operating load.
- CTs firing oil for ambient temperatures of 35°F, 59°F, and 95°F at:
  - 100 percent operating load; and
  - 75 percent operating load.

To determine the operating load that produced the maximum impacts from the CTs, an emission rate of 79.365 pounds per hour (lb/hr) or 10 grams per second (g/s) was initially used for the Power Block. Each CT was modeled with 1/3 of these emissions. These modeling results produced relative concentrations as a function of the modeled emission rate (i.e., $\mu g/m^3$ per 10.0 g/s). These impacts are referred to as generic pollutant impacts. Maximum air quality impacts for specific pollutants were then determined by multiplying the maximum pollutant-specific emission rate in lb/hr (g/s) by the maximum predicted generic impact divided by the modeled emission rate [e.g., 79.365 lb/hr (10.0 g/s)].

For these analyses, as a conservative estimate of impacts during natural gas-firing, the pollutant emissions at 100 percent load included duct-firing for every hour in the year even though duct-firing will be limited to 2,880 hr/yr.

The load analysis was performed using the exit gas operating data for the MPS 501G Class CT and Siemens H CT. Once the worst-case operating condition was determined for each CT, subsequent analyses were performed with exit gas operating data specific to each CT vendor.

Additional analyses were performed for SO_2, NO_x, PM_{10}, and CO emissions to address the combined impact of the CTs and other RBEC sources. As noted previously, the exit gas operating data specific to each CT vendor were used. Modeling was performed that included the CTs and fuel heater with the CTs operating load that produced the maximum CT impact from the generic impact analysis. Modeling was also performed that included the CTs, fuel heater, and gas compressor station, again

based on the CTs operating load that produced the maximum CT impact from the generic impact analysis.

A separate air quality analysis was performed for the auxiliary boiler alone, which will be used to assist in startup for one of the CTs. As discussed previously, the combustor for the CTs requires steam for combustor cooling, which normally comes from the HRSG. For startup, an auxiliary boiler is required to supply steam for the combustion process for only one CT. Once sufficient quality and quantity of steam is available from the HRSG, steam from the auxiliary boiler is not required for the other CTs. It was conservatively assumed that the annual operation of the auxiliary boiler would be 500 hr/yr for the startup of the CT.

Detailed descriptions of the other RBEC sources are presented in Tables 2-3 through 2-8 in Section 2.0 and Appendix A.

The proposed CTs will have a HRSG stack height of 149 feet and an inner stack diameter of 22 feet. Because the proposed stack heights are less than GEP, building downwash effects were included in the modeling analysis (see following section on building downwash). In addition, since the stack heights for the other RBEC sources are also less than GEP, building downwash effects were included in the modeling analysis for these sources.

6.1.6 Building Downwash Effects

All significant building structures for RBEC were identified by the Site plot plan (see Figure 2-1). The following building structures were processed in the EPA Building Profile Input Program [(BPIP), Version 04274] program to determine direction-specific building heights and widths for each 10-degree azimuth direction for each source that was included in the modeling analysis:

Structure	Height (feet)	Width (feet)	Length (feet)
CT Air Inlet	97	24	59
HRSG Structure	77	35	90
CT Structure	35	99	24
STG Structure	52	150	43
Compressor Station	20	30	75
Existing Units 3 and 4	137	38	77

As a conservative estimate of potential impacts, the gas compressors were assumed to be in an enclosed building. However, each of the gas compressors may stand-alone and not be enclosed in any structure.

Based on this evaluation, the GEP stack height for the CTs was determined to be 193 feet. Therefore, building downwash effects for the CTs were included in the air modeling analyses. With stack heights of 60 feet or less for the other RBEC sources, building downwash effects were included in the modeling analysis for these sources. The BPIP files are presented in Appendix D.

6.1.7 Receptor Locations

To determine the maximum impact for all pollutants and averaging times in the vicinity of the Site, concentrations were predicted at receptors located in detailed receptor grids centered on the proposed units, the modeling origin, and extended from the Site out to 5 km. Although the terrain around the immediate vicinity is flat, receptor elevations were included at each receptor in the analysis.

Along the Site boundary, a Cartesian receptor grid was used to predict concentrations at 56 receptors spaced at 50-meter intervals. In addition, a general Cartesian grid was used to predict concentrations beyond the Site boundary out to 5 km. Receptors were located at the following intervals and distances from the origin:

- Along the Site boundary or fenceline – 50 m;
- Beyond the fenceline to 2 km – 100 m; and
- From 2 km to 5 km – 250 m.

Concentrations were also predicted at elevated receptors located on the higher elevations of the Palm Beach House, a condominium complex, located about 1,700 ft (530 m) to the south of the Plant. The receptors at the Palm Beach House were located at elevations of 50, 60, 70, 80, and 90 meters to represent the middle to higher elevations of the Palm Beach House.

More than 3,000 receptors were used in the analysis to determine the maximum impacts for the existing and converted Plants and are presented in Appendix D.

6.1.8 Background Concentrations

Background concentrations are necessary to determine total ambient air quality impacts to demonstrate compliance with the AAQS. “Background concentrations” are defined as concentrations

due to sources other than those specifically included in the modeling analysis. For all pollutants, background would include other point sources not included in the modeling, fugitive emission sources, and natural background sources. In general, monitoring data collected near the area in which the air quality impact is performed is used for this purpose.

Summaries of ambient SO_2, PM_{10}, NO_2, and CO concentrations measured are presented in Section 5.0. Based on data collected from 2005 to 2008, the highest annual and second-highest short-term concentrations were selected to represent background concentrations and are as follows:

Pollutant	Averaging Period	Background Concentration (ppm)	Background Concentration ($\mu g/m^3$)
SO_2	3-hour	0.004	10.5
	24-hour	0.004	10.5
	Annual	0.0017	4.4
PM_{10}	24-hour	NA	60
	Annual	NA	25.9
NO_2	Annual	0.0096	18.0
CO	1-hour	3.4	3,891
	8-hour	2.2	2,517

6.2 Model Results

6.2.1 Air Quality Impacts for the Existing FPL Units

Air modeling analyses were performed to determine the maximum total air quality impacts of SO_2, NO_2, PM_{10}, and CO from Units 3 and 4 at the existing Riviera Plant added to background concentrations. A summary of the maximum total air quality predicted for comparison to the AAQS in the Plant's vicinity and at the Palm Beach House is presented in Table 6-4. These results indicate that the maximum pollutant impacts predicted for the existing Plant are less than the AAQS.

The highest annual, HSH 24-hour, and HSH 3-hour SO_2 concentrations are predicted to be 25, 210, and 756 $\mu g/m^3$, respectively. These concentrations are below the annual, 24-hour, and 3-hour SO_2 AAQS of 60, 260, and 1,300 $\mu g/m^3$, respectively.

The highest annual NO_2 concentration is predicted to be 27 µg/m^3, which is below the annual NO_x AAQS of 100 µg/m^3.

The highest annual and HSH 24-hour PM_{10} concentrations are 28 and 83 µg/m^3, respectively. These concentrations are below the annual and 24-hour PM_{10} AAQS of 50 and 150 µg/m^3, respectively.

The highest HSH 8-hour and HSH 1-hour CO concentrations are predicted to be 2,531 and 3,919 µg/m^3, respectively. These concentrations are below the 8-hour and 1-hour CO AAQS of 10,000 and 40,000 µg/m^3, respectively. It should be noted that the background concentrations contribute more than 99 percent to the total air quality impacts.

6.2.2 Air Quality Impacts due to RBEC

The maximum pollutant concentrations predicted for RBEC for the CTs firing natural gas and fuel oil are given in Tables 6-5A and 6-5B for impacts in the Plant's vicinity and at the Palm Beach House, respectively. Based on the worst-case operating condition, two additional modeling analyses were performed. The first analysis included the CTs and fuel heater and the second analysis included the CTs, fuel heater, and gas compressor station. The results of these additional analyses are also presented in Tables 6-5A and 6-5B.

The maximum concentrations for RBEC, including the CTs, fuel heater, and gas compression station as well as background concentrations, for comparison to the AAQS are presented in Tables 6-6A and 6-6B for impacts in the Plant's vicinity and at the Palm Beach House, respectively. As shown in these tables, the modeling results indicate that maximum concentrations are predicted to be less than the AAQS and are comparable among the CT vendors considered.

CTs and Fuel Heater

For the CTs and fuel heater, the highest annual, HSH 24-hour, and HSH 3-hour SO_2 concentrations are predicted to be 5.4, 20, and 52 µg/m^3, respectively. These concentrations are below the annual, 24-hour, and 3-hour SO_2 AAQS of 60, 260, and 1,300 µg/m^3, respectively.

The highest annual NO_2 concentration is predicted to be 20 µg/m^3, which is below the annual NO_x AAQS of 100 µg/m^3.

The highest annual and HSH 24-hour PM_{10} concentrations are 27 and 68 µg/m^3, respectively. These concentrations are below the annual and 24-hour PM_{10} AAQS of 50 and 150 µg/m^3, respectively.

The highest HSH 8-hour and HSH 1-hour CO concentrations are predicted to be 2,610 and 4,125 µg/m^3, respectively. These concentrations are below the 8-hour and 1-hour CO AAQS of 10,000 and 40,000 µg/m^3, respectively. Similar to the air quality impacts predicted for the existing FPL units, the background concentrations contribute more than 99 percent to the total air quality impacts.

CTs, Fuel Heater, and Gas Compressor Station

For the CTs, fuel heater, and gas compressor station, the results are similar to or slightly higher than those for the CTs and fuel heater alone. The highest annual, HSH 24-hour, and HSH 3-hour SO_2 concentrations are predicted to be 5.4, 20, and 52 µg/m^3, respectively. These concentrations are below the annual, 24-hour, and 3-hour SO_2 AAQS of 60, 260, and 1,300 µg/m^3, respectively.

The highest annual NO_2 concentration is predicted to be 35 µg/m^3, which is below the annual NO_x AAQS of 100 µg/m^3.

The highest annual and HSH 24-hour PM_{10} concentrations are 27 and 68 µg/m^3, respectively. These concentrations are below the annual and 24-hour PM_{10} AAQS of 50 and 150 µg/m^3, respectively.

The highest HSH 8-hour and HSH 1-hour CO concentrations are predicted to be 2,610 and 4,125 µg/m^3, respectively. These concentrations are below the 8-hour and 1-hour CO AAQS of 10,000 and 40,000 µg/m^3, respectively. Again, the background concentrations contribute more than 99 percent to the total air quality impacts.

Auxiliary Boiler

The maximum concentrations for the auxiliary boiler for the converted Plant with background concentrations, for comparison to the AAQS are presented in Table 6-7. It should be noted that the auxiliary boiler is needed only for the MPS 501G1 and MPS 501G1PLUS CT for startup of the CT. As shown in Table 6-7, the modeling results indicate that maximum concentrations due to the auxiliary boiler are also predicted to be less than the AAQS and are similar to those predicted for the CTs and other RBEC sources.

The highest annual, HSH 24-hour, and HSH 3-hour SO_2 concentrations are predicted to be 4.5, 14, and 17 µg/m^3, respectively. These concentrations are below the annual, 24-hour, and 3-hour SO_2 AAQS of 60, 260, and 1,300 µg/m^3, respectively.

The highest annual NO_2 concentration is predicted to be 18 µg/m^3, which is below the annual NO_x AAQS of 100 µg/m^3.

The highest annual and HSH 24-hour PM_{10} concentrations are 26 and 61 µg/m^3, respectively. These concentrations are below the annual and 24-hour PM_{10} AAQS of 50 and 150 µg/m^3, respectively.

The highest HSH 8-hour and HSH 1-hour CO concentrations are predicted to be 2,589 and 4,008 µg/m^3, respectively. These concentrations are below the 8-hour and 1-hour CO AAQS of 10,000 and 40,000 µg/m^3, respectively.

Examples of the modeling input and summary files are provided in Appendix E.

6.3 Conclusions

Based on these air quality modeling analyses, the maximum pollutant concentrations due to RBEC are predicted to be less than the AAQS and will comply with all applicable AAQS. Indeed, the modeling results clearly demonstrate that Florida's air quality will be protected and be improved with the converted Plant. This is demonstrated by Figure 6-1, which presents the maximum total air quality impacts predicted for the existing Units 3 and 4 and RBEC compared to the AAQS. As shown in Figure 6-1, there is improvement in the maximum total air quality concentrations for SO_2 and PM_{10} with RBEC. As discussed earlier, the maximum annual NO_2 concentrations are predicted to be higher for RBEC, but are still well below the AAQS. The predicted impacts for RBEC are primarily due to the gas compressor station. Moreover, there is a reduction in NO_x emissions by over 3,000 TPY with the RBEC Project. The maximum total CO impacts for RBEC are predicted to be much lower than the AAQS, with more than 95 percent due to background concentration.

In conclusion, RBEC will reduce actual emissions of air pollutants by more than 17,000 TPY from the existing operation, or more than 90-percent reduction, while improving the general air quality in the vicinity of the Site. Indeed, the maximum generating capacity of RBEC is about 100 percent higher than the existing units. This will be accomplished using the cleanest fuels, advanced combustion technology and additional control for NO_x emissions.

TABLE 6-1
SUMMARY OF PREDICTED POLLUTANT CONCENTRATIONS
FOR THE EXISTING RIVIERA PLANT AND RBEC
COMPARED TO AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	Maximum Concentration (ug/m^3) [a] Existing Units 3&4 Only	Maximum Concentration (ug/m^3) [a] RBEC Only [c]	Total Concentration (ug/m^3) including Background [b] Units 3&4	Total Concentration (ug/m^3) including Background [b] RBEC [c]	Ambient Air Quality Standard (AAQS) ($\mu g/m^3$)
SO_2	Annual	20.6	0.9	25.0	5.4	60
	24-Hour	199	9.1	210	19.6	260
	3-Hour	746	41.7	756	52.2	1,300
PM_{10}	Annual	2.3	0.9	28.2	26.8	50
	24-Hour	22.7	8.3	82.7	68.3	150
NO_2	Annual	8.7	17.1	26.7	35.2	100
CO	8-Hour	13.8	92.5	2,531	2,610	10,000
	1-Hour	28.0	234	3,919	4,125	40,000

[a] Based on maximum concentrations predicted in general grid in the plant vicinity and at Palm Beach House.

[b] Background concentration based on the maximum measured concentration from representative air quality data for the Site.

[c] RBEC sources include the 3 CTs/HRSGs, fuel heater, and gas compressors.

TABLE 6-2

MAJOR FEATURES OF THE AERMOD MODEL, VERSION 07026

AERMOD Model Features
• Plume dispersion/growth rates are determined by the profile of vertical and horizontal turbulence, vary with height, and use a continuous growth function.
• In a convective atmosphere, uses three separate algorithms to describe plume behavior as it comes in contact with the mixed layer lid; in a stable atmosphere uses a mechanically mixed layer near the surface.
• Polar or Cartesian coordinate systems for receptor locations can be included directly or by an external file reference.
• Urban model dispersion is input as a function of City size and population density; sources can also be modeled individually as urban sources.
• Stable plume rise: uses Briggs equations with winds and temperature gradients at stack top up to half way up to plume rise. Convective plume rise: plume superimposed on random convective velocities.
• Procedures suggested by Briggs (1974) for evaluating stack-tip downwash.
• Has capability of simulating point, volume, area, and multi-sized area sources.
• Accounts for the effects of vertical variations in wind and turbulence (Brower et al., 1998).
• Uses measured and computed boundary layer parameters and similarity relationships to develop vertical profiles of wind, temperature, and turbulence (Brower et al., 1998).
• Concentration estimates for 1-hour to annual average times.
• Creates vertical profiles of wind, temperature, and turbulence using all available measurement levels.
• Terrain features are depicted by use of a controlling hill elevation and a receptor point elevation.
• Modeling domain surface characteristics are determined by selected direction and month/season values of surface roughness length, Albedo, and Bowen ratio.
• Contains both a mechanical and convective mixed layer height, the latter based on the hourly accumulation of sensible heat flux.
• The method of Pasquill (1976) to account for buoyancy-induced dispersion.
• A default regulatory option to set various model options and parameters to EPA-recommended values.
• Contains procedures for calm-wind and missing data for the processing of short term averages.

Note: AERMOD = The American Meteorological Society and Environmental Protection Agency Regulatory Model.

Source: EPA, 2007.

TABLE 6-3
EXISTING FPL RIVIERA PLANT, UNITS 3 AND 4
STACK, OPERATING, AND EMISSION DATA

		Operating and Emission Data	
Parameter	**Units**	**Unit 3**	**Unit 4**
Stack Data			
Height	feet	298	298
Diameter	feet	16.0	16.0
Operating Data [a]			
Heat input[b]	MMBtu/hr	3,050	3,050
Temperature	^{o}F	291	291
Flow rate	acfm	1,154,617	1,154,617
Velocity	ft/sec	95.7	95.7
Maximum Hourly Emissions			
SO_2	lb/MMBtu[c]	1.10	1.10
	lb/hr	3,355	3,355
PM/PM_{10}	lb/MMBtu [b,d]	0.125	0.125
	lb/hr	381	381
NO_x	lb/MMBtu [b]	0.62	0.62
	lb/hr	1,891	1,891
CO	lb/MMBtu [e]	0.03	0.03
	lb/hr	101.0	101.0

[a] Stack and operating parameters based on 2007 stack test data, using average flow rate and temperature.

[b] Based on Permit No. 0990043-003-AV

[c] Based on use of maximum historical sulfur fuel oil content of 1 percent.

[d] Based on 0.3 lb/MMBtu for 3 hr/day and 0.1 lb/MMBtu for 21 hr/day.

[e] Based on AP-42 emission factor for combustion for No. 6 fuel oil (Table 1.3-1, U.S. EPA, 1998) and 152 MMBtu/1,000 gal: CO: 5 lb/1000 gal

TABLE 6-4
SUMMARY OF POLLUTANT CONCENTRATIONS PREDICTED FOR THE EXISTING RIVIERA PLANT COMPARED TO AMBIENT AIR QUALITY STANDARDS

Pollutant	Emission Basis (lb/MMBtu)	Emission Rate Per Unit (lb/hr)	Averaging Time	Units 3 & 4 Maximum Concentration [a] ($\mu g/m^3$)	Background Concentration [b] ($\mu g/m^3$)	Total Concentration ($\mu g/m^3$)	Ambient Air Quality Standard (AAQS) ($\mu g/m^3$)
General Grid Impacts							
SO_2	1.10	3,355	Annual	20.6	4.4	25.0	60
			24-Hour	105	10.5	116	260
			3-Hour	268	10.5	279	1,300
PM_{10}	0.125	381	Annual	2.3	25.9	28.2	50
			24-Hour	11.9	60.0	71.9	150
NO_x [c]	0.62	1,891	Annual	8.7	18.0	26.7	100
CO	0.03	101.0	8-Hour	6.6	2,517	2,524	10,000
			1-Hour	8.9	3,890	3,899	40,000
Palm Beach House Impacts							
SO_2	1.10	3,355	Annual	15.1	4.4	19.5	60
			24-Hour	199	10.5	210	260
			3-Hour	746	10.5	756	1,300
PM_{10}	0.125	381	Annual	1.7	25.9	27.6	50
			24-Hour	22.7	60.0	82.7	150
NO_x [c]	0.62	1,891	Annual	6.4	18.0	24.4	100
CO	0.03	101	8-Hour	13.8	2,517	2,531	10,000
			1-Hour	28.0	3,890	3,919	40,000

[a] Concentrations are based on highest predicted concentrations from AERMOD using 5 years of meteorological data from 2001 to 2005 with surface and upper air data from the National Weather Service stations at Palm Beach and Miami International Airports, respectively. Based on highest annual and highest, second-highest short-term average concentrations predicted for the units, by ratioing modeled rate to pollutant specific rate:

Modeled Rate (lb/hr)	Averaging Time	Predicted Concentration (ug/m^3) General Grid	Predicted Concentration (ug/m^3) Condominiums
79.37	Annual	0.243	0.178
	24-Hour	1.243	2.358
	8-Hour	2.591	5.426
	3-Hour	3.172	8.820
	1-Hour	3.495	11.013

[b] Based on highest annual and second-highest short-term average concentrations measured at representative monitoring stations nearest the Site.

[c] NO_x to NO_2 conversion factor of 0.75 applied to modeled NO_x impacts based on EPA Modeling Guidelines.

TABLE 6-5A
SUMMARY OF MAXIMUM POLLUTANT CONCENTRATIONS PREDICTED
FOR NATURAL GAS- AND DISTILLATE FUEL OIL-FIRING
FOR RBEC IN GENERAL GRID

		MPS 501G Class			Siemens H		
		Maximum Predicted Concentration ($\mu g/m^3$)			Maximum Predicted Concentration ($\mu g/m^3$)		
Pollutant	**Averaging Time**	**Natural Gas**	**Fuel Oil**	**Maximum**	**Natural Gas**	**Fuel Oil**	**Maximum**
CTs Only [a]							
SO_2	Annual	0.37	0.04	0.37	0.31	0.036	0.31
	24-Hour	2.16	0.25	2.16	1.88	0.24	1.88
	3-Hour	7.3	1.09	7.3	6.11	1.05	6.11
PM_{10}	Annual	0.24	0.39	0.26	0.29	0.43	0.30
	24-Hour	1.36	2.54	2.54	1.81	2.59	2.59
NO_2	Annual [c]	0.36	0.57	0.39	0.31	0.65	0.35
CO	8-Hour	15.6	45.8	45.8	16.0	12.7	16.0
	1-Hour	34.5	101.9	101.9	28.6	28.2	28.6
CTs and Fuel Heater							
SO_2	Annual	0.39	NM	0.39	0.32	NM	0.32
	24-Hour	2.17	NM	2.17	1.90	NM	1.90
	3-Hour	7.2	NM	7.2	5.3	NM	5.3
PM_{10}	Annual	NM	0.40	0.40	NM	0.43	0.43
	24-Hour	NM	2.54	2.54	NM	2.60	2.60
NO_2	Annual [c]	NM	1.65	1.65	NM	1.65	1.65
CO	8-Hour	NM	45.9	45.9	19.6	NM	19.6
	1-Hour	NM	102.2	102.2	34.4	NM	34.4
CTs, Fuel Heater, and Gas Compressors [b]							
SO_2	Annual	0.46	NM	0.46	0.42	NM	0.42
	24-Hour	2.88	NM	2.88	2.89	NM	2.89
	3-Hour	7.3	NM	7.3	5.4	NM	5.4
PM_{10}	Annual	NM	0.63	0.63	NM	0.65	0.65
	24-Hour	NM	4.71	4.71	NM	4.73	4.73
NO_2	Annual [c]	NM	17.14	17.14	NM	17.14	17.14
CO	8-Hour	NM	74.5	74.5	74.5	NM	74.5
	1-Hour	NM	147.8	147.8	147.8	NM	147.8

[a] Based on pollutant emissions for each vendor.
Maximum annual average concentrations are based on prorating the maximum impacts for each operation by the following maximum number of hours requested for that operation:

	Hours for Each Operation		
Pollutant	**Natural Gas with Duct-Firing**	**Fuel Oil**	**Total**
SO_2	8,760	0	8,760
PM_{10}	7,760	1,000	8,760
NO_2	7,760	1,000	8,760

[b] Maximum impacts based on operating data for each vendor and worst-case conditions from CT load analysis:
For SO_2, MPS: gas-firing at 100% load, 95 ^oF (24-hour); Siemens: gas-firing at 75% load, 35 ^oF (24-hour);
for NO_2, MPS: oil-firing at 100% load, 59 ^oF; Siemens: oil-firing at 75% load, 59 ^oF;
for PM_{10}, MPS: oil-firing at 75% load, 35 ^oF; Siemens: oil-firing at 75% load, 95 ^oF;
for CO, MPS: oil-firing at 75% load, 35 ^oF; Siemens: gas-firing at 75% load, 35 ^oF.

[c] NO_x to NO_2 conversion factor based on EPA Modeling Guidelines: 75 %.

Note: NM = Not Modeled.

TABLE 6-5B
SUMMARY OF MAXIMUM POLLUTANT CONCENTRATIONS PREDICTED
FOR NATURAL GAS- AND DISTILLATE FUEL OIL-FIRING
FOR RBEC AT PALM BEACH HOUSE

		MPS 501G Class			Siemens H		
		Maximum Predicted Concentration ($\mu g/m^3$)			Maximum Predicted Concentration ($\mu g/m^3$)		
Pollutant	Averaging Time	Natural Gas	Fuel Oil	Maximum	Natural Gas	Fuel Oil	Maximum
CTs Only [a]							
SO_2	Annual	0.31	0.023	0.31	0.26	0.024	0.26
	24-Hour	3.41	0.26	3.41	2.89	0.251	2.89
	3-Hour	14.74	0.79	14.74	12.83	0.89	12.83
PM_{10}	Annual	0.20	0.25	0.20	0.25	0.29	0.26
	24-Hour	2.15	2.62	2.62	2.75	3.01	3.01
NO_2	Annual [c]	0.301	0.350	0.31	0.26	0.43	0.28
CO	8-Hour	30.0	34.0	34.0	31.6	10.3	31.6
	1-Hour	80.9	78.8	80.9	85.0	23.8	85.0
CTs and Fuel Heater							
SO_2	Annual	0.93	NM	0.93	0.79	NM	0.79
	24-Hour	10.21	NM	10.21	8.67	NM	8.67
	3-Hour	44.1	NM	44.1	38.5	NM	38.5
PM_{10}	Annual	NM	0.73	0.73	NM	0.87	0.87
	24-Hour	NM	7.88	7.88	NM	9.02	9.02
NO_2	Annual [c]	NM	1.05	1.05	NM	1.28	1.28
CO	8-Hour	NM	102.1	102.1	94.9	NM	94.9
	1-Hour	NM	236.5	236.5	254.8	NM	254.8
CTs, Fuel Heater, and Gas Compressors [b]							
SO_2	Annual	0.94	NM	0.94	0.80	NM	0.80
	24-Hour	10.22	NM	10.22	8.69	NM	8.69
	3-Hour	44.1	NM	44.1	38.5	NM	38.5
PM_{10}	Annual	NM	0.74	0.74	NM	0.88	0.88
	24-Hour	NM	7.89	7.89	NM	9.05	9.05
NO_2	Annual [c]	NM	2.64	2.64	NM	2.67	2.67
CO	8-Hour	NM	102.1	102.1	95.5	NM	95.5
	1-Hour	NM	236.5	236.5	254.8	NM	254.8

[a] Based on pollutant emissions for each vendor.
Maximum annual average concentrations are based on prorating the maximum impacts for each operation by the following maximum number of hours requested for that operation:

	Hours for Each Operation		
Pollutant	Natural Gas with Duct-Firing	Fuel Oil	Total
SO_2	8,760	0	8,760
PM_{10}	7,760	1,000	8,760
NO_2	7,760	1,000	8,760

[b] Maximum impacts based on operating data for each vendor and worst-case conditions from CT load analysis:
For SO_2, MPS: gas-firing at 100% load, 95 ^oF; Siemens: gas-firing at 75% load, 35 ^oF (24-hour);
for NO_2, MPS: oil-firing at 100% load, 59 ^oF; Siemens: oil-firing at 75% load, 59 ^oF;
for PM_{10}, MPS: oil-firing at 75% load, 35 ^oF (24-hour); Siemens: oil-firing at 75% load, 95 ^oF;
for CO, MPS: oil-firing at 75% load, 95 ^oF; Siemens: gas-firing at 75% load, 35 ^oF.

[c] NO_x to NO_2 conversion factor based on EPA Modeling Guidelines: 75 %.

Note: NM = Not Modeled.

TABLE 6-6A
MAXIMUM POLLUTANT CONCENTRATIONS PREDICTED
FOR RBEC IN GENERAL GRID
COMPARED TO THE AAQS

		MPS 501G Class			Siemens H			
		Maximum Predicted Concentration ($\mu g/m^3$)			Maximum Predicted Concentration ($\mu g/m^3$)			
Pollutant	**Averaging Time**	**CCEC [a]**	**Background [b]**	**Total**	**CCEC [a]**	**Background [b]**	**Total**	**AAQS ($\mu g/m^3$)**
CTs and Fuel Heater								
SO_2	Annual	0.39	4.4	4.83	0.32	4.4	4.76	60
	24-Hour	1.80	10.5	12.3	1.47	10.5	11.9	260
	3-Hour	5.3	10.5	15.7	4.3	10.5	14.8	1,300
PM_{10}	Annual	0.40	25.9	26.3	0.43	25.9	26.3	50
	24-Hour	2.00	60.0	62.0	2.15	60.0	62.1	150
NO_2	Annual	1.65	18.0	19.7	1.65	18.0	19.7	100
CO	8-Hour	28.8	2,517	2,546	16.2	2,517	2,534	10,000
	1-Hour	85.3	3,890	3,976	34.2	3,890	3,925	40,000
CTs, Fuel Heater, and Gas Compressors								
SO_2	Annual	0.46	4.4	4.91	0.42	4.4	4.87	60
	24-Hour	2.70	10.5	13.2	2.71	10.5	13.2	260
	3-Hour	5.3	10.5	15.8	4.4	10.5	14.9	1,300
PM_{10}	Annual	0.63	25.9	26.5	0.65	25.9	26.6	50
	24-Hour	4.40	60.0	64.4	4.41	60.0	64.4	150
NO_2	Annual	17.14	18.0	35.2	17.14	18.0	35.2	100
CO	8-Hour	71.3	2,517	2,589	71.3	2,517	2,589	10,000
	1-Hour	141.4	3,890	4,032	141.4	3,890	4,032	40,000

[a] Based on highest annual and highest, second-highest short-term average concentrations predicted for the project.

[b] Based on highest annual and second-highest short-term average concentrations measured at representative monitoring stations nearest the Site.

TABLE 6-6B
MAXIMUM POLLUTANT CONCENTRATIONS PREDICTED
FOR RBEC AT PALM BEACH HOUSE
COMPARED TO THE AAQS

		MPS 501G Class			Siemens H			
		Maximum Predicted Concentration ($\mu g/m^3$)			Maximum Predicted Concentration ($\mu g/m^3$)			
Pollutant	**Averaging Time**	**CCEC [a]**	**Background [b]**	**Total**	**CCEC [a]**	**Background [b]**	**Total**	**AAQS ($\mu g/m^3$)**
CTs and Fuel Heater								
SO_2	Annual	0.93	4.4	5.38	0.79	4.4	5.24	60
	24-Hour	9.09	10.5	19.5	7.89	10.5	18.4	260
	3-Hour	41.7	10.5	52.2	36.2	10.5	46.7	1,300
PM_{10}	Annual	0.73	25.9	26.6	0.87	25.9	26.8	50
	24-Hour	6.89	60.0	66.9	8.22	60.0	68.2	150
NO_2	Annual	1.05	18.0	19.1	1.28	18.0	19.3	100
CO	8-Hour	92.5	2,517	2,610	83.6	2,517	2,601	10,000
	1-Hour	234	3,890	4,124	234	3,890	4,125	40,000
CTs, Fuel Heater, and Gas Compressors								
SO_2	Annual	0.94	4.4	5.38	0.80	4.4	5.24	60
	24-Hour	9.1	10.5	19.6	7.9	10.5	18.4	260
	3-Hour	41.7	10.5	52.2	36.2	10.5	46.7	1,300
PM_{10}	Annual	0.74	25.9	26.6	0.88	25.9	26.8	50
	24-Hour	6.93	60.0	66.9	8.25	60.0	68.3	150
NO_2	Annual	2.64	18.0	20.7	2.67	18.0	20.7	100
CO	8-Hour	92.5	2,517	2,610	84.3	2,517	2,602	10,000
	1-Hour	233.9	3,890	4,124	234.4	3,890	4,125	40,000

[a] Based on highest annual and highest, second-highest short-term average concentrations predicted for the project.

[b] Based on highest annual and second-highest short-term average concentrations measured at representative monitoring stations nearest the Site.

TABLE 6-7
SUMMARY OF POLLUTANT CONCENTRATIONS PREDICTED FOR THE RBEC AUXILIARY BOILER COMPARED TO AMBIENT AIR QUALITY STANDARDS

Pollutant	Emission Rate	Units	Averaging Time	Maximum Concentration [a,d] ($\mu g/m^3$)	Background Concentration [b] ($\mu g/m^3$)	Total Concentration ($\mu g/m^3$)	Ambient Air Quality Standard (AAQS) ($\mu g/m^3$)
SO_2	0.14	TPY	Annual	0.026	4.4	4.5	60
	0.54	lb/hr	24-Hour	3.4	10.5	13.8	260
	0.54	lb/hr	3-Hour	6.2	10.5	16.6	1,300
PM_{10}	0.17	TPY	Annual	0.03	25.9	25.9	50
	0.70	lb/hr	24-Hour	1.1	60.0	61.1	150
NO_x [c]	1.25	TPY	Annual	0.18	18.0	18.2	100
CO	7.98	lb/hr	8-Hour	71.7	2,517	2,589	10,000
	7.98	lb/hr	1-Hour	117.9	3,890	4,008	40,000

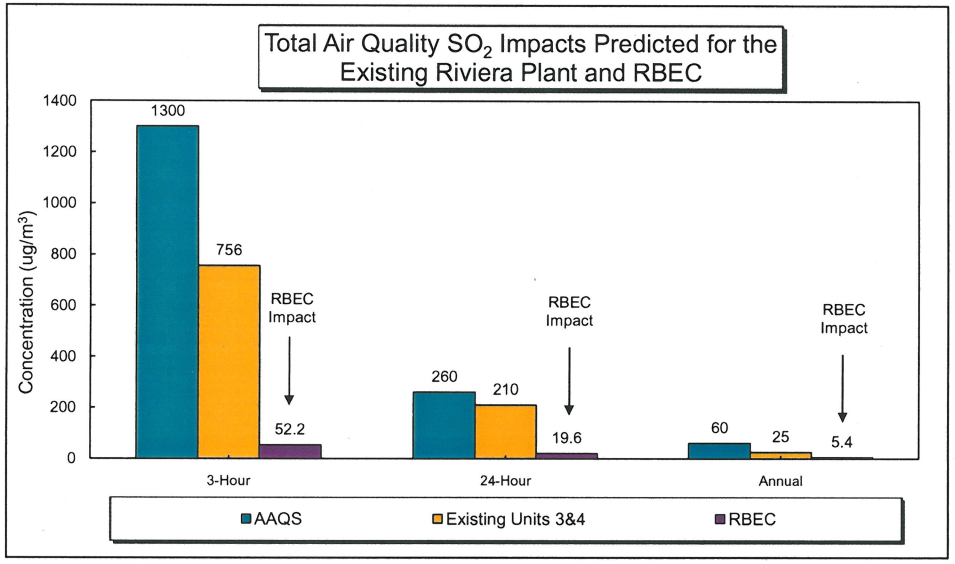
[a] Concentrations are based on highest predicted concentrations from AERMOD using 5 years of meteorological data from 2001 to 2005 with surface and upper air data from the National Weather Service stations at Palm Beach and Miami International Airports, respectively. Based on highest annual and highest short-term average concentrations predicted for the units, by ratioing modeled rate to pollutant specific rate:

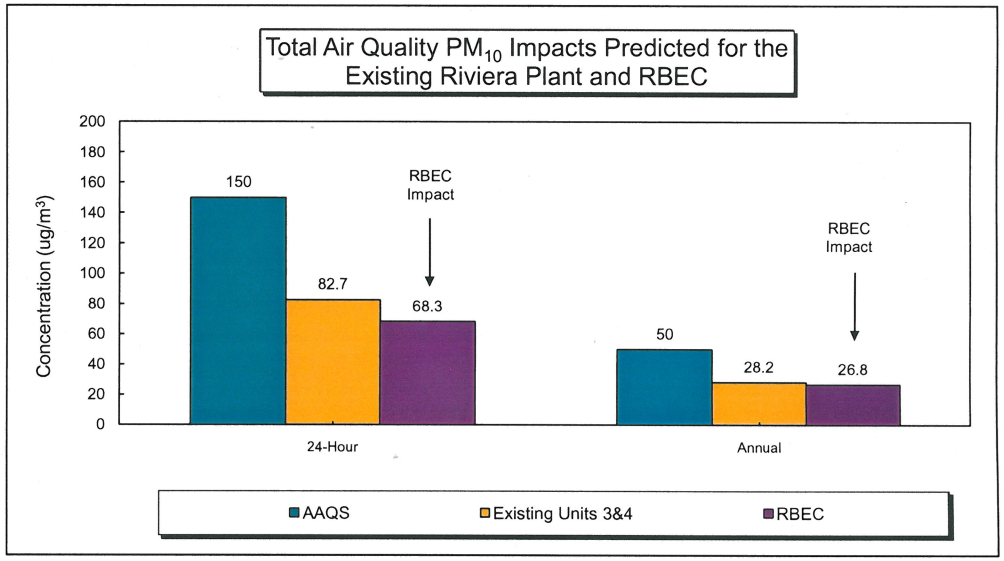
Modeled Rate (lb/hr)	Averaging Time	Predicted Concentration ($\mu g/m^3$)
79.37	Annual	33.3
	24-Hour	247.1
	8-Hour	356.4
	3-Hour	454.4
	1-Hour	586.4

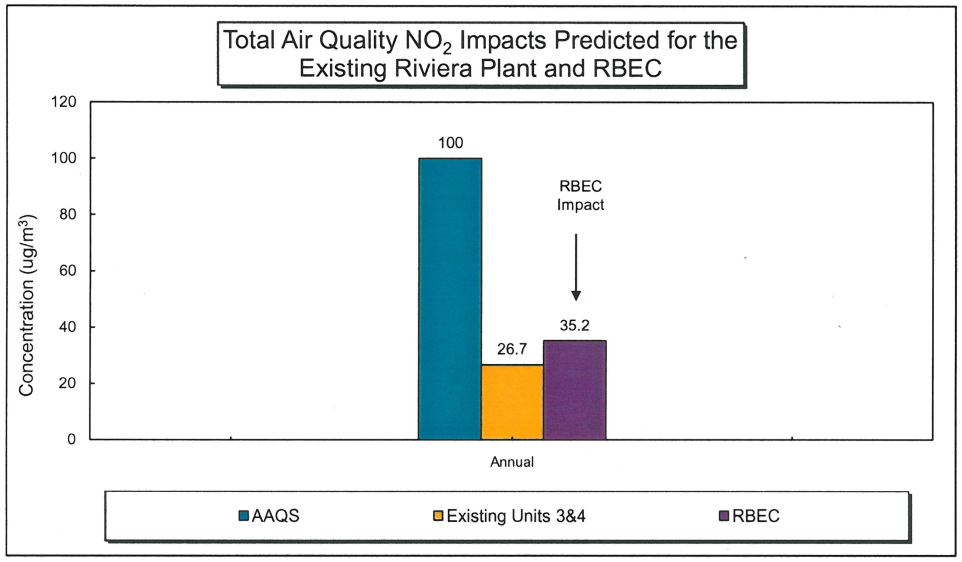
[b] Based on highest annual and second-highest short-term average concentrations measured at representative monitoring stations nearest the Site.

[c] NO_x to NO_2 conversion factor of 0.75 applied to modeled NO_x impacts based on EPA Modeling Guidelines.

[d] Based on 500 hours/yr operation.







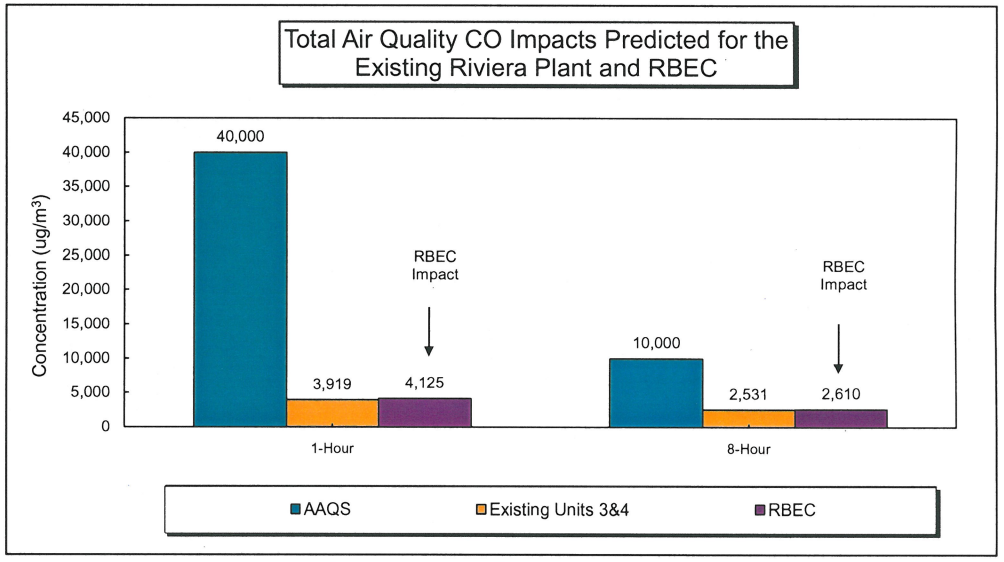


Figure 6-1.
Maximum Total Air Quality Impacts of the Existing Units 3 & 4 and RBEC Compared to Ambient Air Quality Standards

CCEC/Appendix 10.2.5

Source: Golder, 2009.

FPL

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APPENDIX A

EXPECTED PERFORMANCE AND EMISSION INFORMATION

TABLE A-1-501G CLASS
DESIGN INFORMATION AND STACK PARAMETERS FOR THE CONVERSION PROJECT
MPS 501G CLASS CT, DRY LOW NO_x COMBUSTOR, NATURAL GAS, BASE LOAD

	CT Only Turbine Inlet Temperature				CT with Duct Burner Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**75 °F**	**95 °F**	**35 °F w/DB**	**59 °F w/DB**	**75 °F w/DB**	**95 °F w/DB**
Combustion Turbine Performance								
Heat Input (MMBtu/hr, LHV)	2,509	2,406	2,324	2,242	2,509	2,406	2,324	2,242
(MMBtu/hr, HHV)	2,785	2,671	2,580	2,489	2,785	2,671	2,580	2,489
Evaporative Cooler	Off	On	On	On	Off	Off	Off	Off
Relative Humidity (%)	60	60	60	50	40	60	60	50
Fuel heating value (Btu/lb, LHV)	20,909	20,909	20,909	20,909	20,909	20,909	20,909	20,909
(Btu/lb, HHV)	23,209	23,209	23,209	23,209	23,209	23,209	23,209	23,209
(HHV/LHV)	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110
Steam Flow (lb/hr)	NA	NA	NA	NA	NA	NA	NA	NA
Duct Burner (DB)								
Heat input (MMBtu/hr, HHV)	0	0	0	0	475	475	475	475
(MMBtu/hr, LHV)	0	0	0	0	427.9	427.9	427.9	427.9
CT/DB Exhaust Flow								
Mass Flow (lb/hr)- provided	5,117,000	4,928,000	4,772,000	4,601,000	5,137,642.9	4,948,643	4,792,643	4,621,644
- provided	NA	NA	NA	NA				
Temperature (°F) - provided	1126	1135	1144	1156	1,126	1,135	1,144	1,156
Moisture (% Vol.)	8.30	9.04	9.77	10.91	9.61	10.39	11.15	12.33
Oxygen (% Vol.)	12.00	11.89	11.78	11.56	10.55	10.39	10.23	9.97
Molecular Weight	28.42	28.33	28.25	28.12	28.35	28.27	28.18	28.05
Volume flow (acfm) - calculated	3,481,669	3,382,811	3,303,538	3,223,823	3,504,027	3,404,768	3,325,831	3,245,994
Fuel Usage								
Fuel usage (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu [Fuel Heat Content, Btu/lb (LHV)]								
Heat input (MMBtu/hr, LHV)	2,509	2,406	2,324	2,242	2,509	2,406	2,324	2,242
Heat content (Btu/lb, LHV)	20,909	20,909	20,909	20,909	20,909	20,909	20,909	20,909
Fuel usage (lb/hr)- provided	120,000	115,100	111,180	107,260	120,000	115,100	111,180	107,260
- calculated	119,997	115,085	111,164	107,243	119,997	115,085	111,164	107,243
Heat content (Btu/cf, LHV)- assumed	918	918	918	918	918	918	918	918
Fuel density (lb/ft^3)	0.0439	0.0439	0.0439	0.0439	0.0439	0.0439	0.0439	0.0439
Fuel usage (cf/hr)- calculated	2,733,204	2,621,598	2,532,313	2,443,029	2,733,204	2,621,598	2,532,313	2,443,029
Fuel Usage - Duct Burner Only								
Fuel usage (lb/hr)- calculated	0	0	0	0	20,466	20,466	20,466	20,466
Fuel usage (cf/hr)- calculated	0	0	0	0	466,152	466,152	466,152	466,152
HRSG Stack								
HRSG - Stack Height (feet)	149	149	149	149	149	149	149	149
Diameter (feet)	22	22	22	22	22	22	22	22
HRSG Stack Flow Conditions								
Velocity (ft/sec) = Volume flow (acfm) / [((diameter)² /4) x 3.14159] / 60 sec/min								
Mass flow (lb/hr)	5,117,000	4,928,000	4,772,000	4,601,000	5,137,643	4,948,643	4,792,643	4,621,644
HRSG Stack Temperature (^{o}F)	196	195	195	195	186	185	185	184
Molecular weight	28.42	28.33	28.25	28.12	28.35	28.27	28.18	28.05
Volume flow (acfm)	1,440,085	1,388,967	1,348,601	1,307,085	1,426,797	1,375,782	1,336,553	1,293,376
Diameter (feet)	22	22	22	22	22	22	22	22
Velocity (ft/sec)- calculated	63.1	60.9	59.1	57.3	62.6	60.3	58.6	56.7

Note: Universal gas constant = 1,545.4 ft-lb(force)/°R; atmospheric pressure = 2,112.5 lb(force)/ft² (@14.67 psia).
Source: MPS, 2008; CT Performance Data; Golder, 2008.

TABLE A-2-501G CLASS
MAXIMUM EMISSIONS FOR CRITERIA POLLUTANTS FOR THE CONVERSION PROJECT
MPS 501G CLASS CT, DRY LOW NO_x COMBUSTOR, NATURAL GAS, BASE LOAD

	CT Only Turbine Inlet Temperature				CT with Duct Burner Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**75 °F**	**95 °F**	**35 °F w/DB**	**59 °F w/DB**	**75 °F w/DB**	**95 °F w/DB**
Particulate from CT, DB, and HRSG								
Total PM_{10} = PM_{10} (front half) + PM_{10} [$(NH_4)_2SO_4$] in HRSG only (back-half)								
a. PM_{10} (front half) (lb/hr)								
CT- provided	4.0	3.5	3.4	3.2	4.0	3.5	3.4	3.2
DB (lb/hr) - calculated	0.0	0.0	0.0	0.0	2.4	2.4	2.4	2.4
Total CT/DB emission rate (lb/hr)	4.0	3.5	3.4	3.2	6.4	5.9	5.8	5.6
b. PM_{10} [$(NH_4)_2SO_4$] from HRSG only (back half) = Sulfur trioxide from conversion of SO_2 converts to ammonium sulfate (= PM_{10})								
Particulate from conversion of SO_2 = SO_2 emissions (lb/hr) x conversion of SO_2 to SO_3 in CT and in SCR x lb SO_3/lb SO_2 x conversion of SO_3 to $(NH_4)_2SO_4$ x lb $(NH_4)_2SO_4$ / lb SO_3								
CT SO_2 emission rate (lb/hr)- calculated	15.6	15.0	14.5	14.0	15.6	15.0	14.5	14.0
Conversion (%) from SO_2 to SO_3 in CT	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
DB SO_2 emission rate (lb/hr)- calculated	--	--	--	--	2.7	2.7	2.7	2.7
Conversion (%) from SO_2 to SO_3 in DB	--	--	--	--	20.0	20.0	20.0	20.0
Remaining SO_2 (lb/hr) after conversion - calculated	14.1	13.5	13.0	12.6	16.2	15.6	15.2	14.7
Conversion (%) from SO_2 to SO_3 in SCR	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
MW SO_3/ SO_2 (80/64)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Conversion (%) from SO_3 to $(NH_4)_2(SO_4)$	100	100	100	100	100	100	100	100
MW $(NH_4)_2$ SO_4/ SO_3 (132/80)	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
HRSG Particulate as $(NH_4)_2(SO_4)$ (lb/hr)- calculated	4.09	3.92	3.79	3.66	5.32	5.15	5.02	4.89
Total HRSG stack emission rate (lb/hr) [a + b] - provided								
-calculated	8.1	7.4	7.2	6.9	11.7	11.0	10.8	10.5
- maximum	8.1	7.4	7.2	6.9	11.7	11.0	10.8	10.5
(lb/mmBtu, HHV)	NA	NA	NA	NA	NA	NA	NA	NA
Sulfur Dioxide								
SO_2 (lb/hr)= Natural gas (scf/hr) x sulfur content(gr/100 scf) x 1 lb/7000 gr x (lb SO_2 /lb S) /100								
Fuel use (cf/hr)	2,733,204	2,621,598	2,532,313	2,443,029	3,199,356	3,087,750	2,998,466	2,909,181
Sulfur content (grains/ 100 cf)	2	2	2	2	2	2	2	2
lb SO_2 /lb S (64/32)	2	2	2	2	2	2	2	2
HRSG stack emission rate (lb/hr) - calculated	15.6	15.0	14.5	14.0	18.3	17.6	17.1	16.6
Nitrogen Oxides								
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]								
NO_x (ppmv actual) = NO_x (ppmd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]								
NO_x (lb/hr) = NO_x (ppm actual) x Volume flow (acfm) x 46 (mole. wgt NO_x) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr								
Basis, ppm actual- calculated	18.2	18.1	18.0	17.9	22.1	22.1	22.1	22.2
CT/DB, ppmvd @15% O_2 - provided	15	15	15	15	15.6	15.6	15.7	15.7
Moisture (%)	8.29760756	9.04185405	9.76898791	10.91	9.61	10.39	11.15	12.33
Oxygen (%)	11.9990187	11.8901928	11.7771604	11.56	10.55	10.39	10.23	9.97
Oxygen (%) dry	13.08	13.07	13.05	12.98	11.67	11.59	11.52	11.38
Turbine Flow (acfm)	3,481,669	3,382,811	3,303,538	3,223,823	3,504,027	3,404,768	3,325,831	3,245,994
Turbine Flow (acfm), dry	3,192,774	3,076,942	2,980,816	2,872,095	3,167,465	3,050,961	2,954,900	2,845,697
Turbine Exhaust Temperature (°F)	1,126	1,135	1,144	1,156	1,126	1,135	1,144	1,156
CT/DB emission rate (lb/hr) - calculated	150.9	144.8	139.9	135.0	184.2	178.1	173.1	168.2
CT/DB Emission rate (lb/hr) - provided	151.0	144.0	140.0	135.0	184.3	177.3	173.3	168.3
HRSG Stack emission rate, ppmvd @ 15% O_2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
HRSG stack emission rate (lb/hr) - calculated (Max. CT/DB calculated/provided)	20.1	19.3	18.7	18.0	23.6	22.8	22.1	21.5
Carbon Monoxide								
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]								
CO (ppmv wet or actual) = CO (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]								
CO (lb/hr) = CO (ppm actual) x Volume flow (acfm) x 28 (mole. wgt CO) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr								
Basis, ppm actual- calculated	4.98	4.95	4.92	4.90	8.7	8.8	8.9	9.0
Basis, ppmvd @ 15% O_2 - provided	4.10	4.10	4.10	4.10	6.1	6.2	6.3	6.4
Moisture (%)	8.30	9.04	9.77	10.91	9.61	10.39	11.15	12.33
Oxygen (%)	12.00	11.89	11.78	11.56	10.55	10.39	10.23	9.97
Oxygen (%) dry	13.08	13.07	13.05	12.98	11.67	11.59	11.52	11.38
Turbine Flow (acfm)	3,481,669	3,382,811	3,303,538	3,223,823	3,504,027	3,404,768	3,325,831	3,245,994
Turbine Flow (acfm), dry	3,192,774	3,076,942	2,980,816	2,872,095	3,167,465	3,050,961	2,954,900	2,845,697
Turbine Exhaust Temperature (°F)	1,126	1,135	1,144	1,156	1,126	1,135	1,144	1,156
CT/DB emission rate (lb/hr) - calculated	25.1	24.1	23.3	22.5	44.1	43.1	42.3	41.5
CT/DB Emission rate (lb/hr) - provided	25.0	24.0	24.0	23.0	44.0	43.0	43.0	42.0
HRSG Stack emission rate, ppmvd @ 15% O_2 - provided	4.1	4.1	4.1	4.1	7.6	7.6	7.6	7.6
HRSG Stack emission rate (lb/hr)- calculated (Max. CT/DB calculated/provided)	25.1	24.1	24.0	23.0	54.5	52.7	52.0	50.3
Volatile Organic Compounds								
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]								
VOC (ppmv wet or actual) = VOC (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]								
VOC (lb/hr) = VOC (ppm actual) x Volume flow (acfm) x 16 (mole. wgt CH_4) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr								
Basis, ppm actual- calculated	1.21	1.21	1.20	1.20	2.0	2.0	2.1	2.1
Basis, ppmvd @ 15% O_2 - provided	1.00	1.00	1.00	1.00	1.4	1.4	1.5	1.5
Moisture (%)	8.30	9.04	9.77	10.91	9.61	10.39	11.15	12.33
Oxygen (%) wet	12.00	11.89	11.78	11.56	10.55	10.39	10.23	9.97
Oxygen (%) dry	13.08	13.07	13.05	12.98	11.67	11.59	11.52	11.38
Turbine Flow (acfm)	3,481,669	3,382,811	3,303,538	3,223,823	3,504,027	3,404,768	3,325,831	3,245,994
Turbine Flow (acfm), dry	3,192,774	3,076,942	2,980,816	2,872,095	3,167,465	3,050,961	2,954,900	2,845,697
Turbine Exhaust Temperature (°F)	1,126	1,135	1,144	1,156	1,126	1,135	1,144	1,156
CT/DB emission rate (lb/hr) - calculated	3.50	3.36	3.24	3.13	5.87	5.73	5.62	5.51
CT/DB Emission rate (lb/hr) - provided	3.50	3.40	3.30	3.20	5.88	5.78	5.68	5.58
HRSG Stack emission rate, ppmvd @ 15% O_2 - provided	1.2	1.2	1.2	1.2	1.6	1.6	1.6	1.6
HRSG Stack emission rate (lb/hr)- calculated (Max. CT/DB calculated/provided)	4.2	4.08	4.0	3.8	6.6	6.4	6.2	6.0
Sulfuric Acid Mist								
Sulfuric Acid Mist (lb/hr)= SO_2 emission (lb/hr) x Conversion to H_2SO_4 (% by weight)/100								
CT SO_2 emission rate (lb/hr) - calculated	15.6	15.0	14.5	14.0	15.6	15.0	14.5	14.0
CT Conversion to H_2SO_4 (% by weight) - provided	10	10	10	10	10	10	10	10
DB SO_2 emission rate (lb/hr) - provided	0	0	0	0	2.7	2.7	2.7	2.7
DB Conversion to H_2SO_4 (%) - provided	20	20	20	20	20	20	20	20
SCR SO_2 (lb/hr)(remaining SO_2 after conversion) - calc	14.1	13.5	13.0	12.6	16.2	15.6	15.2	14.7
SCR Conversion to H_2SO_4 (% by weight) - provided	3	3	3	3	3	3	3	3
HRSG Stack emission rate (lb/hr)	3.04	2.91	2.81	2.71	3.95	3.83	3.73	3.63
Lead								
Lead (lb/hr) = NA								
Emission Rate Basis	NA	NA	NA	NA	NA	NA	NA	NA
Emission rate (lb/hr)	NA	NA	NA	NA	NA	NA	NA	NA

Note: ppmvd= parts per million, volume dry; O_2= oxygen.
Source: MPS, 2008; CT Performance Data; Golder, 2008.

TABLE A-3-501G CLASS
DESIGN INFORMATION AND STACK PARAMETERS
FOR THE CONVERSION PROJECT
MPS 501G CLASS CT, DRY LOW NO_x COMBUSTOR, NATURAL GAS, 75% LOAD

	Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**75 °F**	**95 °F**
Combustion Turbine Performance				
Heat Input (MMBtu/hr, LHV)	1,935	1,844	1,781	1,705
(MMBtu/hr, HHV)	2,148	2,047	1,977	1,892
Relative Humidity (%)	60	60	60	50
Fuel heating value (Btu/lb, LHV)	20,909	20,909	20,909	20,909
(Btu/lb, HHV)	23,209	23,209	23,209	23,209
(HHV/LHV)	1.110	1.110	1.110	1.110
CT Exhaust Flow				
Mass flow (lb/hr)- provided	4,161,800	4,012,700	3,895,000	3,752,000
- provided	NA	NA	NA	NA
Temperature (°F) - provided	1,099	1,116	1,127	1,143
Moisture (% Vol.)	7.91	8.39	9.06	9.96
Oxygen (% Vol.)	12.44	12.44	12.38	12.23
Molecular Weight	28.44	28.39	28.38	28.20
Volume flow (acfm) - calculated	2,781,574	2,715,558	2,655,238	2,600,400
Fuel Usage				
Fuel usage (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu [Fuel Heat Content, Btu/lb (LHV)]				
Heat input (MMBtu/hr, LHV)	1,935	1,844	1,781	1,705
Heat content (Btu/lb, LHV)	20,909	20,909	20,909	20,909
Fuel usage (lb/hr)- provided	92,570	88,180	85,200	81,510
- calculated	92,550	88,177	85,182	81,520
Heat content (Btu/cf, LHV)- assumed	918	918	918	918
Fuel density (lb/ft^3)	0.0439	0.0439	0.0439	0.0439
Fuel usage (cf/hr)- calculated	2,108,439	2,008,449	1,940,575	1,856,529
HRSG Stack				
HRSG - Stack Height (feet)	149	149	149	149
Diameter (feet)	22	22	22	22
HRSG Stack Flow Conditions				
Velocity (ft/sec) = Volume flow (acfm) / [((diameter)² /4) x 3.14159] / 60 sec/min				
Mass flow (lb/hr)	4,161,800	4,012,700	3,895,000	3,752,000
HRSG Stack Temperature (^oF)	184	185	186	187
Molecular weight	28.44	28.39	28.38	28.20
Volume flow (acfm)	1,149,027	1,111,733	1,080,834	1,049,569
Diameter (feet)	22	22	22	22
Velocity (ft/sec)- calculated	50.4	48.7	47.4	46.0

Note: Universal gas constant = 1,545.4 ft-lb(force)/°R; atmospheric pressure = 2,112.5 lb(force)/ft² (@14.67 psia).
Source: MPS, 2008; CT Performance Data; Golder, 2008.

TABLE A-4-501G CLASS
MAXIMUM EMISSIONS FOR CRITERIA POLLUTANTS FOR THE CONVERSION PROJECT
MPS 501G CLASS CT, DRY LOW NO_x COMBUSTOR, NATURAL GAS, 75% LOAD

	Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**75 °F**	**95 °F**
Particulate from CT and HRSG				
Total PM_{10} = PM_{10} (front half) + PM_{10} [$(NH_4)_2SO_4$] in HRSG only (back-half)				
a. PM_{10} (front half) (lb/hr)				
Particulate from CT- provided	3.0	3.0	3.0	3.0
b. PM_{10} [$(NH_4)_2SO_4$] from HRSG only (back half) = Sulfur trioxide from conversion of SO_2 converts to ammonium sulfate (= PM_{10})				
Particulate from conversion of SO_2 = SO_2 emissions (lb/hr) x conversion of SO_2 to SO_3 in CT and in SCR x lb SO_3/lb SO_2 x conversion of SO_3 to $(NH_4)_2SO_4$ x lb $(NH_4)_2SO_4$/ lb SO_3				
SO_2 emission rate (lb/hr)- calculated	12.0	11.5	11.1	10.6
Conversion (%) from SO_2 to SO_3	10.0	10.0	10.0	10.0
Remaining SO_2 (lb/hr) in CT after conversion - calculated	10.8	10.3	10.0	9.5
Conversion (%) from SO_2 to SO_3 in SCR	3.0	3.0	3.0	3.0
MW SO_3/ SO_2 (80/64)	1.3	1.3	1.3	1.3
Conversion (%) from SO_3 to $(NH_4)_2(SO_4)$	100	100	100	100
MW $(NH_4)_2$ SO_4/ SO_3 (132/80)	1.7	1.7	1.7	1.7
HRSG Particulate as $(NH_4)_2(SO_4)$ (lb/hr)- calculated	3.16	3.01	2.90	2.78
Total HRSG stack emission rate (lb/hr) [a + b] - provided				
-calculated	6.2	6.0	5.9	5.8
- maximum	6.2	6.0	5.9	5.8
(lb/mmBtu, HHV)	NA	NA	NA	NA
Sulfur Dioxide				
SO_2 (lb/hr)= Natural gas (scf/hr) x sulfur content(gr/100 scf) x 1 lb/7000 gr x (lb SO_2 /lb S) /100				
Fuel use (cf/hr)	2,108,439	2,008,449	1,940,575	1,856,529
Sulfur content (grains/ 100 cf)	2	2	2	2
lb SO_2 /lb S (64/32)	2	2	2	2
HRSG Stack emission rate (lb/hr)- calculated	12.0	11.5	11.1	10.6
Nitrogen Oxides				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
NO_x (ppm actual) = NO_x (ppmd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
NO_x (lb/hr) = NO_x (ppm actual) x Volume flow (acfm) x 46 (mole. wgt NO_x) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	17.3	17.1	16.8	16.7
CT / DB, ppmvd @15% O_2 - provided	15	15	15	15
Moisture (%)	7.908796321	8.389799533	9.059407947	9.955184131
Oxygen (%)	12.44	12.44	12.38	12.23
Oxygen (%) dry	13.51	13.58	13.62	13.58
Turbine Flow (acfm)	2,781,574	2,715,558	2,655,238	2,600,400
Turbine Flow (acfm), dry	2,561,585	2,487,728	2,414,689	2,341,526
Turbine Exhaust Temperature (°F)	1,099	1,116	1,127	1,143
CT Emission rate (lb/hr) - calculated	116.4	110.9	106.3	102.5
CT Emission rate (lb/hr) - provided	116.0	111.0	107.0	103.0
HRSG Stack emission rate, ppmvd @ 15% O_2	2.0	2.0	2.0	2.0
HRSG Stack emission rate (lb/hr) - calculated	15.5	14.8	14.3	13.7
(Max. CT/DB calculated/provided)				
Carbon Monoxide				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
CO (ppmv wet or actual) = CO (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
CO (lb/hr) = CO (ppm actual) x Volume flow (acfm) x 28 (mole. wgt CO) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	11.5	11.4	11.2	11.2
Basis, ppmvd @ 15% O_2 - provided	10	10	10	10
Moisture (%)	7.91	8.39	9.06	9.96
Oxygen (%)	12.44	12.44	12.38	12.23
Oxygen (%) dry	13.51	13.58	13.62	13.58
Turbine Flow (acfm)	2,781,574	2,715,558	2,655,238	2,600,400
Turbine Flow (acfm), dry	2,561,585	2,487,728	2,414,689	2,341,526
Turbine Exhaust Temperature (°F)	1,099	1,116	1,127	1,143
HRSG Exhaust Temperature (°F)	184	185	186	187
CT Emission rate (lb/hr) - calculated	47.3	45.0	43.1	41.6
CT Emission rate (lb/hr) - provided	48.0	45.5	44.0	42.0
HRSG Stack emission rate, ppmvd @ 15% O_2	10	10	10	10
HRSG Stack emission rate (lb/hr)- calculated	48.0	45.5	44.0	42.0
(Max. CT/DB calculated/provided)				
Volatile Organic Compounds				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
VOC (ppmv wet or actual) = VOC (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
VOC (lb/hr) = VOC (ppm actual) x Volume flow (acfm) x 16 (mole. wgt CH_4) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppmvd - calculated	1.15	1.14	1.12	1.12
Basis, ppmvd @ 15% O_2 - provided	1	1	1	1
Moisture (%)	7.908796321	8.389799533	9.059407947	9.955184131
Oxygen (%)	12.44	12.44	12.38	12.23
Oxygen (%) dry	13.51	13.58	13.62	13.58
Turbine Flow (acfm)	2,781,574	2,715,558	2,655,238	2,600,400
Turbine Flow (acfm), dry	2,561,585	2,487,728	2,414,689	2,341,526
Turbine Exhaust Temperature (°F)	1,099	1,116	1,127	1,143
HRSG Exhaust Temperature (°F)	184	184	184	184
CT Emission rate (lb/hr) - calculated	2.70	2.57	2.46	2.38
CT Emission rate (lb/hr) - provided	2.70	2.60	2.50	2.40
HRSG Stack emission rate, ppmvd @ 15% O_2	1.2	1.2	1.2	1.2
HRSG Stack emission rate (lb/hr)- calculated	3.2	3.1	3.0	2.9
(Max. CT/DB calculated/provided)				
Sulfuric Acid Mist				
Sulfuric Acid Mist (lb/hr)= SO_2 emission (lb/hr) x Conversion to H_2SO_4 (% by weight)/100				
CT SO_2 emission rate (lb/hr) - calculated	12.0	11.5	11.1	10.6
CT Conversion to H_2SO_4 (% by weight) - provided	10	10	10	10
DB SO_2 emission rate (lb/hr) - provided	0	0	0	0
DB Conversion to H_2SO_4 (%) - provided	20	20	20	20
SCR SO_2 emission rate (lb/hr) - calculated (remaining SO_2 after conversion)	10.8	10.3	10.0	9.5
HRSG Stack emission rate (lb/hr)- calculated	2.34	2.23	2.16	2.06
- provided	1.9	1.6	1.6	1.5
Lead				
Lead (lb/hr) = NA				
Emission Rate Basis	NA	NA	NA	NA
HRSG Stack emission rate (lb/hr)	NA	NA	NA	NA

Note: ppmvd= parts per million, volume dry; O_2= oxygen.
Source: MPS, 2008; CT Performance Data; Golder, 2008.

TABLE A-5-501G CLASS
DESIGN INFORMATION AND STACK PARAMETERS
FOR THE CONVERSION PROJECT
MPS 501G CLASS CT, DRY LOW NO_x COMBUSTOR, DISTILLATE OIL, BASE LOAD

	Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**75 °F**	**95 °F**
Combustion Turbine Performance				
Heat Input (MMBtu/hr, LHV)	2,326	2,187	2,097	1,986
(MMBtu/hr, HHV)	2,466	2,318	2,223	2,105
Relative Humidity (%)	60	60	60	50
Fuel heating value (Btu/lb, LHV)	18,387	18,387	18,387	18,387
(Btu/lb, HHV)	19,490	19,490	19,490	19,490
(HHV/LHV)	1.060	1.060	1.060	1.060
CT Exhaust Flow				
Mass Flow (lb/hr)- provided	5,200,800	4,948,500	4,770,500	4,546,000
Temperature (°F) - provided	993	1,005	1,016	1,031
Moisture (% Vol.)	7.48	7.95	8.61	9.52
Oxygen (% Vol.)	12.52	12.51	12.43	12.31
Molecular Weight	28.66	28.60	28.52	28.41
Volume flow (acfm) - calculated	3,214,789	3,090,567	3,010,188	2,908,900
Fuel Usage				
Fuel usage (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu [Fuel Heat Content, Btu/lb (LHV)]				
Heat input (MMBtu/hr, LHV)	2,326	2,187	2,097	1,986
Heat content (Btu/lb, LHV)	18,387	18,387	18,387	18,387
Fuel usage (lb/hr)- provided	126,530	118,950	114,050	108,030
- calculated	126,502	118,943	114,048	108,011
HRSG Stack				
HRSG - Stack Height (feet)	149	149	149	149
Diameter (feet)	22	22	22	22
HRSG Stack Flow Conditions				
Velocity (ft/sec) = Volume flow (acfm) / [((diameter)² /4) x 3.14159] / 60 sec/min				
Mass flow (lb/hr) - provided	5,200,800	4,948,500	4,770,500	4,546,000
HRSG Stack Temperature (^oF)	359	357	355	354
Molecular weight	28.66	28.60	28.52	28.41
Volume flow (acfm)	1,812,053	1,723,545	1,662,130	1,588,092
Diameter (feet)	22	22	22	22
Velocity (ft/sec)- calculated	79.4	75.6	72.9	69.6

Note: Universal gas constant = 1,545.4 ft-lb(force)/°R; atmospheric pressure = 2,112.5 lb(force)/ft² (@14.67 psia).
Source: MPS, 2008; CT Performance Data; Golder, 2008.

TABLE A-6-501G CLASS
MAXIMUM EMISSIONS FOR CRITERIA POLLUTANTS FOR THE CONVERSION PROJECT
MPS 501G CLASS CT, DRY LOW NO_x COMBUSTOR, DISTILLATE OIL, BASE LOAD

	Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**75 °F**	**95 °F**
Particulate from CTand SCR				
Total PM_{10} = PM_{10} (front half) + PM_{10} [$(NH_4)_2SO_4$] in HRSG only (back-half)				
a. PM_{10} (front half) (lb/hr)				
Particulate from CT- provided	37.8	35.8	34.4	32.6
b. PM_{10} ($(NH_4)_2SO_4$) from HRSG only (back half) = Sulfur trioxide from conversion of SO_2 converts to ammonium sulfate (= PM_{10})				
Particulate from conversion of SO_2 = SO_2 emissions (lb/hr) x conversion of SO_2 to SO_3 in CT and in SCR x lb SO_3/lb SO_2 x conversion of SO_3 to $(NH_4)_2SO_4$ x lb $(NH_4)_2SO_4$/ lb SO_3				
SO_2 emission rate (lb/hr)- calculated	3.8	3.6	3.4	3.2
Conversion (%) from SO_2 to SO_3	10.0	10.0	10.0	10.0
Remaining SO_2 (lb/hr) in CT after conversion - calculated	3.4	3.2	3.1	2.9
Conversion (%) from SO_2 to SO_3 in SCR	3.0	3.0	3.0	3.0
MW SO_3/ SO_2 (80/64)	1.3	1.3	1.3	1.3
Conversion (%) from SO_3 to $(NH_4)_2(SO_4)$	100	100	100	100
MW $(NH_4)_2$ SO_4/ SO_3 (132/80)	1.7	1.7	1.7	1.7
HRSG Particulate as $(NH_4)_2(SO_4)$ (lb/hr)- calculated	0.99	0.93	0.90	0.85
Total HRSG stack emission rate (lb/hr) [a + b] - provided	38.4	36.3	34.9	33.1
-calculated	38.8	36.7	35.3	33.4
- maximum	38.8	36.7	35.3	33.4
(lb/mmBtu, HHV)	NA	NA	NA	NA
Sulfur Dioxide				
SO_2 (lb/hr)= Fuel oil (lb/hr) x sulfur content(% weight) x (lb SO_2 /lb S) /100				
Fuel oil Sulfur Content	0.0015%	0.0015%	0.0015%	0.0015%
Fuel oil use (lb/hr)	126,530	118,950	114,050	108,030
lb SO_2 / lb S (64/32)	2	2	2	2
HRSG Stack emission rate (lb/hr)- calculated	3.8	3.6	3.4	3.2
Nitrogen Oxides				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
NO_x (ppm actual) = NO_x (ppmd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
NO_x (lb/hr) = NO_x (ppm actual) x Volume flow (acfm) x 46 (mole. wgt NO_x) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	48.5	47.9	47.5	47.0
CT/DB, ppmvd @15% O_2	42	42	42	42
Moisture (%)	7.476823302	7.953290253	8.611751593	9.524698683
Oxygen (%)	12.52	12.51	12.43	12.31
Oxygen (%) dry	13.53	13.59	13.61	13.60
Turbine Flow (acfm)	3,214,789	3,090,567	3,010,188	2,908,900
Turbine Flow (acfm), dry	2,974,425	2,844,765	2,750,958	2,631,836
Turbine Exhaust Temperature (°F)	993	1,005	1,016	1,031
CT Emission rate (lb/hr) - calculated	405.0	381.0	365.2	346.0
CT emission rate (lb/hr) - provided	404.0	379.0	364.0	345.0
HRSG Stack emission rate, ppmvd @ 15% O_2 - provided	8	8	8.0	8.0
HRSG Stack emission rate (lb/hr) - calculated	77.1	72.6	69.6	65.9
(Max. CT/DB calculated/provided)				
Carbon Monoxide				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
CO (ppmv wet or actual) = CO (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
CO (lb/hr) = CO (ppm actual) x Volume flow (acfm) x 28 (mole. wgt CO) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	9.2	9.1	9.0	9.0
Basis, ppmvd @ 15% O_2 - provided	8	8	8	8
Moisture (%)	7.476823302	7.953290253	8.611751593	9.524698683
Oxygen (%)	12.52	12.51	12.43	12.31
Oxygen (%) dry	13.53	13.59	13.61	13.60
Turbine Flow (acfm)	3,214,789	3,090,567	3,010,188	2,908,900
Turbine Flow (acfm), dry	2,974,425	2,844,765	2,750,958	2,631,836
Turbine Exhaust Temperature (°F)	993	1,005	1,016	1,031
HRSG Exhaust Temperature (°F)	359	357	355	354
CT Emission rate (lb/hr) - calculated	47.0	44.2	42.3	40.1
CT emission rate (lb/hr) - provided	47.0	44.0	43.0	40.0
HRSG Stack emission rate, ppmvd @ 15% O_2	8.0	8.0	8.0	8.0
HRSG Stack emission rate (lb/hr) - calculated	47.0	44.2	43.0	40.1
(Max. CT/DB calculated/provided)				
Volatile Organic Compounds				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
VOC (ppmv wet or actual) = VOC (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
VOC (lb/hr) = VOC (ppm actual) x Volume flow (acfm) x 16 (mole. wgt CH_4) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	6.9	6.8	6.8	6.7
Basis, ppmvd @ 15% O_2 - provided	6.0	6.0	6.0	6.0
Moisture (%)	7.48	7.95	8.61	9.52
Oxygen (%)	12.52	12.51	12.43	12.31
Oxygen (%-dry)	13.53	13.59	13.61	13.60
Turbine Flow (acfm)	3,214,789	3,090,567	3,010,188	2,908,900
Turbine Flow (acfm), dry	2,974,425	2,844,765	2,750,958	2,631,836
Turbine Exhaust Temperature (°F)	993	1,005	1,016	1,031
CT Emission rate (lb/hr) - calculated	20.1	18.9	18.1	17.2
CT emission rate (lb/hr) - provided	20.1	18.9	18.1	17.2
HRSG Stack emission rate, ppmvd @ 15% O_2	6.0	6.0	6.0	6.0
HRSG Stack emission rate (lb/hr) - calculated	20.1	18.9	18.1	17.2
(Max. CT/DB calculated/provided)				
Sulfuric Acid Mist				
Sulfuric Acid Mist (lb/hr)= SO_2 emission (lb/hr) x Conversion to H_2SO_4 (% by weight)/100				
CT SO_2 emission rate (lb/hr) - calculated	3.8	3.6	3.4	3.2
CT Conversion to H_2SO_4 (% by weight) - provided	10	10	10	10
DB SO_2 emission rate (lb/hr) - provided	0	0	0	0
DB Conversion to H_2SO_4 (%) - provided	20	20	20	20
SCR SO_2 emission rate (lb/hr) - calculated (remaining SO_2 after conversion)	3.4	3.2	3.1	2.9
SCR Conversion to H_2SO_4 (% by weight) - provided	3	3	3	3
HRSG Stack emission rate (lb/hr)- calculated	0.74	0.69	0.67	0.63
- provided	1.2	1.1	1.0	1.0
Lead				
Lead (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Emission Rate Basis (lb/10^{12} Btu)	14	14	14	14
HRSG Stack emission rate (lb/hr)- calculated	0.0326	0.0306	0.0294	0.0278

Note: ppmvd= parts per million, volume dry; O_2= oxygen.
Source: MPS, 2008; CT Performance Data; Golder, 2008.

TABLE A-7-501G CLASS
DESIGN INFORMATION AND STACK PARAMETERS
FOR THE WEST COUNTY ENERGY CENTER UNIT 3 PROJECT
MPS 501G CLASS CT, DRY LOW NO_x COMBUSTOR, DISTILLATE OIL, 75% LOAD

	Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**75 °F**	**95 °F**
Combustion Turbine Performance				
Heat Input (MMBtu/hr, LHV)	1,815	1,721	1,660	1,585
(MMBtu/hr, HHV)	1,924	1,824	1,760	1,680
Relative Humidity (%)	60	60	60	50
Fuel heating value (Btu/lb, LHV)	18,387	18,387	18,387	18,387
(Btu/lb, HHV)	19,490	19,490	19,490	19,490
(HHV/LHV)	1.060	1.060	1.060	1.060
CT Exhaust Flow				
Mass Flow (lb/hr)- with no margin	5,031,800	4,841,700	4,703,300	4,511,000
- provided	NA	NA	NA	NA
Temperature (°F) - provided	840	854	866	885
Moisture (% Vol.)	6.12	6.62	7.28	8.20
Oxygen (% Vol.)	14.13	14.12	14.04	13.87
Molecular Weight	28.71	28.65	28.57	28.46
Volume flow (acfm) - calculated	2,777,963	2,707,457	2,661,515	2,599,281
Fuel Usage				
Fuel usage (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu [Fuel Heat Content, Btu/lb (LHV)]				
Heat input (MMBtu/hr, LHV)	1,815	1,721	1,660	1,585
Heat content (Btu/lb, LHV)	18,387	18,387	18,387	18,387
Fuel usage (lb/hr)- calculated	98,710	93,950	90,270	86,180
	98,711	93,599	90,281	86,202
HRSG Stack				
HRSG - Stack Height (feet)	149	149	149	149
Diameter (feet)	22	22	22	22
HRSG Stack Flow Conditions				
Velocity (ft/sec) = Volume flow (acfm) / [((diameter)² /4) x 3.14159] / 60 sec/min				
Mass flow (lb/hr)	5,031,800	4,841,700	4,703,300	4,511,000
HRSG Stack Temperature (^oF)	350	348	346	345
Molecular weight	28.71	28.65	28.57	28.46
Volume flow (acfm)	1,730,885	1,664,859	1,617,784	1,555,703
Diameter (feet)	22	22	22	22
Velocity (ft/sec)- calculated	75.9	73.0	70.9	68.2

Note: Universal gas constant = 1,545.4 ft-lb(force)/°R; atmospheric pressure = 2,112.5 lb(force)/ft² (@14.67 psia).
Source: MPS, 2008; CT Performance Data; Golder, 2008.

TABLE A-8-501G CLASS
MAXIMUM EMISSIONS FOR CRITERIA POLLUTANTS FOR THE CONVERSION PROJECT
MPS 501G CLASS CT, DRY LOW NO_x COMBUSTOR, DISTILLATE OIL, 75% LOAD

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Particulate from CTand SCR				
Total PM_{10} = PM_{10} (front half) + PM_{10} [$(NH_4)_2SO_4$] in HRSG only (back-half)				
a. PM_{10} (front half) (lb/hr)				
Particulate from CT- provided	36.9	35.4	34.2	32.6
b. PM_{10} [$(NH_4)_2SO_4$] from HRSG only (back half) = Sulfur trioxide from conversion of SO_2 converts to ammonium sulfate (= PM_{10})				
Particulate from conversion of SO_2 = SO_2 emissions (lb/hr) x conversion of SO_2 to SO_3 in CT and in SCR x lb SO_3/lb SO_2 x conversion of SO_3 to $(NH_4)_2SO_4$ x lb $(NH_4)_2SO_4$/ lb SO_3				
SO_2 emission rate (lb/hr)- calculated	3.0	2.8	2.7	2.6
Conversion (%) from SO_2 to SO_3 in CT	10.0	10.0	10.0	10.0
Remaining SO_2 (lb/hr) in CT after conversion - calculated	2.7	2.5	2.4	2.3
Conversion (%) from SO_2 to SO_3 in SCR	3.0	3.0	3.0	3.0
MW SO_3/ SO_2 (80/64)	1.3	1.3	1.3	1.3
Conversion (%) from SO_3 to $(NH_4)_2(SO_4)$	100	100	100	100
MW $(NH_4)_2$ SO_4/ SO_3 (132/80)	1.7	1.7	1.7	1.7
HRSG Particulate as $(NH_4)_2(SO_4)$ (lb/hr)- calculated	0.78	0.74	0.71	0.68
Total HRSG stack emission rate (lb/hr) [a + b] - provided	37.4	35.9	34.7	33
-calculated	37.7	36.1	34.9	33.3
- maximum	37.7	36.1	34.9	33.3
(lb/mmBtu, HHV)	NA	NA	NA	NA
Sulfur Dioxide				
SO_2 (lb/hr)= Fuel oil (lb/hr) x sulfur content(% weight) x (lb SO_2 /lb S) /100				
Fuel oil Sulfur Content	0.0015%	0.0015%	0.0015%	0.0015%
Fuel oil use (lb/hr)	98,710	93,950	90,270	86,180
lb SO_2 / lb S (64/32)	2	2	2	2
HRSG Stack emission rate (lb/hr)- calculated	3.0	2.8	2.7	2.6
Nitrogen Oxides				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
NO_x (ppm actual) = NO_x (ppmd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
NO_x (lb/hr) = NO_x (ppm actual) x Volume flow (acfm) x 46 (mole. wgt NO_x) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	39.1	38.4	38.0	37.8
CT/DB, ppmvd @15% O_2	42	42	42	42
Moisture (%)	6.119380948	6.615474963	7.278904126	8.198706257
Oxygen (%)	14.13	14.12	14.04	13.87
Oxygen (%) dry	15.05	15.12	15.14	15.11
Turbine Flow (acfm)	2,777,963	2,707,457	2,661,515	2,599,281
Turbine Flow (acfm), dry	2,607,969	2,528,346	2,467,786	2,386,173
Turbine Exhaust Temperature (°F)	840	854	866	885
CT emission rate (lb/hr)	315.1	298.7	288.0	275.7
CT emission rate (lb/hr)(provided)	315.0	299.0	288.0	275.0
HRSG Stack, ppmvd @ 15% O_2 - provided	8.0	8.0	8.0	8.0
HRSG Stack emission rate (lb/hr)- calculated (Max. CT/DB calculated/provided)	60.0	57.0	54.9	52.5
Carbon Monoxide				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
CO (ppmv wet or actual) = CO (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
CO (lb/hr) = CO (ppm actual) x Volume flow (acfm) x 28 (mole. wgt CO) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	46.5	45.7	45.3	45.0
Basis, ppmvd @ 15% O_2 - provided	50	50	50	50
Moisture (%)	6.119380948	6.615474963	7.278904126	8.198706257
Oxygen (%)	14.13	14.12	14.04	13.87
Oxygen (%) dry	15.05	15.12	15.14	15.11
Turbine Flow (acfm)	2,777,963	2,707,457	2,661,515	2,599,281
Turbine Flow (acfm), dry	2,607,969	2,528,346	2,467,786	2,386,173
Turbine Exhaust Temperature (°F)	840	854	866	885
HRSG Exhaust Temperature (°F)	350	348	346	345
CT emission rate (lb/hr)	228.3	216.5	208.7	199.8
CT emission rate (lb/hr)(provided)	228.0	217.0	209.0	200.0
HRSG Stack, ppmvd @ 15% O_2 - provided	50.0	50.0	50.0	50.0
HRSG Stack emission rate (lb/hr)- calculated (Max. CT/DB calculated/provided)	228.3	217.0	209.0	200.0
Volatile Organic Compounds				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
VOC (ppmv wet or actual) = VOC (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
VOC (lb/hr) = VOC (ppm actual) x Volume flow (acfm) x 16 (mole. wgt CH_4) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	9.3	9.1	9.1	9.0
Basis, ppmvd @ 15% O_2 - provided	10.0	10.0	10.0	10.0
Moisture (%)	6.12	6.62	7.28	8.20
Oxygen (%)	14.13	14.12	14.04	13.87
Oxygen (%) dry	15.05	15.12	15.14	15.11
Turbine Flow (acfm)	2,777,963	2,707,457	2,661,515	2,599,281
Turbine Flow (acfm), dry	2,607,969	2,528,346	2,467,786	2,386,173
Turbine Exhaust Temperature (°F)	840	854	866	885
HRSG Exhaust Temperature (°F)	350	348	346	345
CT emission rate (lb/hr) (calculated)	26.1	24.7	23.9	22.8
CT emission rate (lb/hr)(provided)	26.1	24.8	23.9	22.8
HRSG Stack, ppmvd @ 15% O_2 - provided	10.0	10.0	10.0	10.0
HRSG Stack emission rate (lb/hr)- calculated (Max. CT/DB calculated/provided)	26.10	24.80	23.90	22.83
Sulfuric Acid Mist				
Sulfuric Acid Mist (lb/hr)= SO_2 emission (lb/hr) x Conversion to H_2SO_4 (% by weight)/100				
CT SO_2 emission rate (lb/hr) - provided	3.0	2.8	2.7	2.6
CT Conversion to H_2SO_4 (% by weight) - provided	10	10	10	10
DB SO_2 emission rate (lb/hr) - provided	0	0	0	0
DB Conversion to H_2SO_4 (%) - provided	20	20	20	20
SCR SO_2 emission rate (lb/hr) - calculated (remaining SO_2 after conversion	2.7	2.5	2.4	2.3
SCR Conversion to H_2SO_4 (% by weight) - provided	3	3	3	3
HRSG Stack emission rate (lb/hr)- calculated	0.58	0.55	0.53	0.50
Lead				
Lead (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Emission Rate Basis (lb/10^{12} Btu)	14	14	14	14
HRSG Stack emission rate (lb/hr)- calculated	0.0254	0.0241	0.0232	0.0222

Note: ppmvd= parts per million, volume dry; O_2= oxygen.
Source: MPS, 2008; CT Performance Data; Golder, 2008.

TABLE A-9-501G CLASS
REGULATED AND HAZARDOUS AIR POLLUTANT EMISSION FACTORS AND EMISSIONS
FOR THE CONVERSION PROJECT
WHEN FIRING NATURAL GAS, MPS 501G CLASS CT

Parameter		Emission Rate (lb/hr) firing Natural Gas for Operating Conditions of Base Load (1)		Natural Gas Maximum Annual Gas	
Ambient Temperature (^oF):		59 °F	59 °F w/DB	Compressors	59 °F
HIR (MMBtu/hr):		2,671	3,146	1 CT/HRSG	3 CTs/HRSGs
Sulfuric acid mist		2.10	3.83	11.7	35.1
HAPs [Section 112(b) of Clean Air Act]					
1,3-Butadiene		0.001149	0.001353	0.005	0.016
Acetaldehyde		0.1068	0.1258	0.495	1.486
Acrolein		0.0171	0.0201	0.079	0.238
Benzene		0.0321	0.0378	0.149	0.446
Ethylbenzene		0.0855	0.1007	0.396	1.189
Formadehyde		0.573	0.676	2.658	7.973
Naphthalene		0.00347	0.00409	0.016	0.048
Polycyclic Aromatic Hydrocarbons (PAH)	(3)	0.00588	0.00692	0.027	0.082
Propylene Oxide		0.0775	0.0912	0.359	1.077
Toluene		0.0881	0.1038	0.409	1.226
Xylene		0.171	0.201	0.793	2.378
Antimony		0.0	0.0	0.0	0.00
Arsenic		0.0	0.0	0.0	0.00
Beryllium		0.0	0.0	0.0	0.00
Cadmium		0.0	0.0	0.0	0.00
Chromium		0.0	0.0	0.0	0.00
Lead		0.0	0.0	0.0	0.00
Manganese		0.0	0.0	0.0	0.00
Mercury		0.0	0.0	0.0	3.71E-05
Nickel		0.0	0.0	0.0	0.00
Selenium		0.0	0.0	0.0	0.00
HAPs (Total)		1.162	1.369	5.39	16.2

(1) Emissions based on the following emission factors and conversion factors for firing natural gas:

Emission Factors		Value	Reference
Sulfuric acid mist		10	%; Conversion of SO_2 to SO_3 in gas turbine
1,3-Butadiene	(a)	0.43	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Acetaldehyde		40	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Acrolein		6.4	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Benzene		12	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Ethylbenzene		32	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Formadehyde		0.091	ppmvd @15% O_2 (see Table 9a)
Naphthalene		1.3	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Polycyclic Aromatic Hydrocarbons (PAH)		2.2	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Propylene Oxide	(a)	29	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Toluene		33	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000. Database
Xylene		64	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Antimony		0.00E+00	
Arsenic		0.00E+00	
Beryllium		0.00E+00	
Cadmium		0.00E+00	
Chromium		0.00E+00	
Lead		0.00E+00	
Manganese		0.00E+00	
Mercury		1.00E-03	
Nickel		0.00E+00	
Selenium		0.00E+00	

(a) Based on 1/2 the detection limit; expected emissions are lower.

(2) Annual emissions based on ambient temperature of 59^oF firing natural gas for following hours:

5880 CT
2880 CT/DB

(3) Assumed to be representative of Polycyclic Organic Matter (POM) emissions, a regulated HAP.

TABLE A-9a-501G CLASS
MAXIMUM FORMALDEHYDE EMISSIONS
FOR THE CONVERSION PROJECT
MPS 501G CLASS CT, DRY LOW NO_x COMBUSTOR, NATURAL GAS, BASE LOAD

	CT Only Turbine Inlet Temperature			
Parameter	**35 °F 0**	**59 °F**	**59 °F w/DB**	**95 °F**
Formaldehyde (CH_2O) MW = 30				Gas Compressors
CH_2O (lb/hr) = CH_2O (ppm actual) x Volume flow (acfm) x 46 (mole. wgt NO_x) x 2116.8 lb/ft^2 (pressure) / [1545.7 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
CH_2O (ppm actual) = CH_2O (ppmd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x (1- Moisture(%)/100)				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
Basis, ppm actual- calculated	0.111	0.110	0.129	0.109
CT, ppmvd @15% O_2	0.091	0.091	0.091	0.091
Moisture (%)	8.297607563	9.041854047	10.39	10.91027168
Oxygen (%)	12.00	11.89	10.39	11.56
Oxygen (%) dry	13.08	13.07	11.59	12.98
Exhaust Flow (acfm)	1,440,085	1,388,967	1,375,782	1,307,085
Exhaust Temperature (°F)	196	195	185	195
CT Emission rate (lb/hr)	0.597	0.573	0.676	0.534
CT Emission rate (lb/10^{12} Btu) (HHV)	214.4	214.6	252.9	214.6

Note: ppmvd= parts per million, volume dry; O_2= oxygen.
Source: MPS, 2005; CT Performance Data; Golder, 2008.

TABLE A-10-501G CLASS

REGULATED AND HAZARDOUS AIR POLLUTANT EMISSION FACTORS AND EMISSIONS FOR THE CONVERSION PROJECT WHEN FIRING DISTILLATE FUEL OIL, MPS 501G CLASS CT

Parameter	Emission Rate (lb/hr) Distillate Fuel Oil (1)	Maximum Annual Emissions (TPY)			Emission Rate (lb/hr) Natural Gas (4)		Maximum Annual Emissions (TPY)		
	Base Load	Gas			Base Load		Natural Gas and Fuel Oil (5)		
Ambient Temperature (^{o}F):	59 °F	Compressors							
HIR (MMBtu/hr):	2,318	3 CT/HRSGs (500 hrs on oil)	3 CT/HRSGs (1,000 hrs on oil)	3 CT/HRSGs (1,500 hrs on oil)	1 CT/HRSGs (CT Only)	1 CT/HRSGs (CT + DB)	3 CT/HRSGs (500 hrs on oil)	3 CT/HRSGs (1,000 hrs on oil)	3 CT/HRSGs (1,500 hrs on oil)
Sulfuric acid mist	0.69	0.52	1.04	1.56	2.10	3.83	34.0	32.9	31.9
HAPs [Section 112(b) of Clean Air Act]									
1,3-Butadiene	0.0371	0.028	0.056	0.083	0.001	0.001	0.043	0.070	0.097
Acetaldehyde	0.00	0.00	0.00	0.00	0.107	0.126	1.406	1.326	1.246
Acrolein	0.00	0.00	0.00	0.00	0.017	0.020	0.225	0.212	0.199
Benzene	0.128	0.096	0.191	0.287	0.032	0.038	0.517	0.589	0.661
Ethylbenzene	0.00	0.00	0.00	0.00	0.085	0.101	1.125	1.061	0.996
Formadehyde	0.538	0.404	0.808	1.211	0.573	0.676	7.947	7.921	7.895
Naphthalene	0.0811	0.061	0.122	0.183	0.003	0.004	0.107	0.165	0.223
Polycyclic Aromatic Hydrocarbons (PAH) (3)	0.0927	0.070	0.139	0.209	0.006	0.007	0.147	0.212	0.277
Propylene Oxide	0.00	0.00	0.00	0.00	0.077	0.091	1.019	0.961	0.903
Toluene	0.00	0.00	0.00	0.00	0.088	0.104	1.160	1.094	1.028
Xylene	0.00	0.00	0.00	0.00	0.171	0.201	2.249	2.121	1.993
Antimony	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arsenic	0.0255	0.019	0.038	0.057	0.00	0.00	0.019	0.038	0.057
Beryllium	0.000719	0.0005	0.001	0.002	0.00	0.00	0.00	0.00	0.00
Cadmium	0.01113	0.0083	0.017	0.025	0.00	0.00	0.008	0.017	0.025
Chromium	0.0255	0.019	0.038	0.057	0.00	0.00	0.019	0.038	0.057
Lead	0.0325	0.024	0.049	0.073	0.00	0.00	0.024	0.049	0.073
Manganese	1.83	1.374	2.747	4.121	0.00	0.00	1.37	2.75	4.12
Mercury	0.00278	0.0021	0.004	0.006	0.00	0.00	0.00	0.00	0.01
Nickel	0.01066	0.0080	0.016	0.024	0.00	0.00	0.008	0.016	0.024
Selenium	0.0580	0.043	0.087	0.130	0.00	0.00	0.043	0.087	0.130
HAPs (Total)	2.87	2.16	4.31	6.47	1.2	1.4	17.4	18.7	20.0

(1) Emissions based on the following emission factors and conversion factors for firing distillate fuel oil:

Emission Factors		Value	Reference
Sulfuric acid mist		5	%; Conversion of SO_2 to SO_3 in gas turbine
1,3-Butadiene	(a)	16	lb/10^{12} Btu; AP-42,Table 3.1-4. EPA 2000
Acetaldehyde		0.0	
Acrolein		0.0	
Benzene		55	lb/10^{12} Btu; AP-42,Table 3.1-4. EPA 2000
Ethylbenzene		0.0	
Formadehyde		0.091	ppmvd @15% O2 (see Table 10a)
Naphthalene		35	lb/10^{12} Btu; AP-42,Table 3.1-4. EPA 2000
Polycyclic Aromatic Hydrocarbons (PAH)		40	lb/10^{12} Btu; AP-42,Table 3.1-4. EPA 2000
Propylene Oxide		0.0	
Toluene		0.0	
Xylene		0.0	
Antimony		0.0	
Arsenic	(a)	11	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Beryllium	(a)	0.31	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Cadmium		4.8	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Chromium		11	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Lead		14	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Manganese		790	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Mercury		1.2	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Nickel	(a)	4.6	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Selenium	(a)	25	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000

(a) Based on 1/2 the detection limit; expected emissions are lower.

(2) Annual emissions based on ambient temperature of 59 ^{o}F and firing fuel oil at base load for : 500 hours 1,000 hours 1,500 hours

(3) Assumed to be representative of Polycyclic Organic Matter (POM) emissions, a regulated HAP.

(4) Natural gas firing emission rates based on Table A-9.

(5) Maximum total annual emissions based on the following combination of operating hours:

Oil firing at base load for :	500 hours	1,000 hours	1,500 hours
Natural gas at base load for :	5,380 hours	4,880 hours	4,380 hours
Natural gas with duct firing at base load for :	2,880 hours	2,880 hours	2,880 hours

TABLE A-10a-501G CLASS
MAXIMUM FORMALDEHYDE EMISSIONS
FOR THE CONVERSION PROJECT
MPS 501G CLASS CT, DRY LOW NO_x COMBUSTOR, DISTILLATE OIL, BASE LOAD

	CT Only Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**75 °F**	**95 °F**
Formaldehyde (CH_2O) MW = 30				Gas Compressors
CH_2O (lb/hr) = CH_2O (ppm actual) x Volume flow (acfm) x 46 (mole. wgt NO_x) x 2116.8 lb/ft^2 (pressure) / [1545.7 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
CH_2O (ppm actual) = CH_2O (ppmd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
Basis, ppmvw - calculated	0.105	0.104	0.103	0.102
CT, ppmvd @15% O_2	0.091	0.091	0.091	0.091
Moisture (%)	7.48	7.95	8.61175159	9.52469868
Oxygen (%)	12.52	12.51	12.43	12.31
Oxygen (%) dry	13.53	13.59	13.61	13.60
Exhaust Flow (acfm)	1,812,053	1,723,545	1,662,130	1,588,092
Exhaust Temperature (°F)	359	357	355	354
CT Emission rate (lb/hr)	0.572	0.538	0.516	0.489
CT Emission rate (lb/10^{12} Btu) (HHV)	232.1	232.2	232.1	232.3

Note: ppmvd= parts per million, volume dry; O_2= oxygen.

Source: MPS, 2007; CT Performance Data; Golder, 2007.

TABLE A-1-SH
DESIGN INFORMATION AND STACK PARAMETERS FOR THE CONVERSION PROJECT
SIEMENS H CT, DRY LOW NO_x COMBUSTOR, NATURAL GAS, BASE LOAD

	CT Only Turbine Inlet Temperature				CT with Duct Burner Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**75 °F**	**95 °F**	**35 °F w/DB**	**59 °F w/DB**	**75 °F w/DB**	**95 °F w/DB**
Combustion Turbine Performance								
Heat Input (MMBtu/hr, LHV)	2,421	2,320	2,230	2,137	2,421	2,320	2,230	2,137
(MMBtu/hr, HHV)	2,689	2,577	2,477	2,374	2,689	2,577	2,477	2,374
Evaporative Cooler	Off	On	On	On	Off	On	On	On
Relative Humidity (%)	60	60	60	50	60	60	60	50
Fuel heating value (Btu/lb, LHV)	21,511	21,511	21,511	21,511	21,511	21,511	21,511	21,511
(Btu/lb, HHV)	23,893	23,893	23,893	23,893	23,893	23,893	23,893	23,893
(HHV/LHV)	1.111	1.111	1.111	1.111	1.111	1.111	1.111	1.111
Steam Flow (lb/hr)	NA	NA	NA	NA	NA	NA	NA	NA
Duct Burner (DB)								
Heat input (MMBtu/hr, HHV)	0	0	0	0	475	475	475	475
(MMBtu/hr, LHV)	0	0	0	0	427.6	427.6	427.6	427.6
CT/DB Exhaust Flow								
Mass Flow (lb/hr)- provided	4,969,000	4,769,000	4,595,000	4,403,000	4,989,629.2	4,789,629	4,615,629	4,423,630
Temperature (°F) - provided	1120.8	1138.7	1151.4	1168.0	1,121	1,139	1,151	1,168
Moisture (% Vol.)	8.36	9.14	9.88	11.03	9.70	10.52	11.31	12.50
Oxygen (% Vol.)	12.05	11.92	11.80	11.59	10.55	10.36	10.19	9.92
Molecular Weight	28.41	28.32	28.23	28.11	28.32	28.23	28.15	28.02
Volume flow (acfm) - calculated	3,371,551	3,282,606	3,197,670	3,109,381	3,395,582	3,306,909	3,221,846	3,134,129
Fuel Usage								
Fuel usage (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu [Fuel Heat Content, Btu/lb (LHV)]								
Heat input (MMBtu/hr, LHV)	2,421	2,320	2,230	2,137	2,421	2,320	2,230	2,137
Heat content (Btu/lb, LHV)	21,511	21,511	21,511	21,511	21,511	21,511	21,511	21,511
Fuel usage (lb/hr)- provided	112,537	107,877	103,660	99,362	112,537	107,877	103,660	99,362
- calculated	112,543	107,856	103,671	99,360	112,543	107,856	103,671	99,360
Heat content (Btu/cf, LHV)- assumed	918	918	918	918	918	918	918	918
Fuel density (lb/ft^3)	0.0427	0.0427	0.0427	0.0427	0.0427	0.0427	0.0427	0.0427
Fuel usage (cf/hr)- calculated	2,637,019	2,527,824	2,429,009	2,328,296	2,637,019	2,527,824	2,429,009	2,328,296
Fuel Usage - Duct Burner Only								
Fuel usage (lb/hr)- calculated	0	0	0	0	19,880	19,880	19,880	19,880
Fuel usage (cf/hr)- calculated	0	0	0	0	465,844	465,844	465,844	465,844
HRSG Stack								
HRSG - Stack Height (feet)	149	149	149	149	149	149	149	149
Diameter (feet)	22	22	22	22	22	22	22	22
HRSG Stack Flow Conditions								
Velocity (ft/sec) = Volume flow (acfm) / [((diameter)² /4) x 3.14159] / 60 sec/min								
Mass flow (lb/hr)	4,969,000	4,769,000	4,595,000	4,403,000	4,989,629	4,789,629	4,615,629	4,423,630
HRSG Stack Temperature (^{o}F)	196	195	195	195	186	185	185	184
Molecular weight	28.41	28.32	28.23	28.11	28.32	28.23	28.15	28.02
Volume flow (acfm)	1,399,125	1,344,704	1,299,388	1,251,392	1,387,188	1,333,147	1,288,818	1,239,598
Diameter (feet)	22	22	22	22	22	22	22	22
Velocity (ft/sec)- calculated	61.3	59.0	57.0	54.9	60.8	58.5	56.5	54.3

Note: Universal gas constant = 1,545.4 ft-lb(force)/°R; atmospheric pressure = 2,112.5 lb(force)/ft² (@14.67 psia).
Source: Siemens, 2008; CT Performance Data; Golder, 2008.

TABLE A-2-SH
MAXIMUM EMISSIONS FOR CRITERIA POLLUTANTS FOR THE CONVERSION PROJECT
SIEMENS H CT, DRY LOW NO_x COMBUSTOR, NATURAL GAS, BASE LOAD

	CT Only Turbine Inlet Temperature				CT with Duct Burner Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**75 °F**	**95 °F**	**35 °F w/DB**	**59 °F w/DB**	**75 °F w/DB**	**95 °F w/DB**
Particulate from CT, DB, and HRSG								
Total PM_{10} = PM_{10} (front half) + PM_{10} [$(NH_4)_2SO_4$] in HRSG only (back-half)								
a. PM_{10} (front half) (lb/hr)								
CT- provided	9.4	9.0	8.6	8.2	9.4	9.0	8.6	8.2
DB (lb/hr) - calculated	0.0	0.0	0.0	0.0	2.4	2.4	2.4	2.4
Total CT/DB emission rate (lb/hr)	9.4	9.0	8.6	8.2	11.8	11.4	11.0	10.6
b. PM_{10} [$(NH_4)_2SO_4$] from HRSG only (back half) = Sulfur trioxide from conversion of SO_2 converts to ammonium sulfate (= PM_{10})								
Particulate from conversion of SO_2 = SO_2 emissions (lb/hr) x conversion of SO_2 to SO_3 in CT and in SCR x lb SO_3/lb SO_2 x conversion of SO_3 to $(NH_4)_2SO_4$ x lb $(NH_4)_2SO_4$ / lb SO_3								
CT SO_2 emission rate (lb/hr)- calculated	15.1	14.4	13.9	13.3	15.1	14.4	13.9	13.3
Conversion (%) from SO_2 to SO_3 in CT	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
DB SO_2 emission rate (lb/hr)- calculated	--	--	--	--	2.7	2.7	2.7	2.7
Conversion (%) from SO_2 to SO_3 in DB	--	--	--	--	20.0	20.0	20.0	20.0
Remaining SO_2 (lb/hr) after conversion - calculated	13.6	13.0	12.5	12.0	15.7	15.1	14.6	14.1
Conversion (%) from SO_2 to SO_3 in SCR	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
MW SO_3/ SO_2 (80/64)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Conversion (%) from SO_3 to $(NH_4)_2(SO_4)$	100	100	100	100	100	100	100	100
MW $(NH_4)_2$ SO_4/ SO_3 (132/80)	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
HRSG Particulate as $(NH_4)_2(SO_4)$ (lb/hr)- calculated	3.95	3.78	3.64	3.48	5.18	5.01	4.87	4.71
Total HRSG stack emission rate (lb/hr) [a + b] - provided	13.0	13.0	12.0	11.0				
-calculated	13.3	12.8	12.2	11.7	17.0	16.4	15.8	15.3
- maximum	13.3	13.0	12.2	11.7	17.0	16.4	15.8	15.3
(lb/mmBtu, HHV)	NA	NA	NA	NA	NA	NA	NA	NA
Sulfur Dioxide								
SO_2 (lb/hr)= Natural gas (scf/hr) x sulfur content(gr/100 scf) x 1 lb/7000 gr x (lb SO_2 /lb S) /100								
Fuel use (cf/hr)	2,637,019	2,527,824	2,429,009	2,328,296	3,102,863	2,993,668	2,894,853	2,794,141
Sulfur content (grains/ 100 cf)	2	2	2	2	2	2	2	2
lb SO_2 /lb S (64/32)	2	2	2	2	2	2	2	2
HRSG stack emission rate (lb/hr) - calculated	15.1	14.4	13.9	13.3	17.7	17.1	16.5	16.0
Nitrogen Oxides								
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]								
NO_x (ppmv actual) = NO_x (ppmd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]								
NO_x (lb/hr) = NO_x (ppm actual) x Volume flow (acfm) x 46 (mole. wgt NO_x) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr								
Basis, ppm actual- calculated	30.1	30.0	29.8	29.7	34.0	34.0	34.0	34.0
CT/DB, ppmvd @15% O_2 - provided	25	25	25	25	24.1	24.1	24.0	24.0
Moisture (%)	8.36	9.14	9.88	11.03	9.70	10.52	11.31	12.50
Oxygen (%)	12.05	11.92	11.8	11.59	10.55	10.36	10.19	9.92
Oxygen (%) dry	13.15	13.12	13.09	13.03	11.68	11.58	11.49	11.34
Turbine Flow (acfm)	3,371,551	3,282,606	3,197,670	3,109,381	3,395,582	3,306,909	3,221,846	3,134,129
Turbine Flow (acfm), dry	3,089,689	2,982,576	2,881,740	2,766,416	3,066,240	2,958,861	2,857,517	2,742,267
Turbine Exhaust Temperature (°F)	1,121	1,139	1,151	1,168	1,121	1,139	1,151	1,168
CT/DB emission rate (lb/hr) - calculated	242.2	232.1	223.2	213.9	275.4	265.3	256.4	247.1
CT/DB Emission rate (lb/hr) - provided	250.0	239.0	230.0	220.0	283.3	272.3	263.3	253.3
HRSG Stack emission rate, ppmvd @ 15% O_2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
HRSG stack emission rate (lb/hr) - calculated (Max. CT/DB calculated/provided)	20.0	19.1	18.4	17.6	23.5	22.6	21.9	21.1
Carbon Monoxide								
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]								
CO (ppmv wet or actual) = CO (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]								
CO (lb/hr) = CO (ppm actual) x Volume flow (acfm) x 28 (mole. wgt CO) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr								
Basis, ppm actual- calculated	6.02	5.99	5.96	5.94	9.8	9.9	10.1	10.2
Basis, ppmvd @ 15% O_2 - provided	5.00	5.00	5.00	5.00	7.0	7.0	7.1	7.2
Moisture (%)	8.36	9.14	9.88	11.03	9.70	10.52	11.31	12.50
Oxygen (%)	12.05	11.92	11.80	11.59	10.55	10.36	10.19	9.92
Oxygen (%) dry	13.15	13.12	13.09	13.03	11.68	11.58	11.49	11.34
Turbine Flow (acfm)	3,371,551	3,282,606	3,197,670	3,109,381	3,395,582	3,306,909	3,221,846	3,134,129
Turbine Flow (acfm), dry	3,089,689	2,982,576	2,881,740	2,766,416	3,066,240	2,958,861	2,857,517	2,742,267
Turbine Exhaust Temperature (°F)	1,121	1,139	1,151	1,168	1,121	1,139	1,151	1,168
CT/DB emission rate (lb/hr) - calculated	29.5	28.3	27.2	26.0	48.5	47.3	46.2	45.0
CT/DB Emission rate (lb/hr) - provided	30.0	29.0	28.0	27.0	49.0	48.0	47.0	46.0
HRSG Stack emission rate, ppmvd @ 15% O_2 - provided	5.0	5.0	5.0	5.0	7.0	7.0	7.1	7.2
HRSG Stack emission rate (lb/hr)- calculated (Max. CT/DB calculated/provided)	30.0	29.0	28.0	27.0	49.0	48.0	47.0	46.0
Volatile Organic Compounds								
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]								
VOC (ppmv wet or actual) = VOC (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]								
VOC (lb/hr) = VOC (ppm actual) x Volume flow (acfm) x 16 (mole. wgt CH_4) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr								
Basis, ppm actual- calculated	1.81	1.80	1.79	1.78	2.6	2.7	2.7	2.7
Basis, ppmvd @ 15% O_2 - provided	1.50	1.50	1.50	1.50	1.9	1.9	1.9	1.9
Moisture (%)	8.36	9.14	9.88	11.03	9.70	10.52	11.31	12.50
Oxygen (%) wet	12.05	11.92	11.80	11.59	10.55	10.36	10.19	9.92
Oxygen (%) dry	13.15	13.12	13.09	13.03	11.68	11.58	11.49	11.34
Turbine Flow (acfm)	3,371,551	3,282,606	3,197,670	3,109,381	3,395,582	3,306,909	3,221,846	3,134,129
Turbine Flow (acfm), dry	3,089,689	2,982,576	2,881,740	2,766,416	3,066,240	2,958,861	2,857,517	2,742,267
Turbine Exhaust Temperature (°F)	1,121	1,139	1,151	1,168	1,121	1,139	1,151	1,168
CT/DB emission rate (lb/hr) - calculated	5.05	4.84	4.66	4.46	7.43	7.22	7.03	6.84
CT/DB Emission rate (lb/hr) - provided	0.00	0.00	0.00	0.00	2.38	2.38	2.38	2.38
not used	7.00	6.70	6.50	6.20				
HRSG Stack emission rate, ppmvd @ 15% O_2 - provided	1.5	1.5	1.5	1.5	1.9	1.9	1.9	1.9
HRSG Stack emission rate (lb/hr)- calculated (Max. CT/DB calculated/provided)	5.1	4.84	4.7	4.5	7.4	7.2	7.0	6.8
Sulfuric Acid Mist								
Sulfuric Acid Mist (lb/hr)= SO_2 emission (lb/hr) x Conversion to H_2SO_4 (% by weight)/100								
CT SO_2 emission rate (lb/hr) - calculated	15.1	14.4	13.9	13.3	15.1	14.4	13.9	13.3
CT Conversion to H_2SO_4 (% by weight) - provided	10	10	10	10	10	10	10	10
DB SO_2 emission rate (lb/hr) - provided	0	0	0	0	2.7	2.7	2.7	2.7
DB Conversion to H_2SO_4 (%) - provided	20	20	20	20	20	20	20	20
SCR SO_2 (lb/hr)(remaining SO_2 after conversion) - calc	13.6	13.0	12.5	12.0	15.7	15.1	14.6	14.1
SCR Conversion to H_2SO_4 (% by weight) - provided	3	3	3	3	3	3	3	3
HRSG Stack emission rate (lb/hr)	2.93	2.81	2.70	2.59	3.84	3.72	3.61	3.50
Lead								
Lead (lb/hr) = NA								
Emission Rate Basis	NA	NA	NA	NA	NA	NA	NA	NA
Emission rate (lb/hr)	NA	NA	NA	NA	NA	NA	NA	NA

Note: ppmvd= parts per million, volume dry; O_2= oxygen.
Source: Siemens, 2008; CT Performance Data; Golder, 2008.

TABLE A-3-SH
DESIGN INFORMATION AND STACK PARAMETERS
FOR THE CONVERSION PROJECT
SIEMENS H CT, DRY LOW NO_x COMBUSTOR, NATURAL GAS, 75% LOAD

	Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**75 °F**	**95 °F**
Combustion Turbine Performance				
Heat Input (MMBtu/hr, LHV)	1,946	1,828	1,745	1,640
(MMBtu/hr, HHV)	2,161	2,030	1,938	1,822
Relative Humidity (%)	60	60	60	50
Fuel heating value (Btu/lb, LHV)	21,511	21,511	21,511	21,511
(Btu/lb, HHV)	23,893	23,893	23,893	23,893
(HHV/LHV)	1.111	1.111	1.111	1.111
CT Exhaust Flow				
Mass flow (lb/hr)- provided	4,067,000	3,887,500	3,753,000	3,575,000
Temperature (°F) - provided	1,149.1	1,160.6	1,168.5	1,180.7
Moisture (% Vol.)	8.22	8.65	9.27	10.13
Oxygen (% Vol.)	12.21	12.25	12.21	12.15
Molecular Weight	28.42	28.36	28.29	28.19
Volume flow (acfm) - calculated	2,807,747	2,708,602	2,634,236	2,536,737
Fuel Usage				
Fuel usage (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu [Fuel Heat Content, Btu/lb (LHV)]				
Heat input (MMBtu/hr, LHV)	1,946	1,828	1,745	1,640
Heat content (Btu/lb, LHV)	21,511	21,511	21,511	21,511
Fuel usage (lb/hr)- provided	90,449	84,967	81,126	76,250
- calculated	90,445	84,962	81,112	76,257
Heat content (Btu/cf, LHV)- assumed	918	918	918	918
Fuel density (lb/ft^3)	0.0427	0.0427	0.0427	0.0427
Fuel usage (cf/hr)- calculated	2,119,443	1,990,986	1,900,982	1,786,725
HRSG Stack				
HRSG - Stack Height (feet)	149	149	149	149
Diameter (feet)	22	22	22	22
HRSG Stack Flow Conditions				
Velocity (ft/sec) = Volume flow (acfm) / [((diameter)^2 /4) x 3.14159] / 60 sec/min				
Mass flow (lb/hr)	4,067,000	3,887,500	3,753,000	3,575,000
HRSG Stack Temperature (^{o}F)	184	185	186	187
Molecular weight	28.42	28.36	28.29	28.19
Volume flow (acfm)	1,123,727	1,078,059	1,044,959	1,000,347
Diameter (feet)	22	22	22	22
Velocity (ft/sec)- calculated	49.3	47.3	45.8	43.9

Note: Universal gas constant = 1,545.4 ft-lb(force)/°R; atmospheric pressure = 2,112.5 lb(force)/ft^2 (@14.67 psia)
Source: Siemens, 2008; CT Performance Data; Golder, 2008.

TABLE A-4-SH
MAXIMUM EMISSIONS FOR CRITERIA POLLUTANTS FOR THE CONVERSION PROJECT
SIEMENS H CT, DRY LOW NO_x COMBUSTOR, NATURAL GAS, 75% LOAD

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Particulate from CT and HRSG				
Total PM_{10} = PM_{10} (front half) + PM_{10} [$(NH_4)_2SO_4$] in HRSG only (back-half)				
a. PM_{10} (front half) (lb/hr)				
Particulate from CT- provided	7.7	7.4	7.1	6.7
b. PM_{10} [$(NH_4)_2SO_4$] from HRSG only (back half) = Sulfur trioxide from conversion of SO_2 converts to ammonium sulfate (= PM_{10})				
Particulate from conversion of SO_2 = SO_2 emissions (lb/hr) x conversion of SO_2 to SO_3 in CT and in SCR x lb SO_3/lb SO_2 x conversion of SO_3 to $(NH_4)_2SO_4$ x lb $(NH_4)_2SO_4$ / lb SO_3				
SO_2 emission rate (lb/hr)- calculated	12.1	11.4	10.9	10.2
Conversion (%) from SO_2 to SO_3	10.0	10.0	10.0	10.0
Remaining SO_2 (lb/hr) in CT after conversion - calculated	10.9	10.2	9.8	9.2
Conversion (%) from SO_2 to SO_3 in SCR	3.0	3.0	3.0	3.0
MW SO_3/ SO_2 (80/64)	1.3	1.3	1.3	1.3
Conversion (%) from SO_3 to $(NH_4)_2(SO_4)$	100	100	100	100
MW $(NH_4)_2$ SO_4/ SO_3 (132/80)	1.7	1.7	1.7	1.7
HRSG Particulate as $(NH_4)_2(SO_4)$ (lb/hr)- calculated	3.17	2.98	2.85	2.67
Total HRSG stack emission rate (lb/hr) [a + b] - provided	11	11	9.8	9.3
-calculated	10.9	10.3	9.9	9.4
- maximum	11.0	11.0	9.9	9.4
(lb/mmBtu, HHV)	NA	NA	NA	NA
Sulfur Dioxide				
SO_2 (lb/hr)= Natural gas (scf/hr) x sulfur content(gr/100 scf) x 1 lb/7000 gr x (lb SO_2 /lb S) /100				
Fuel use (cf/hr)	2,119,443	1,990,986	1,900,982	1,786,725
Sulfur content (grains/ 100 cf)	2	2	2	2
lb SO_2 /lb S (64/32)	2	2	2	2
HRSG Stack emission rate (lb/hr)- calculated	12.1	11.4	10.9	10.2
Nitrogen Oxides				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
NO_x (ppm actual) = NO_x (ppmd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
NO_x (lb/hr) = NO_x (ppm actual) x Volume flow (acfm) x 46 (mole. wgt NO_x) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	29.5	29.0	28.6	28.1
CT / DB, ppmvd @15% O_2 - provided	25	25	25	25
Moisture (%)	8.22	8.65	9.27	10.13
Oxygen (%)	12.21	12.25	12.21	12.15
Oxygen (%) dry	13.30	13.41	13.46	13.52
Turbine Flow (acfm)	2,807,747	2,708,602	2,634,236	2,536,737
Turbine Flow (acfm), dry	2,576,950	2,474,308	2,390,042	2,279,766
Turbine Exhaust Temperature (°F)	1,149	1,161	1,169	1,181
CT Emission rate (lb/hr) - calculated	194.5	182.8	174.6	163.9
CT Emission rate (lb/hr) - provided	201.0	188.0	180.0	169.0
HRSG Stack emission rate, ppmvd @ 15% O_2	2.0	2.0	2.0	2.0
HRSG Stack emission rate (lb/hr) - calculated	16.1	15.0	14.4	13.5
(Max. CT/DB calculated/provided)				
Carbon Monoxide				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
CO (ppmv wet or actual) = CO (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
CO (lb/hr) = CO (ppm actual) x Volume flow (acfm) x 28 (mole. wgt CO) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	11.8	11.6	11.4	11.2
Basis, ppmvd @ 15% O_2 - provided	10	10	10	10
Moisture (%)	8.22	8.65	9.27	10.13
Oxygen (%)	12.21	12.25	12.21	12.15
Oxygen (%) dry	13.30	13.41	13.46	13.52
Turbine Flow (acfm)	2,807,747	2,708,602	2,634,236	2,536,737
Turbine Flow (acfm), dry	2,576,950	2,474,308	2,390,042	2,279,766
Turbine Exhaust Temperature (°F)	1,149	1,161	1,169	1,181
HRSG Exhaust Temperature (°F)	184	185	186	187
CT Emission rate (lb/hr) - calculated	47.4	44.5	42.5	39.9
CT Emission rate (lb/hr) - provided	49.0	46.0	44.0	41.0
HRSG Stack emission rate, ppmvd @ 15% O_2	10	10	10	10
HRSG Stack emission rate (lb/hr)- calculated	49.0	46.0	44.0	41.0
(Max. CT/DB calculated/provided)				
Volatile Organic Compounds				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
VOC (ppmv wet or actual) = VOC (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
VOC (lb/hr) = VOC (ppm actual) x Volume flow (acfm) x 16 (mole. wgt CH_4) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppmvd - calculated	1.77	1.74	1.72	1.69
Basis, ppmvd @ 15% O_2 - provided	1.5	1.5	1.5	1.5
Moisture (%)	8.22	8.65	9.27	10.13
Oxygen (%)	12.21	12.25	12.21	12.15
Oxygen (%) dry	13.30	13.41	13.46	13.52
Turbine Flow (acfm)	2,807,747	2,708,602	2,634,236	2,536,737
Turbine Flow (acfm), dry	2,576,950	2,474,308	2,390,042	2,279,766
Turbine Exhaust Temperature (°F)	1,149	1,161	1,169	1,181
HRSG Exhaust Temperature (°F)	184	184	184	184
CT Emission rate (lb/hr) - calculated	4.06	3.82	3.64	3.42
CT Emission rate (lb/hr) - provided	0.00	0.00	0.00	0.00
not used (at 2 ppmvd)	5.60	0.00	5.10	4.80
HRSG Stack emission rate, ppmvd @ 15% O_2	1.5	1.5	1.5	1.5
HRSG Stack emission rate (lb/hr)- calculated	4.06	3.82	3.64	3.42
(Max. CT/DB calculated/provided)				
Sulfuric Acid Mist				
Sulfuric Acid Mist (lb/hr)= SO_2 emission (lb/hr) x Conversion to H_2SO_4 (% by weight)/100				
CT SO_2 emission rate (lb/hr) - calculated	12.1	11.4	10.9	10.2
CT Conversion to H_2SO_4 (% by weight) - provided	10	10	10	10
DB SO_2 emission rate (lb/hr) - provided	0	0	0	0
DB Conversion to H_2SO_4 (%) - provided	20	20	20	20
SCR SO_2 emission rate (lb/hr) - calculated (remaining SO_2 after conversion)	10.9	10.2	9.8	9.2
HRSG Stack emission rate (lb/hr)- calculated	2.36	2.21	2.11	1.99
Lead				
Lead (lb/hr) = NA				
Emission Rate Basis	NA	NA	NA	NA
HRSG Stack emission rate (lb/hr)	NA	NA	NA	NA

Note: ppmvd= parts per million, volume dry; O_2= oxygen.
Source: Siemens, 2008; CT Performance Data; Golder, 2008.

TABLE A-5-SH
DESIGN INFORMATION AND STACK PARAMETERS
FOR THE CONVERSION PROJECT
SIEMENS H CT, DRY LOW NO_x COMBUSTOR, DISTILLATE OIL, BASE LOAD

	Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**75 °F**	**95 °F**
Combustion Turbine Performance				
Heat Input (MMBtu/hr, LHV)	2,420	2,268	2,162	2,028
(MMBtu/hr, HHV)	2,565	2,404	2,292	2,150
Relative Humidity (%)	60	60	60	50
Fuel heating value (Btu/lb, LHV)	18,387	18,387	18,387	18,387
(Btu/lb, HHV)	19,490	19,490	19,490	19,490
(HHV/LHV)	1.060	1.060	1.060	1.060
CT Exhaust Flow				
Mass Flow (lb/hr)- provided	5,090,824	4,814,396	4,613,552	4,350,270
Temperature (°F) - provided	1,071.0	1,092.0	1,106.0	1,127.0
Moisture (% Vol.)	7.97	8.46	9.12	10.02
Oxygen (% Vol.)	11.91	11.88	11.80	11.68
Molecular Weight	28.66	28.59	28.52	28.42
Volume flow (acfm) - calculated	3,315,909	3,186,273	3,088,451	2,962,342
Fuel Usage				
Fuel usage (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu (Fuel Heat Content, Btu/lb (LHV))				
Heat input (MMBtu/hr, LHV)	2,420	2,268	2,162	2,028
Heat content (Btu/lb, LHV)	18,387	18,387	18,387	18,387
Fuel usage (lb/hr)- provided	131,600	123,371	117,608	110,306
- calculated	131,615	123,348	117,583	110,295
HRSG Stack				
HRSG - Stack Height (feet)	149	149	149	149
Diameter (feet)	22	22	22	22
HRSG Stack Flow Conditions				
Velocity (ft/sec) = Volume flow (acfm) / [((diameter)² /4) x 3.14159] / 60 sec/min				
Mass flow (lb/hr) - provided	5,090,824	4,814,396	4,613,552	4,350,270
HRSG Stack Temperature (^oF)	359	357	355	354
Molecular weight	28.66	28.59	28.52	28.42
Volume flow (acfm)	1,773,827	1,677,310	1,607,335	1,519,437
Diameter (feet)	22	22	22	22
Velocity (ft/sec)- calculated	77.8	73.5	70.5	66.6

Note: Universal gas constant = 1,545.4 ft-lb(force)/°R; atmospheric pressure = 2,112.5 lb(force)/ft² (@14.67 psia).
Source: Siemens, 2008; CT Performance Data; Golder, 2008.

TABLE A-6-SH
MAXIMUM EMISSIONS FOR CRITERIA POLLUTANTS FOR THE CONVERSION PROJECT
SIEMENS H CT, DRY LOW NO_x COMBUSTOR, DISTILLATE OIL, BASE LOAD

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Particulate from CTand SCR				
Total PM_{10} = PM_{10} (front half) + PM_{10} [$(NH_4)_2SO_4$] in HRSG only (back-half)				
a. PM_{10} (front half) (lb/hr)				
Particulate from CT- provided	not avail.	not avail.	not avail.	not avail.
b. PM_{10} ($(NH_4)_2SO_4$) from HRSG only (back half) = Sulfur trioxide from conversion of SO_2 converts to ammonium sulfate (= PM_{10})				
Particulate from conversion of SO_2 = SO_2 emissions (lb/hr) x conversion of SO_2 to SO_3 in CT and in SCR x lb SO_3/lb SO_2 x conversion of SO_3 to $(NH_4)_2SO_4$ x lb $(NH_4)_2SO_4$/ lb SO_3				
SO_2 emission rate (lb/hr)- calculated	3.9	3.7	3.5	3.3
Conversion (%) from SO_2 to SO_3	10.0	10.0	10.0	10.0
Remaining SO_2 (lb/hr) in CT after conversion - calculated	3.6	3.3	3.2	3.0
Conversion (%) from SO_2 to SO_3 in SCR	3.0	3.0	3.0	3.0
MW SO_3/ SO_2 (80/64)	1.3	1.3	1.3	1.3
Conversion (%) from SO_3 to $(NH_4)_2(SO_4)$	100	100	100	100
MW $(NH_4)_2$ SO_4/ SO_3 (132/80)	1.7	1.7	1.7	1.7
HRSG Particulate as $(NH_4)_2(SO_4)$ (lb/hr)- calculated	1.03	0.97	0.92	0.87
Total HRSG stack emission rate (lb/hr) [a + b] - provided	30.0	30.0	30.0	30.0
-calculated				
- maximum				
(lb/mmBtu, HHV)	NA	NA	NA	NA
Sulfur Dioxide				
SO_2 (lb/hr)= Fuel oil (lb/hr) x sulfur content(% weight) x (lb SO_2 /lb S) /100				
Fuel oil Sulfur Content	0.0015%	0.0015%	0.0015%	0.0015%
Fuel oil use (lb/hr)	131,600	123,371	117,608	110,306
lb SO_2 / lb S (64/32)	2	2	2	2
HRSG Stack emission rate (lb/hr)- calculated	3.9	3.7	3.5	3.3
Nitrogen Oxides				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
NO_x (ppm actual) = NO_x (ppmd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
NO_x (lb/hr) = NO_x (ppm actual) x Volume flow (acfm) x 46 (mole. wgt NO_x) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	52.1	51.6	51.2	50.7
CT/DB, ppmvd @15% O_2	42	42	42	42
Moisture (%)	7.97	8.46	9.12	10.02
Oxygen (%)	11.91	11.88	11.80	11.68
Oxygen (%) dry	12.94	12.98	12.98	12.98
Turbine Flow (acfm)	3,315,909	3,186,273	3,088,451	2,962,342
Turbine Flow (acfm), dry	3,051,631	2,916,714	2,806,784	2,665,515
Turbine Exhaust Temperature (°F)	1,071	1,092	1,106	1,127
CT Emission rate (lb/hr) - calculated	426.0	399.9	381.0	357.2
CT emission rate (lb/hr) - provided	448.0	420.0	400.0	375.0
HRSG Stack emission rate, ppmvd @ 15% O_2 - provided	8	8	8	8
HRSG Stack emission rate (lb/hr) - calculated	85.3	80.0	76.2	71.4
(Max. CT/DB calculated/provided)				
Carbon Monoxide				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
CO (ppmv wet or actual) = CO (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
CO (lb/hr) = CO (ppm actual) x Volume flow (acfm) x 28 (mole. wgt CO) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	12.4	12.3	12.2	12.1
Basis, ppmvd @ 15% O_2 - provided	10	10	10	10
Moisture (%)	7.97	8.46	9.12	10.02
Oxygen (%)	11.91	11.88	11.80	11.68
Oxygen (%) dry	12.94	12.98	12.98	12.98
Turbine Flow (acfm)	3,315,909	3,186,273	3,088,451	2,962,342
Turbine Flow (acfm), dry	3,051,631	2,916,714	2,806,784	2,665,515
Turbine Exhaust Temperature (°F)	1,071	1,092	1,106	1,127
HRSG Exhaust Temperature (°F)	359	357	355	354
CT Emission rate (lb/hr) - calculated	61.7	58.0	55.2	51.8
CT emission rate (lb/hr) - provided	65.0	61.0	58.0	54.0
HRSG Stack emission rate, ppmvd @ 15% O_2	10.0	10.0	10.0	10.0
HRSG Stack emission rate (lb/hr) - calculated	65.0	61.0	58.0	54.0
(Max. CT/DB calculated/provided)				
Volatile Organic Compounds				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
VOC (ppmv wet or actual) = VOC (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
VOC (lb/hr) = VOC (ppm actual) x Volume flow (acfm) x 16 (mole. wgt CH_4) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	2.5	2.5	2.4	2.4
Basis, ppmvd @ 15% O_2 - provided	2.0	2.0	2.0	2.0
Moisture (%)	7.97	8.46	9.12	10.02
Oxygen (%)	11.91	11.88	11.80	11.68
Oxygen (%-dry)	12.94	12.98	12.98	12.98
Turbine Flow (acfm)	3,315,909	3,186,273	3,088,451	2,962,342
Turbine Flow (acfm), dry	3,051,631	2,916,714	2,806,784	2,665,515
Turbine Exhaust Temperature (°F)	1,071	1,092	1,106	1,127
CT Emission rate (lb/hr) - calculated	7.1	6.6	6.3	5.9
CT emission rate (lb/hr) - provided	7.4	7.0	6.6	6.2
HRSG Stack emission rate, ppmvd @ 15% O_2	2.0	2.0	2.0	2.0
HRSG Stack emission rate (lb/hr) - calculated	7.4	7.0	6.6	6.2
(Max. CT/DB calculated/provided)				
Sulfuric Acid Mist				
Sulfuric Acid Mist (lb/hr)= SO_2 emission (lb/hr) x Conversion to H_2SO_4 (% by weight)/100				
CT SO_2 emission rate (lb/hr) - calculated	3.9	3.7	3.5	3.3
CT Conversion to H_2SO_4 (% by weight) - provided	10	10	10	10
DB SO_2 emission rate (lb/hr) - provided	0	0	0	0
DB Conversion to H_2SO_4 (%) - provided	20	20	20	20
SCR SO_2 emission rate (lb/hr) - calculated (remaining SO_2 after conversion)	3.6	3.3	3.2	3.0
SCR Conversion to H_2SO_4 (% by weight) - provided	3	3	3	3
HRSG Stack emission rate (lb/hr)- calculated	0.77	0.72	0.69	0.64
- provided				
Lead				
Lead (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Emission Rate Basis (lb/10^{12} Btu)	14	14	14	14
Heat Input (MMBtu/hr, HHV)	2,565	2,404	2,292	2,150
HRSG Stack emission rate (lb/hr)- calculated	0.0359	0.0337	0.0321	0.0301

Note: ppmvd= parts per million, volume dry; O_2= oxygen.
Source: Siemens, 2008; CT Performance Data; Golder, 2008.

TABLE A-7-SH
DESIGN INFORMATION AND STACK PARAMETERS
FOR THE CONVERSION PROJECT
SIEMENS H CT, DRY LOW NO_x COMBUSTOR, DISTILLATE OIL, 75% LOAD

	Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**75 °F**	**95 °F**
Combustion Turbine Performance				
Heat Input (MMBtu/hr, LHV)	1,979	1,857	1,772	1,664
(MMBtu/hr, HHV)	2,098	1,968	1,878	1,764
Relative Humidity (%)	60	60	60	50
Fuel heating value (Btu/lb, LHV)	18,387	18,387	18,387	18,387
(Btu/lb, HHV)	19,490	19,490	19,490	19,490
(HHV/LHV)	1.060	1.060	1.060	1.060
CT Exhaust Flow				
Mass Flow (lb/hr)- provided	4,102,785	3,920,619	3,786,372	3,606,773
Temperature (°F) - provided	1,126	1,136	1,143	1,154
Moisture (% Vol.)	7.78	8.2	8.81	9.66
Oxygen (% Vol.)	11.93	11.99	11.97	11.92
Molecular Weight	28.68	28.62	28.54	28.44
Volume flow (acfm) - calculated	2,766,557	2,666,078	2,592,584	2,495,524
Fuel Usage				
Fuel usage (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu [Fuel Heat Content, Btu/lb (LHV)]				
Heat input (MMBtu/hr, LHV)	1,979	1,857	1,772	1,664
Heat content (Btu/lb, LHV)	18,387	18,387	18,387	18,387
Fuel usage (lb/hr)- provided	107,635	100,987	96,398	90,522
- calculated	107,630	100,995	96,372	90,499
HRSG Stack				
HRSG - Stack Height (feet)	149	149	149	149
Diameter (feet)	22	22	22	22
HRSG Stack Flow Conditions				
Velocity (ft/sec) = Volume flow (acfm) / [((diameter)² /4) x 3.14159] / 60 sec/min				
Mass flow (lb/hr)	4,102,785	3,920,619	3,786,372	3,606,773
HRSG Stack Temperature (^oF)	350	348	346	345
Molecular weight	28.68	28.62	28.54	28.44
Volume flow (acfm)	1,412,933	1,349,744	1,303,570	1,244,669
Diameter (feet)	22	22	22	22
Velocity (ft/sec)- calculated	61.9	59.2	57.2	54.6
Velocity (ft/sec)- provided	55	53	52	50

Note: Universal gas constant = 1,545.4 ft-lb(force)/°R; atmospheric pressure = 2,112.5 lb(force)/ft² (@14.67 psia).
Source: Siemens, 2008; CT Performance Data; Golder, 2008.

TABLE A-8-SH
MAXIMUM EMISSIONS FOR CRITERIA POLLUTANTS FOR THE CONVERSION PROJECT
SIEMENS H CT, DRY LOW NO_x COMBUSTOR, DISTILLATE OIL, 75% LOAD

	Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**75 °F**	**95 °F**
Particulate from CTand SCR				
Total PM_{10} = PM_{10} (front half) + PM_{10} [$(NH_4)_2SO_4$] in HRSG only (back-half)				
a. PM_{10} (front half) (lb/hr)				
Particulate from CT- provided	0.0	0.0	0.0	0.0
b. PM_{10} [$(NH_4)_2SO_4$] from HRSG only (back half) = Sulfur trioxide from conversion of SO_2 converts to ammonium sulfate (= PM_{10})				
Particulate from conversion of SO_2 = SO_2 emissions (lb/hr) x conversion of SO_2 to SO_3 in CT and in SCR x lb SO_3/lb SO_2 x conversion of SO_3 to $(NH_4)_2SO_4$ x lb $(NH_4)_2SO_4$/ lb SO_3				
SO_2 emission rate (lb/hr)- calculated	3.2	3.0	2.9	2.7
Conversion (%) from SO_2 to SO_3 in CT	10.0	10.0	10.0	10.0
Remaining SO_2 (lb/hr) in CT after conversion - calculated	2.9	2.7	2.6	2.4
Conversion (%) from SO_2 to SO_3 in SCR	3.0	3.0	3.0	3.0
MW SO_3/ SO_2 (80/64)	1.3	1.3	1.3	1.3
Conversion (%) from SO_3 to $(NH_4)_2(SO_4)$	100	100	100	100
MW $(NH_4)_2$ SO_4/ SO_3 (132/80)	1.7	1.7	1.7	1.7
HRSG Particulate as $(NH_4)_2(SO_4)$ (lb/hr)- calculated	0.85	0.79	0.76	0.71
Total HRSG stack emission rate (lb/hr) [a + b] - provided	30.0	30.0	30.0	30.0
-calculated	0.8	0.8	0.8	0.7
- maximum	30.0	30.0	30.0	30.0
(lb/mmBtu, HHV)	NA	NA	NA	NA
Sulfur Dioxide				
SO_2 (lb/hr)= Fuel oil (lb/hr) x sulfur content(% weight) x (lb SO_2 /lb S) /100				
Fuel oil Sulfur Content	0.0015%	0.0015%	0.0015%	0.0015%
Fuel oil use (lb/hr)	107,635	100,987	96,398	90,522
lb SO_2 / lb S (64/32)	2	2	2	2
HRSG Stack emission rate (lb/hr)- calculated	3.2	3.0	2.9	2.7
Nitrogen Oxides				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
NO_x (ppm actual) = NO_x (ppmd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
NO_x (lb/hr) = NO_x (ppm actual) x Volume flow (acfm) x 46 (mole. wgt NO_x) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	52.3	51.2	50.5	49.6
CT/DB, ppmvd @15% O_2	42	42	42	42
Moisture (%)	7.78	8.2	8.81	9.66
Oxygen (%)	11.93	11.99	11.97	11.92
Oxygen (%) dry	12.94	13.06	13.13	13.19
Turbine Flow (acfm)	2,766,557	2,666,078	2,592,584	2,495,524
Turbine Flow (acfm), dry	2,551,319	2,447,460	2,364,178	2,254,456
Turbine Exhaust Temperature (°F)	1,126	1,136	1,143	1,154
CT emission rate (lb/hr)	344.1	322.9	307.9	289.1
CT emission rate (lb/hr)(provided)	363.0	340.0	325.0	305.0
HRSG Stack, ppmvd @ 15% O_2 - provided	8.0	8.0	8.0	8.0
HRSG Stack emission rate (lb/hr)- calculated	69.1	64.8	61.9	58.1
(Max. CT/DB calculated/provided)				
Carbon Monoxide				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
CO (ppmv wet or actual) = CO (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
CO (lb/hr) = CO (ppm actual) x Volume flow (acfm) x 28 (mole. wgt CO) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	12.4	12.2	12.0	11.8
Basis, ppmvd @ 15% O_2 - provided	10	10	10	10
Moisture (%)	7.78	8.2	8.81	9.66
Oxygen (%)	11.93	11.99	11.97	11.92
Oxygen (%) dry	12.94	13.06	13.13	13.19
Turbine Flow (acfm)	2,766,557	2,666,078	2,592,584	2,495,524
Turbine Flow (acfm), dry	2,551,319	2,447,460	2,364,178	2,254,456
Turbine Exhaust Temperature (°F)	1,126	1,136	1,143	1,154
HRSG Exhaust Temperature (°F)	350	348	346	345
CT emission rate (lb/hr)	49.9	46.8	44.6	41.9
CT emission rate (lb/hr)(provided)	53.0	49.0	47.0	44.0
HRSG Stack, ppmvd @ 15% O_2 - provided	10.0	10.0	10.0	10.0
HRSG Stack emission rate (lb/hr)- calculated	53.0	49.0	47.0	44.0
(Max. CT/DB calculated/provided)				
Volatile Organic Compounds				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
VOC (ppmv wet or actual) = VOC (ppmvd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
VOC (lb/hr) = VOC (ppm actual) x Volume flow (acfm) x 16 (mole. wgt CH_4) x 2112.5 lb/ft^2 (pressure) / [1545.4 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
Basis, ppm actual- calculated	2.5	2.4	2.4	2.4
Basis, ppmvd @ 15% O_2 - provided	2.0	2.0	2.0	2.0
Moisture (%)	7.78	8.20	8.81	9.66
Oxygen (%)	11.93	11.99	11.97	11.92
Oxygen (%) dry	12.94	13.06	13.13	13.19
Turbine Flow (acfm)	2,766,557	2,666,078	2,592,584	2,495,524
Turbine Flow (acfm), dry	2,551,319	2,447,460	2,364,178	2,254,456
Turbine Exhaust Temperature (°F)	1,126	1,136	1,143	1,154
HRSG Exhaust Temperature (°F)	350	348	346	345
CT emission rate (lb/hr) (calculated)	5.7	5.3	5.1	4.8
CT emission rate (lb/hr)(provided)	6.0	5.6	5.4	5.1
HRSG Stack, ppmvd @ 15% O_2 - provided	2.0	2.0	2.0	2.0
HRSG Stack emission rate (lb/hr)- calculated	6.00	5.60	5.40	5.10
(Max. CT/DB calculated/provided)				
Sulfuric Acid Mist				
Sulfuric Acid Mist (lb/hr)= SO_2 emission (lb/hr) x Conversion to H_2SO_4 (% by weight)/100				
CT SO_2 emission rate (lb/hr) - provided	3.2	3.0	2.9	2.7
CT Conversion to H_2SO_4 (% by weight) - provided	10	10	10	10
DB SO_2 emission rate (lb/hr) - provided	0	0	0	0
DB Conversion to H_2SO_4 (%) - provided	20	20	20	20
SCR SO_2 emission rate (lb/hr) - calculated (remaining SO_2 after conversion)	2.9	2.7	2.6	2.4
SCR Conversion to H_2SO_4 (% by weight) - provided	3	3	3	3
HRSG Stack emission rate (lb/hr)- calculated	0.63	0.59	0.56	0.53
Lead				
Lead (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Emission Rate Basis (lb/10^{12} Btu)	14	14	14	14
Heat Input (MMBtu/hr, HHV)	2,098	1,968	1,878	1,764
HRSG Stack emission rate (lb/hr)- calculated	0.0294	0.0276	0.0263	0.0247

Note: ppmvd= parts per million, volume dry; O_2= oxygen.
Source: Siemens, 2008; CT Performance Data; Golder, 2008.

TABLE A-9-SH
REGULATED AND HAZARDOUS AIR POLLUTANT EMISSION FACTORS AND EMISSIONS
FOR THE CONVERSION PROJECT
SIEMENS H CT, DRY LOW NO_x COMBUSTOR, NATURAL GAS, BASE LOAD

Parameter		Emission Rate (lb/hr) firing Natural Gas for Operating Conditions of Base Load (1)		Natural Gas Maximum Annual Gas	
Ambient Temperature (^oF):		59 °F	59 °F w/DB	Compressors	59 °F
HIR (MMBtu/hr):		2,577	3,052	1 CT/HRSG	3 CTs/HRSGs
Sulfuric acid mist		2.10	3.72	11.5	34.6
HAPs (Section 112(b) of Clean Air Act)					
1,3-Butadiene		0.001108	0.001312	0.005	0.015
Acetaldehyde		0.1031	0.1221	0.479	1.437
Acrolein		0.0165	0.0195	0.077	0.230
Benzene		0.0309	0.0366	0.144	0.431
Ethylbenzene		0.0825	0.0977	0.383	1.149
Formadehyde		0.551	0.654	2.562	7.686
Naphthalene		0.00335	0.00397	0.016	0.047
Polycyclic Aromatic Hydrocarbons (PAH)	(3)	0.00567	0.00671	0.026	0.079
Propylene Oxide		0.0747	0.0885	0.347	1.041
Toluene		0.0850	0.1007	0.395	1.185
Xylene		0.165	0.195	0.766	2.298
Antimony		0.0	0.0	0.0	0.00
Arsenic		0.0	0.0	0.0	0.00
Beryllium		0.0	0.0	0.0	0.00
Cadmium		0.0	0.0	0.0	0.00
Chromium		0.0	0.0	0.0	0.00
Lead		0.0	0.0	0.0	0.00
Manganese		0.0	0.0	0.0	0.00
Mercury		0.0	0.0	0.0	3.59E-05
Nickel		0.0	0.0	0.0	0.00
Selenium		0.0	0.0	0.0	0.00
HAPs (Total)		1.119	1.327	5.20	15.6

(1) Emissions based on the following emission factors and conversion factors for firing natural gas:

Emission Factors		Value	Reference
Sulfuric acid mist		10	%; Conversion of SO_2 to SO_3 in gas turbine
1,3-Butadiene	(a)	0.43	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Acetaldehyde		40	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Acrolein		6.4	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Benzene		12	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Ethylbenzene		32	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Formadehyde		0.091	ppmvd @15% O_2 (see Table 9a)
Naphthalene		1.3	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Polycyclic Aromatic Hydrocarbons (PAH)		2.2	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Propylene Oxide	(a)	29	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Toluene		33	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000. Database
Xylene		64	lb/10^{12} Btu; AP-42,Table 3.1-3. EPA 2000
Antimony		0.00E+00	
Arsenic		0.00E+00	
Beryllium		0.00E+00	
Cadmium		0.00E+00	
Chromium		0.00E+00	
Lead		0.00E+00	
Manganese		0.00E+00	
Mercury		1.00E-03	
Nickel		0.00E+00	
Selenium		0.00E+00	

(a) Based on 1/2 the detection limit; expected emissions are lower.

(2) Annual emissions based on ambient temperature of 59 ^oF firing natural gas for following hours:

5880 CT
2880 CT/DB

(3) Assumed to be representative of Polycyclic Organic Matter (POM) emissions, a regulated HAP.

TABLE A-9a-SH
MAXIMUM FORMALDEHYDE EMISSIONS
FOR THE CONVERSION PROJECT
SIEMENS H CT, DRY LOW NO_x COMBUSTOR, NATURAL GAS, BASE LOAD

	CT Only Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**59 °F w/DB**	**95 °F**
Formaldehyde (CH_2O) MW = 30				Gas Compressors
CH_2O (lb/hr) = CH_2O (ppm actual) x Volume flow (acfm) x 30 (mole. wgt CH_2O) x 2116.8 lb/ft^2 (pressure) / [1545.7 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
CH_2O (ppm actual) = CH_2O (ppmd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
Basis, ppm actual- calculated	0.110	0.109	0.129	0.108
CT, ppmvd @15% O_2	0.091	0.091	0.091	0.091
Moisture (%)	8.36	9.14	10.52	11.03
Oxygen (%)	12.05	11.92	10.36	11.59
Oxygen (%) dry	13.15	13.12	11.58	13.03
Exhaust Flow (acfm)	1,399,125	1,344,704	1,333,147	1,251,392
Exhaust Temperature (°F)	196	195	185	195
CT Emission rate (lb/hr)	0.575	0.551	0.654	0.508
CT Emission rate (lb/10^{12} Btu) (HHV)	213.8	213.8	254.0	213.9

Note: ppmvd= parts per million, volume dry; O2= oxygen.
Source: Siemens, 2008; CT Performance Data; Golder, 2008.

TABLE A-10-SH

REGULATED AND HAZARDOUS AIR POLLUTANT EMISSION FACTORS AND EMISSIONS FOR THE CONVERSION PROJECT, SIEMENS H CT

Parameter	Emission Rate (lb/hr) Distillate Fuel Oil (1)	Maximum Annual Emissions (TPY)			Emission Rate (lb/hr) Natural Gas (4)		Maximum Annual Emissions (TPY)		
	Base Load	Gas			Base Load		Natural Gas and Fuel Oil (5)		
Ambient Temperature (^oF):	59 °F	Compressors							
HIR (MMBtu/hr):	2,404	3 CT/HRSGs (500 hrs on oil)	3 CT/HRSGs (1,000 hrs on oil)	3 CT/HRSGs (1,500 hrs on oil)	1 CT/HRSGs (CT Only)	1 CT/HRSGs (CT + DB)	3 CT/HRSGs (500 hrs on oil)	3 CT/HRSGs (1,000 hrs on oil)	3 CT/HRSGs (1,500 hrs on oil)
Sulfuric acid mist	0.72	0.54	1.08	1.62	2.10	3.72	33.6	32.5	31.5
HAPs (Section 112(b) of Clean Air Act)									
1,3-Butadiene	0.0385	0.029	0.058	0.087	0.001	0.001	0.043	0.071	0.099
Acetaldehyde	0.00	0.00	0.00	0.00	0.103	0.122	1.359	1.282	1.205
Acrolein	0.00	0.00	0.00	0.00	0.016	0.020	0.217	0.205	0.193
Benzene	0.132	0.099	0.198	0.298	0.031	0.037	0.507	0.583	0.659
Ethylbenzene	0.00	0.00	0.00	0.00	0.082	0.098	1.087	1.026	0.964
Formadehyde	0.565	0.424	0.848	1.271	0.551	0.654	7.697	7.707	7.718
Naphthalene	0.0841	0.063	0.126	0.189	0.003	0.004	0.107	0.168	0.228
Polycyclic Aromatic Hydrocarbons (PAH) (3)	0.0962	0.072	0.144	0.216	0.006	0.007	0.147	0.215	0.283
Propylene Oxide	0.00	0.00	0.00	0.00	0.075	0.089	0.985	0.929	0.873
Toluene	0.00	0.00	0.00	0.00	0.085	0.101	1.121	1.058	0.994
Xylene	0.00	0.00	0.00	0.00	0.165	0.195	2.175	2.051	1.927
Antimony	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arsenic	0.0264	0.020	0.040	0.060	0.00	0.00	0.020	0.040	0.060
Beryllium	0.000745	0.0006	0.001	0.002	0.00	0.00	0.00	0.00	0.00
Cadmium	0.01154	0.0087	0.017	0.026	0.00	0.00	0.009	0.017	0.026
Chromium	0.0264	0.020	0.040	0.060	0.00	0.00	0.020	0.040	0.060
Lead	0.0337	0.025	0.050	0.076	0.00	0.00	0.025	0.050	0.076
Manganese	1.90	1.424	2.849	4.273	0.00	0.00	1.42	2.85	4.27
Mercury	0.00288	0.0022	0.004	0.006	0.00	0.00	0.00	0.00	0.01
Nickel	0.01106	0.0083	0.017	0.025	0.00	0.00	0.008	0.017	0.025
Selenium	0.0601	0.045	0.090	0.135	0.00	0.00	0.045	0.090	0.135
HAPs (Total)	2.99	2.24	4.48	6.72	1.1	1.3	17.0	18.4	19.8

(1) Emissions based on the following emission factors and conversion factors for firing distillate fuel oil:

Emission Factors		Value	Reference
Sulfuric acid mist		5	%; Conversion of SO_2 to SO_3 in gas turbine
1,3-Butadiene	(a)	16	lb/10^{12} Btu; AP-42,Table 3.1-4. EPA 2000
Acetaldehyde		0.0	
Acrolein		0.0	
Benzene		55	lb/10^{12} Btu; AP-42,Table 3.1-4. EPA 2000
Ethylbenzene		0.0	
Formadehyde		0.091	ppmvd @15% O_2 (see Table 10a)
Naphthalene		35	lb/10^{12} Btu; AP-42,Table 3.1-4. EPA 2000
Polycyclic Aromatic Hydrocarbons (PAH)		40	lb/10^{12} Btu; AP-42,Table 3.1-4. EPA 2000
Propylene Oxide		0.0	
Toluene		0.0	
Xylene		0.0	
Antimony		0.0	
Arsenic	(a)	11	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Beryllium	(a)	0.31	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Cadmium		4.8	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Chromium		11	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Lead		14	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Manganese		790	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Mercury		1.2	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Nickel	(a)	4.6	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000
Selenium	(a)	25	lb/10^{12} Btu; AP-42,Table 3.1-5. EPA 2000

(a) Based on 1/2 the detection limit; expected emissions are lower.

(2) Annual emissions based on ambient temperature of 59 ^oF and firing fuel oil at base load for : 500 hours 1,000 hours 1,500 hours

(3) Assumed to be representative of Polycyclic Organic Matter (POM) emissions, a regulated HAP.

(4) Natural gas firing emission rates based on Table A-9.

(5) Maximum total annual emissions based on the following combination of operating hours:

Oil firing at base load for :	500 hours	1,000 hours	1,500 hours
Natural gas at base load for :	5,380 hours	4,880 hours	4,380 hours
Natural gas with duct firing at base load for :	2,880 hours	2,880 hours	2,880 hours

TABLE A-10a-SH
MAXIMUM FORMALDEHYDE EMISSIONS
FOR THE CONVERSION PROJECT
SIEMENS H CT, DRY LOW NO_x COMBUSTOR, DISTILLATE OIL, BASE LOAD

	CT Only Turbine Inlet Temperature			
Parameter	**35 °F**	**59 °F**	**75 °F**	**95 °F**
Formaldehyde (CH_2O) MW = 30				Gas Compressors
CH_2O (lb/hr) = CH_2O (ppm actual) x Volume flow (acfm) x 30 (mole. wgt CH_2O) x 2116.8 lb/ft^2 (pressure) / [1545.7 (gas constant, R) x Actual Temp. (°R)] x 60 min/hr				
CH_2O (ppm actual) = CH_2O (ppmd @ 15%O_2) x [(20.9 - O_2 dry)/(20.9 - 15)] x [1- Moisture(%)/100]				
Oxygen (%, dry)(O_2 dry) = Oxygen (%)/[1-Moisure (%)]				
Basis, ppmvw - calculated	0.113	0.112	0.111	0.110
CT, ppmvd @15% O_2	0.091	0.091	0.091	0.091
Moisture (%)	7.97	8.46	9.12	10.02
Oxygen (%)	11.91	11.88	11.80	11.68
Oxygen (%) dry	12.94	12.98	12.98	12.98
Exhaust Flow (acfm)	1,773,827	1,677,310	1,607,335	1,519,437
Exhaust Temperature (°F)	359	357	355	354
CT Emission rate (lb/hr)	0.602	0.565	0.538	0.505
CT Emission rate (lb/10^{12} Btu) (HHV)	234.7	235.0	234.9	234.8

Note: ppmvd= parts per million, volume dry; O2= oxygen.

Source: Siemens, 2008; CT Performance Data; Golder, 2008.

TABLE A-11A
HAZARDOUS AIR POLLUTANT EMISSIONS FOR ADDITIONAL RBEC EMISSION UNITS- NATURAL GAS-FIRING

	Auxiliary Boiler and Fuel Heater				Compressor Station		
	Emission Factor [a]		Annual Emission Basis		Emission Factor [a, b]		
Parameter/Pollutant	Units	Value	Auxiliary Boiler	Fuel Heater	Units	Value	Annual Emission Basis [c]
Number of Units			1	1			4
Heat Input Rate (MMBtu/hr)			99.77	10			40.4
Fuel use (scf/hr)			94,569	9,479			39,648
Hours of operation (annual)			500	8,760			8,760
Heat Input Rate (MMBtu/yr)			NA	NA			354,265
Fuel use (MMscf/yr)			47.284	83.03			347.32
HAPs [Section 112(b) of Clean Air Act]			Emissions (TPY)				Emissions (TPY)
Benzene	lb/10^6 scf	2.10E-03	4.96E-05	8.72E-05	lb/MMBtu	4.40E-04	3.90E-03
Formaldehyde	lb/10^6 scf	7.50E-02	1.77E-03	3.11E-03	lb/MMBtu	5.28E-02	4.68E-01
Naphthalene	lb/10^6 scf	6.10E-04	1.44E-05	2.53E-05	lb/MMBtu	7.44E-05	6.59E-04
Toluene	lb/10^6 scf	3.40E-03	8.04E-05	1.41E-04	lb/MMBtu	4.08E-04	3.61E-03
Dichlorobenzene	lb/10^6 scf	1.20E-03	2.84E-05	4.98E-05	lb/MMBtu	NA	NA
Acenaphthene	lb/10^6 scf	1.80E-06	4.26E-08	7.47E-08	lb/MMBtu	1.25E-06	1.11E-05
Acenaphthylene	lb/10^6 scf	1.80E-06	4.26E-08	7.47E-08	lb/MMBtu	5.53E-06	4.90E-05
Acetaldehyde	lb/10^6 scf	NA	NA	NA	lb/MMBtu	8.36E-03	7.40E-02
Acrolein	lb/10^6 scf	NA	NA	NA	lb/MMBtu	5.14E-03	4.55E-02
Anthracene	lb/10^6 scf	2.40E-06	5.67E-08	9.96E-08	lb/MMBtu	NA	NA
Benzo(a)anthracene	lb/10^6 scf	1.80E-06	4.26E-08	7.47E-08	lb/MMBtu	NA	NA
Benzo(b)fluoranthene	lb/10^6 scf	NA	NA	NA	lb/MMBtu	1.66E-07	1.47E-06
Benzene	lb/10^6 scf	2.10E-03	4.96E-05	8.72E-05	lb/MMBtu	NA	NA
Benzo(e)pyrene	lb/10^6 scf	NA	NA	NA	lb/MMBtu	4.15E-07	3.68E-06
Benzo(g,h,i)perylene	lb/10^6 scf	1.20E-06	2.84E-08	4.98E-08	lb/MMBtu	4.14E-07	3.67E-06
Biphenyl	lb/10^6 scf	NA	NA	NA	lb/MMBtu	2.12E-04	1.88E-03
Chrysene	lb/10^6 scf	1.80E-06	4.26E-08	7.47E-08	lb/MMBtu	6.93E-07	6.14E-06
Dibenzo(a,h)anthracene	lb/10^6 scf	1.20E-06	2.84E-08	4.98E-08	lb/MMBtu	NA	NA
Ethylbenzene	lb/10^6 scf	NA	NA	NA	lb/MMBtu	3.97E-05	3.52E-04
Fluoanthene	lb/10^6 scf	3.00E-06	7.09E-08	1.25E-07	lb/MMBtu	1.11E-06	9.83E-06
Fluorene	lb/10^6 scf	2.80E-06	6.62E-08	1.16E-07	lb/MMBtu	5.67E-06	5.02E-05
Indeno(1,2,3-cd)pyrene	lb/10^6 scf	1.80E-06	4.26E-08	7.47E-08	lb/MMBtu	NA	NA
Methanol	lb/10^6 scf	NA	NA	NA	lb/MMBtu	2.50E-03	2.21E-02
Methylcyclohexane	lb/10^6 scf	NA	NA	NA	lb/MMBtu	1.23E-03	1.09E-02
Methylene Chloride	lb/10^6 scf	NA	NA	NA	lb/MMBtu	2.00E-05	1.77E-04
n-Hexane	lb/10^6 scf	NA	NA	NA	lb/MMBtu	1.11E-03	9.83E-03
Phenanthrene	lb/10^6 scf	1.70E-05	4.02E-07	7.06E-07	lb/MMBtu	1.04E-05	9.21E-05
Phenol	lb/10^6 scf	NA	NA	NA	lb/MMBtu	2.40E-05	2.13E-04
Pyrene	lb/10^6 scf	5.00E-06	1.18E-07	2.08E-07	lb/MMBtu	1.36E-06	1.20E-05
Vinyl Chloride	lb/10^6 scf	NA	NA	NA	lb/MMBtu	1.49E-05	1.32E-04
Xylene	lb/10^6 scf	NA	NA	NA	lb/MMBtu	1.84E-04	1.63E-03
1,2,4 Trimethylbenzene	lb/10^6 scf	NA	NA	NA	lb/MMBtu	1.43E-05	1.27E-04
2-Methylnaphthalene	lb/10^6 scf	NA	NA	NA	lb/MMBtu	3.32E-05	2.94E-04
2,2,4-Trimethylpentane	lb/10^6 scf	NA	NA	NA	lb/MMBtu	2.50E-04	2.21E-03
Arsenic	lb/10^6 scf	2.00E-04	4.73E-06	8.30E-06	lb/10^6 scf	2.00E-04	3.47E-05
Beryllium	lb/10^6 scf	1.20E-05	2.84E-07	4.98E-07	lb/10^6 scf	1.20E-05	2.08E-06
Cadmium	lb/10^6 scf	1.10E-03	2.60E-05	4.57E-05	lb/10^6 scf	1.10E-03	1.91E-04
Chromium	lb/10^6 scf	1.40E-03	3.31E-05	5.81E-05	lb/10^6 scf	1.40E-03	2.43E-04
Cobalt	lb/10^6 scf	8.40E-05	1.99E-06	3.49E-06	lb/10^6 scf	8.40E-05	1.46E-05
Mercury	lb/10^6 scf	2.60E-04	6.15E-06	1.08E-05	lb/10^6 scf	2.60E-04	4.52E-05
Manganese	lb/10^6 scf	3.80E-04	8.98E-06	1.58E-05	lb/10^6 scf	3.80E-04	6.60E-05
Nickel	lb/10^6 scf	2.10E-03	4.96E-05	8.72E-05	lb/10^6 scf	2.10E-03	3.65E-04
Selenium	lb/10^6 scf	2.40E-05	5.67E-07	9.96E-07	lb/10^6 scf	2.40E-05	4.17E-06
HAPs (Total)			2.13E-03	3.74E-03			0.65

[a] EPA AP-42 (Section 1.4); for compression station, emission factors apply to metals.

[b] EPA AP-42 (Section 3.2)

[c] Compressor Station includes 7 gas-fired engines rated at 1,340 hp each.
Assumes control efficiency of organic HAPs with oxidation catalyst of: 95 percent.

TABLE A-11B
HAZARDOUS AIR POLLUTANT EMISSIONS FOR ADDITIONAL RBEC EMISSION UNITS- OIL-FIRING

Parameter/Pollutant	Emission Factor [a, b] Units	Emission Factor [a, b] Value	Fire Pump Engine	Emergency Generators [c]
			Annual Emission Basis	
Heat Input Rate (MMBtu/hr)			2.32	42.0
Hours of operation (annual)			80	160
Heat Input Rate (MMBtu/yr)			185.9	6,723
HAPs [Section 112(b) of Clean Air Act]			Emissions (TPY)	
Acrolein	lb/MMBtu	7.88E-06	7.32E-07	2.65E-05
Acetaldehyde	lb/MMBtu	2.52E-05	2.34E-06	8.47E-05
Benzene	lb/MMBtu	7.76E-04	7.21E-05	2.61E-03
Formaldehyde	lb/MMBtu	7.89E-05	7.33E-06	2.65E-04
Naphthalene	lb/MMBtu	1.30E-04	1.21E-05	4.37E-04
Toluene	lb/MMBtu	2.81E-04	2.61E-05	9.45E-04
Xylene	lb/MMBtu	1.93E-04	1.79E-05	6.49E-04
Acenaphthene	lb/MMBtu	4.68E-06	4.35E-07	1.57E-05
Acenaphthylene	lb/MMBtu	9.23E-06	8.58E-07	3.10E-05
Anthracene	lb/MMBtu	1.23E-06	1.14E-07	4.13E-06
Benzo(a)anthracene	lb/MMBtu	6.22E-07	5.78E-08	2.09E-06
Benzo(b)fluoranthene	lb/MMBtu	1.11E-06	1.03E-07	3.73E-06
Benzo(k)fluoranthene	lb/MMBtu	2.18E-07	2.03E-08	7.33E-07
Benzo(g,h,i)perylene	lb/MMBtu	5.56E-07	5.17E-08	1.87E-06
Benzo(a)pyrene	lb/MMBtu	2.57E-07	2.39E-08	8.64E-07
Chrysene	lb/MMBtu	1.53E-06	1.42E-07	5.14E-06
Dibenzo(a,h)anthracene	lb/MMBtu	3.46E-07	3.22E-08	1.16E-06
Fluoanthene	lb/MMBtu	4.03E-06	3.75E-07	1.35E-05
Fluorene	lb/MMBtu	4.47E-06	4.15E-07	1.50E-05
Indo(1,2,3-cd)pyrene	lb/MMBtu	4.14E-07	3.85E-08	1.39E-06
Phenanthrene	lb/MMBtu	1.05E-06	9.76E-08	3.53E-06
Pyrene	lb/MMBtu	3.71E-06	3.45E-07	1.25E-05
Arsenic	$lb/10^{12}$ Btu	4.0	3.72E-07	1.34E-05
Beryllium	$lb/10^{12}$ Btu	3.0	2.79E-07	1.01E-05
Cadmium	$lb/10^{12}$ Btu	3.0	2.79E-07	1.01E-05
Chromium	$lb/10^{12}$ Btu	3.0	2.79E-07	1.01E-05
Lead	$lb/10^{12}$ Btu	9.0	8.37E-07	3.03E-05
Mercury	$lb/10^{12}$ Btu	3.0	2.79E-07	1.01E-05
Manganese	$lb/10^{12}$ Btu	6.0	5.58E-07	2.02E-05
Nickel	$lb/10^{12}$ Btu	3.0	2.79E-07	1.01E-05
Selenium	$lb/10^{12}$ Btu	15.0	1.39E-06	5.04E-05
HAPs (Total)			1.43E-04	5.18E-03

[a] EPA AP-42 (Section 3.4)

[b] EPA AP-42 (Section 1.3) for metals.

[c] Includes two emergency generators.

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	150,000 BBL - No. 2 Fuel Oil, Palm Beach
City:	Palm Beach
State:	Florida
Company:	
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions

Shell Height (ft):	64.00
Diameter (ft):	130.00
Liquid Height (ft) :	64.00
Avg. Liquid Height (ft):	64.00
Volume (gallons):	6,300,000.00
Turnovers:	8.18
Net Throughput(gal/yr):	52,000,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Gray/Light
Shell Condition	Good
Roof Color/Shade:	Gray/Light
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft)	0.00
Radius (ft) (Dome Roof)	65.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Miami, Florida (Avg Atmospheric Pressure = 14.75 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

150,000 BBL - No. 2 Fuel Oil, Palm Beach - Vertical Fixed Roof Tank
Palm Beach, Florida

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Distillate fuel oil no. 2	All	83.70	75.41	92.00	78.13	0.0135	0.0106	0.0172	130.0000			188.00	Option 1: VP70 = .009 VP80 = .012

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

150,000 BBL - No. 2 Fuel Oil, Palm Beach - Vertical Fixed Roof Tank
Palm Beach, Florida

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	2,169.92	3,515.56	5,685.48

APPENDIX B

HISTORICAL ACTUAL EMISSIONS FROM EXISTING UNITS 3 AND 4 AT FPL RIVIERA PLANT

TABLE B-PRV-AOR
SUMMARY OF MAXIMUM ANNUAL EMISSIONS FOR THE EXISTING UNITS AT PRV USING AOR DATA

Pollutant		Annual Emissions (tons/year) 2007	2006	2005	2004	2003	Maximum 2-Year Average (tons/year)	2-Year Average Annual Emissions (tons/year) 2006 2007	2005 2006	2004 2005	2003 2004
SO_2	3	2,741.9	3,335.5	5,415.0	5,837.2	4,169.3		3,038.7	4,375.2	5,626.1	5,003.3
	4	2,815.1	1,903.4	4,815.0	5,572.5	6,419.3		2,359.3	3,359.2	5,193.7	5,995.9
		5,557.0	5,238.9	10,229.9	11,409.7	10,588.6	10,999.2	5,398.0	7,734.4	10,819.8	10,999.2
PM	3	227.6	281.5	436.9	471.8	335.9		254.5	359.2	454.4	403.9
	4	249.3	179.1	388.8	451.4	519.4		214.2	283.9	420.1	485.4
		476.9	460.5	825.7	923.2	855.3	889.3	468.7	643.1	874.5	889.3
PM_{10}	3	227.6	281.5	436.9	471.8	335.9		254.5	359.2	454.4	403.9
	4	249.3	179.1	388.8	451.4	519.4		214.2	283.9	420.1	485.4
		476.9	460.5	825.7	923.2	855.3	889.3	468.7	643.1	874.5	889.3
NO_x	3	877.4	1,524.4	1,762.2	1,928.7	1,424.0		1,200.9	1,643.3	1,845.5	1,676.3
	4	1,191.2	1,553.2	1,577.9	1,878.8	2,273.3		1,372.2	1,565.6	1,728.4	2,076.1
		2,068.6	3,077.6	3,340.1	3,807.5	3,697.3	3,752.4	2,573.1	3,208.9	3,573.8	3,752.4
CO	3	173.5	247.2	191.2	214.8	178.1		210.4	219.2	203.0	196.5
	4	352.5	346.2	173.3	216.3	298.4		349.4	259.8	194.8	257.4
		526.0	593.4	364.5	431.1	476.5	559.7	559.7	479.0	397.8	453.8
VOC (as methane)	3	19.4	22.6	28.6	31.0	22.4		21.0	25.6	29.8	26.7
	4	31.3	20.7	25.6	30.0	35.4		26.0	23.2	27.8	32.7
		50.7	43.3	54.2	60.9	57.8	59.4	47.0	48.8	57.6	59.4
Lead	3	0.033	0.043	0.056	0.061	0.044		0.038	0.050	0.059	0.053
	4	0.044	0.037	0.050	0.059	0.069		0.041	0.044	0.055	0.064
		0.077	0.080	0.106	0.120	0.113	0.117	0.079	0.093	0.113	0.117
SAM [a]	3	121.9	148.3	240.8	259.6	185.4		135.1	194.6	250.2	222.5
	4	125.2	84.7	214.1	247.8	285.5		104.9	149.4	231.0	266.7
		247.1	233.0	455.0	507.4	470.9	489.2	240.1	344.0	481.2	489.2

[a] Estimated from SO_2 emissions and based on ratio of AP-42 emission factors for fuel oil combustion (Table 1.3-1) for SO_3 and SO_2. SO_3 is assumed to be converted to H_2SO_4.

SO_3 emission factor	5.7	S lb/1000 gal (S = sulfur content)
SO_2 emission factor	157	S lb/1000 gal (S = sulfur content)
Ratio SO_3/SO_2 emissions	0.036	fraction
SO_3 molecular wgt (MW)	80	
H_2SO_4 MW	98	
Ratio H_2SO_4/SO_2 MW	1.225	
Ratio H_2SO_4/SO_2 emissions	0.044	

Source: FPL, 2008.

APPENDIX C

COMPARISON OF MODEL RESULTS USING LAND USE VALUES FROM THE SITE AND KPBI AIRPORT

Note:

- **GENGAS file has impacts based on surface characteristics from KPBI.**
- **GENGASON file has impacts based on surface characteristics from RBEC Site.**
- **Results are presented first with impacts from GENGAS file and second with impacts from GENGASON file for each source group and averaging period.**

AERBOB RELEASE 020304

AERMOD OUTPUT FILE NUMBER 1 :GENGAS.O03
AERMOD OUTPUT FILE NUMBER 2 :GENGASON.O03
First title for last output file is: 2003 RBEC- CT LOAD ANALYSIS, SIEMENS GAS 12/31/08
Second title for last output file is: GENERIC (10 g/s) EMISSION RATES FOR CC CTS

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID:	G1095D				
Annual					
	2003	0.56705	593700.	2961200.	03123124
	2003	0.37393	593600.	2961300.	03123124
HIGH 24-Hour					
	2003	3.39174	593600.	2961200.	03061624
	2003	3.60867	594700.	2960000.	03012424
HIGH 8-Hour					
	2003	7.01136	593600.	2961200.	03062916
	2003	6.62667	594600.	2961200.	03031816
HIGH 3-Hour					
	2003	8.11788	593500.	2960700.	03022412
	2003	8.31635	594800.	2960600.	03041003
HIGH 1-Hour					
	2003	12.64923	593300.	2961000.	03120323
	2003	17.30613	594500.	2961200.	03052904
SOURCE GROUP ID:	G1059D				
Annual					
	2003	0.53170	593700.	2961200.	03123124
	2003	0.34832	593600.	2961300.	03123124
HIGH 24-Hour					
	2003	3.18742	593600.	2961200.	03061624
	2003	3.25816	594800.	2959900.	03012424
HIGH 8-Hour					
	2003	6.64073	593600.	2961200.	03062916
	2003	6.23338	594700.	2961200.	03031816
HIGH 3-Hour					
	2003	7.64515	593500.	2960700.	03022412
	2003	7.45404	594800.	2961100.	03062112
HIGH 1-Hour					
	2003	11.63569	593300.	2961000.	03120323
	2003	16.37741	594500.	2961200.	03052904
SOURCE GROUP ID:	G1035D				
Annual					
	2003	0.51177	593600.	2961200.	03123124
	2003	0.33323	593600.	2961300.	03123124
HIGH 24-Hour					
	2003	3.06621	593600.	2961200.	03061624
	2003	3.09892	594800.	2959900.	03012424
HIGH 8-Hour					
	2003	6.41707	593600.	2961200.	03062916
	2003	6.01140	594700.	2961200.	03031816
HIGH 3-Hour					
	2003	7.36272	593500.	2960700.	03022412
	2003	7.20318	594800.	2961100.	03062112
HIGH 1-Hour					
	2003	11.01839	593300.	2961000.	03120323
	2003	15.80567	594500.	2961200.	03052904
SOURCE GROUP ID:	G7595				
Annual					
	2003	0.66511	593700.	2961200.	03123124
	2003	0.44364	593600.	2961300.	03123124
HIGH 24-Hour					
	2003	3.93100	593600.	2961200.	03061624
	2003	4.81193	594700.	2960100.	03012424
HIGH 8-Hour					
	2003	8.18164	593700.	2961100.	03062916
	2003	7.85825	594700.	2960700.	03041016
HIGH 3-Hour					
	2003	9.75547	593600.	2960700.	03022412
	2003	10.74934	594800.	2960600.	03041003
HIGH 1-Hour					
	2003	15.11463	593300.	2961000.	03120323

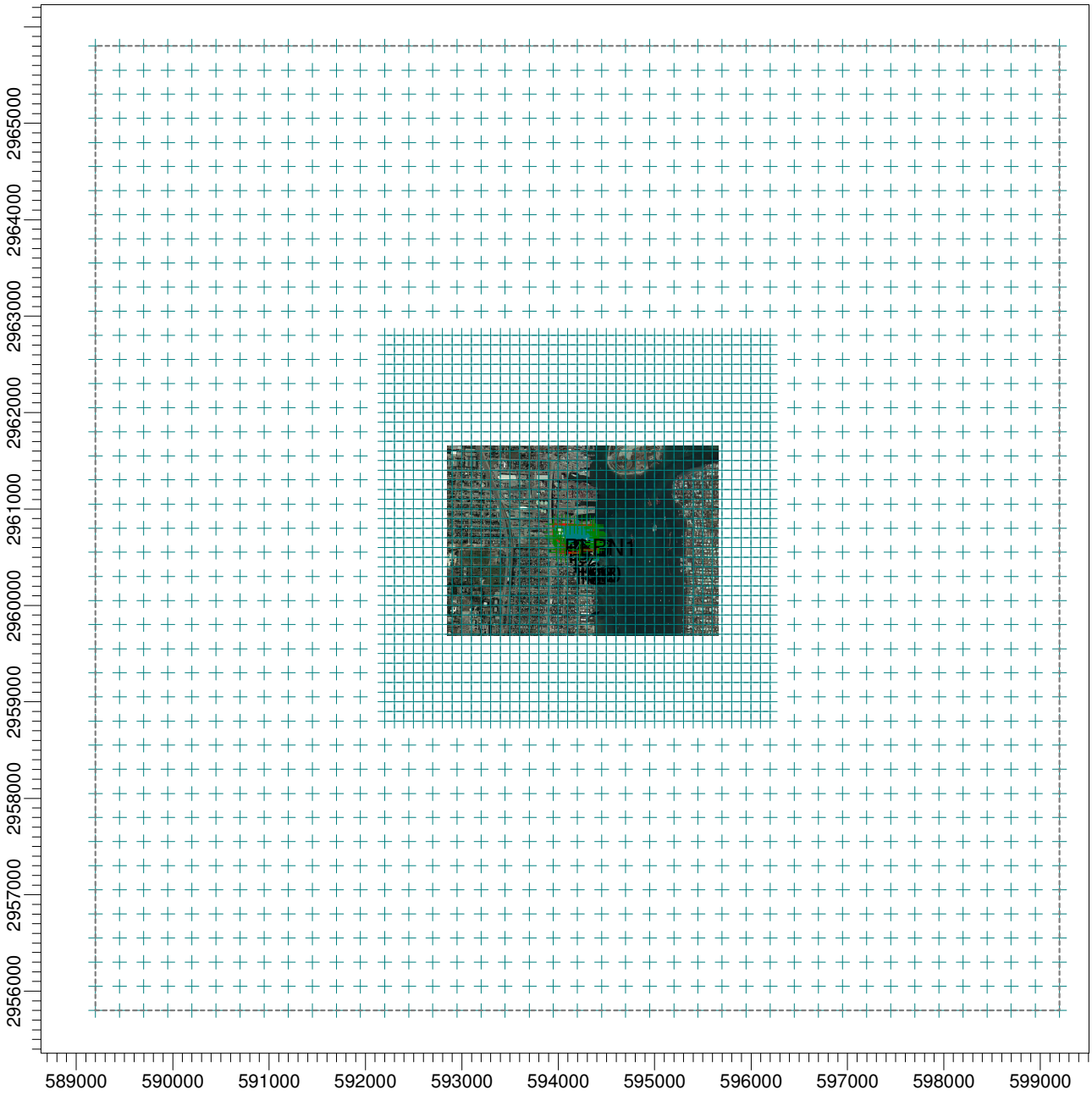
```
                    2003    20.31421        594400.     2961100.      03052904
SOURCE GROUP ID:    G7559
Annual
                    2003     0.63152        593700.     2961200.      03123124
                    2003     0.42026        593600.     2961300.      03123124
HIGH 24-Hour
                    2003     3.75105        593600.     2961200.      03061624
                    2003     4.37957        594700.     2960100.      03012424
HIGH  8-Hour
                    2003     7.72391        593700.     2961100.      03062916
                    2003     7.38757        594600.     2961200.      03031816
HIGH  3-Hour
                    2003     9.05741        593600.     2960700.      03022412
                    2003     9.95472        594800.     2960600.      03041003
HIGH  1-Hour
                    2003    14.33739        593300.     2961000.      03120323
                    2003    18.95294        594400.     2961100.      03052904
SOURCE GROUP ID:    G7535
Annual
                    2003     0.61378        593700.     2961200.      03123124
                    2003     0.40779        593600.     2961300.      03123124
HIGH 24-Hour
                    2003     3.65540        593600.     2961200.      03061624
                    2003     4.14469        594700.     2960100.      03012424
HIGH  8-Hour
                    2003     7.50826        593700.     2961100.      03062916
                    2003     7.18688        594600.     2961200.      03031816
HIGH  3-Hour
                    2003     8.74283        593600.     2960700.      03022412
                    2003     9.50817        594800.     2960600.      03041003
HIGH  1-Hour
                    2003    13.88954        593300.     2961000.      03120323
                    2003    18.40696        594500.     2961200.      03052904
 All receptor computations reported with respect to a user-specified origin
GRID             0.00          0.00
DISCRETE         0.00          0.00
```

APPENDIX D

RECEPTOR LOCATION FIGURES AND PROFILE INPUT PROGRAM (BPIP) FILES

PROJECT TITLE:

Figure D-1
General Receptor Grid for RBEC



COMMENTS:

SOURCES:

12

RECEPTORS: 980

3124

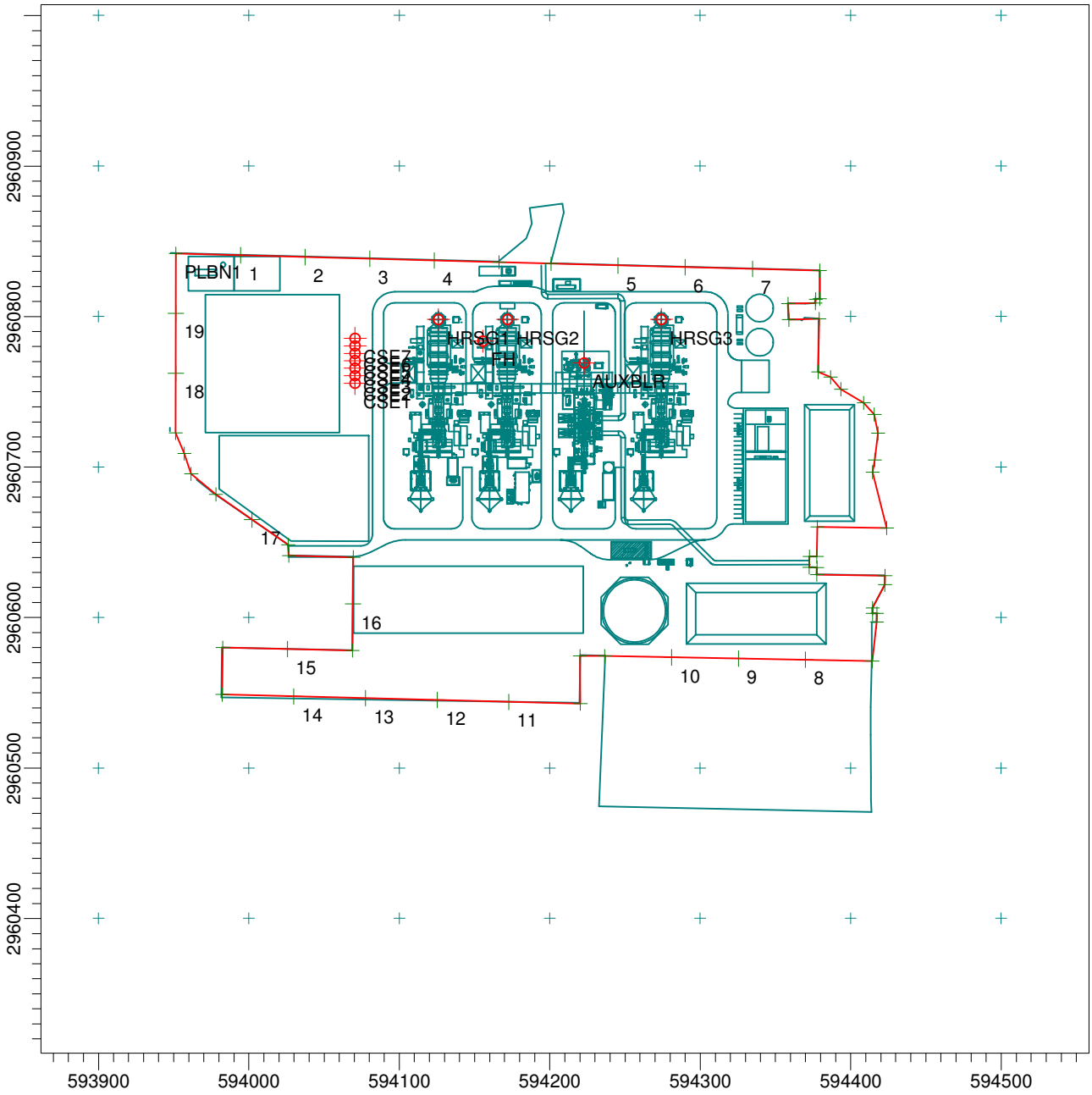
SCALE: 1:66,351

0 2 km

PROJECT NO.:

PROJECT TITLE:

Figure D-2
Detailed Receptor Grid in the Vicinity of RBEC



COMMENTS:	SOURCES: **12**	
	RECEPTORS: 980 **3124**	
		SCALE: 1:4,251 0 0.1 km
		PROJECT NO.:

APPENDIX E

MODEL SUMMARY AND INPUT FILES

TABLE E-1A
MAXIMUM POLLUTANT CONCENTRATIONS PREDICTED FOR RBEC IN GENERAL GRID
FOR ONE COMBUSTION TURBINE/HRSG, MPS 501G CLASS CT

	MAXIMUM EMISSION RATES (lb/hr)							MAXIMUM PREDICTED CONCENTRATIONS (µg/m^3) [c]					
	BASELOAD [b]			75% LOAD			Averaging	BASELOAD			75% LOAD		
POLLUTANT	35°F	59°F	95°F	35°F	59°F	95°F	Time	35°F	59°F	95°F	35°F	59°F	95°F
Natural Gas													
Generic	79.37	79.37	79.37	79.37	79.37	79.37	Annual	0.541	0.561	0.594	0.655	0.670	0.696
(10 g/s)							24-Hour	2.994	3.152	3.439	4.020	4.172	4.443
							8-Hour	7.580	7.761	8.049	8.531	8.645	8.860
							3-Hour	10.543	10.905	11.442	11.563	11.730	12.061
							1-Hour	16.756	17.247	14.597	15.265	15.522	15.949
SO_2	18.3	17.6	16.6	12.1	11.5	10.6	Annual	0.1245	0.1248	0.1245	0.0996	0.0970	0.0931
							24-Hour	0.690	0.701	0.720	0.611	0.604	0.595
							3-Hour	2.43	2.42	2.40	1.76	1.70	1.61
PM_{10}	11.7	11.0	10.5	6.2	6.0	5.8	Annual	0.0797	0.0780	0.0783	0.0509	0.0507	0.0507
							24-Hour	0.441	0.438	0.453	0.312	0.316	0.324
NO_x/ NO_2	23.6	22.8	21.5	15.5	14.8	13.7	Annual	0.161	0.161	0.161	0.128	0.125	0.120
CO	54.5	52.7	50.3	48.0	45.5	42.0	8-Hour	5.21	5.15	5.10	5.16	4.96	4.69
							1-Hour	11.52	11.44	9.24	9.23	8.90	8.44
Fuel Oil													
Generic	79.37	79.37	79.37	79.37	79.37	79.37	Annual	0.259	0.273	0.296	0.275	0.287	0.307
(10 g/s)							24-Hour	1.713	1.777	1.894	1.783	1.837	1.948
							8-Hour	5.097	5.283	5.607	5.302	5.461	5.722
							3-Hour	7.615	7.855	8.027	7.872	7.877	8.148
							1-Hour	11.397	11.769	12.686	11.803	12.251	13.015
SO_2	3.8	3.6	3.2	3.0	2.8	2.6	Annual	0.0124	0.0123	0.0121	0.0103	0.0102	0.0100
							24-Hour	0.082	0.080	0.077	0.067	0.065	0.063
							3-Hour	0.364	0.353	0.328	0.294	0.280	0.265
PM_{10}	38.8	36.7	33.4	37.7	36.1	33.3	Annual	0.126	0.126	0.125	0.131	0.131	0.129
							24-Hour	0.84	0.82	0.80	0.85	0.84	0.82
NO_x/ NO_2	77.1	72.6	65.9	60.0	57.0	52.5	Annual	0.252	0.250	0.246	0.208	0.206	0.203
CO	47.0	44.2	40.1	228.3	217.0	200.0	8-Hour	3.02	2.94	2.83	15.25	14.93	14.42
							1-Hour	6.75	6.55	6.41	33.95	33.50	32.80

[a] Concentrations are based on highest predicted concentrations from AERMOD using 5 years of meteorological data from 2001 to 2005 with surface and upper air data from the National Weather Service stations at Palm Beach and Miami International Airports, respectively.

Pollutant concentrations were based on a modeled or generic concentration predicted using a modeled emission rate of 79.37 lb/hr (10 g/s) for the combined cycle unit. Specific pollutant concentrations were estimated by multiplying the modeled concentration (at 10 g/s) by the ratio of the specific pollutant emission rate to the modeled emission rate of 10 g/s.

[b] Duct firing included at 100 % operating load. Duct firing based on natural gas-fired duct burner with maximum heat input rate of 475 MMBtu/hr (HHV).

[c] Based on Siemens H CT operating data which has lowest exit gas velocities among the CT vendors.

TABLE E-1B
MAXIMUM POLLUTANT CONCENTRATIONS PREDICTED FOR RBEC AT PALM BEACH HOUSE
FOR ONE COMBUSTION TURBINE/HRSG, MPS 501G CLASS CT

	MAXIMUM EMISSION RATES (lb/hr)							MAXIMUM PREDICTED CONCENTRATIONS ($\mu g/m^3$) [c]					
	BASELOAD [b]			75% LOAD			Averaging	BASELOAD			75% LOAD		
POLLUTANT	35°F	59°F	95°F	35°F	59°F	95°F	Time	35°F	59°F	95°F	35°F	59°F	95°F
Natural Gas													
Generic	79.37	79.37	79.37	79.37	79.37	79.37	Annual	1.305	1.375	1.486	1.697	1.747	1.837
(10 g/s)							24-Hour	14.284	15.064	16.298	18.629	19.172	20.165
							8-Hour	36.690	38.951	42.549	49.648	51.341	54.365
							3-Hour	60.133	64.116	70.389	82.365	85.084	89.920
							1-Hour	97.992	104.544	114.695	133.714	137.859	145.179
SO_2	18.3	17.6	16.6	12.1	11.5	10.6	Annual	0.3007	0.3057	0.3112	0.2580	0.2531	0.2459
							24-Hour	3.290	3.349	3.414	2.832	2.777	2.699
							3-Hour	13.85	14.25	14.74	12.52	12.32	12.04
PM_{10}	11.7	11.0	10.5	6.2	6.0	5.8	Annual	0.1924	0.1911	0.1959	0.1317	0.1323	0.1339
							24-Hour	2.105	2.094	2.149	1.446	1.452	1.469
NO_x/ NO_2	23.6	22.8	21.5	15.5	14.8	13.7	Annual	0.388	0.394	0.402	0.332	0.326	0.318
CO	54.5	52.7	50.3	48.0	45.5	42.0	8-Hour	25.22	25.84	26.95	30.03	29.43	28.77
							1-Hour	67.35	69.36	72.64	80.87	79.03	76.83
Fuel Oil													
Generic	79.37	79.37	79.37	79.37	79.37	79.37	Annual	0.472	0.505	0.563	0.512	0.540	0.589
(10 g/s)							24-Hour	5.341	5.506	5.804	5.529	5.674	6.031
							8-Hour	10.734	11.222	12.752	11.402	12.162	13.507
							3-Hour	15.959	17.034	19.386	17.329	18.491	20.549
							1-Hour	23.955	25.973	29.552	26.411	28.177	31.284
SO_2	3.8	3.6	3.2	3.0	2.8	2.6	Annual	0.0226	0.0227	0.0230	0.0191	0.0192	0.0192
							24-Hour	0.255	0.248	0.237	0.206	0.202	0.196
							3-Hour	0.763	0.766	0.792	0.647	0.657	0.669
PM_{10}	38.8	36.7	33.4	37.7	36.1	33.3	Annual	0.231	0.234	0.237	0.243	0.246	0.247
							24-Hour	2.61	2.55	2.45	2.62	2.58	2.53
NO_x/ NO_2	77.1	72.6	65.9	60.0	57.0	52.5	Annual	0.459	0.462	0.467	0.387	0.388	0.390
CO	47.0	44.2	40.1	228.3	217.0	200.0	8-Hour	6.36	6.25	6.45	32.80	33.25	34.04
							1-Hour	14.19	14.46	14.94	75.98	77.04	78.84

[a] Concentrations are based on highest predicted concentrations from AERMOD using 5 years of meteorological data from 2001 to 2005 with surface and upper air data from the National Weather Service stations at Palm Beach and Miami International Airports, respectively.

Pollutant concentrations were based on a modeled or generic concentration predicted using a modeled emission rate of 79.37 lb/hr (10 g/s) for the combined cycle unit. Specific pollutant concentrations were estimated by multiplying the modeled concentration (at 10 g/s) by the ratio of the specific pollutant emission rate to the modeled emission rate of 10 g/s.

[b] Duct firing included at 100 % operating load. Duct firing based on natural gas-fired duct burner with maximum heat input rate of 475 MMBtu/hr (HHV).

[c] Based on Siemens H CT operating data which has lowest exit gas velocities among the CT vendors.

TABLE E-1C
MAXIMUM POLLUTANT CONCENTRATIONS PREDICTED FOR THE RBEC IN GENERAL GRID
FOR ONE COMBUSTION TURBINE/HRSG, SIEMENS H CT

	MAXIMUM EMISSION RATES (lb/hr)							MAXIMUM PREDICTED CONCENTRATIONS ($\mu g/m^3$) [c]					
	BASELOAD [b]			75% LOAD			Averaging	BASELOAD			75% LOAD		
POLLUTANT	35°F	59°F	95°F	35°F	59°F	95°F	Time	35°F	59°F	95°F	35°F	59°F	95°F
Natural Gas													
Generic	79.37	79.37	79.37	79.37	79.37	79.37	Annual	0.554	0.577	0.616	0.667	0.687	0.724
(10 g/s)							24-Hour	3.097	3.288	3.638	4.139	4.342	4.719
							8-Hour	7.712	7.905	8.225	8.618	8.761	9.204
							3-Hour	10.784	11.164	11.018	11.698	11.942	12.364
							1-Hour	17.068	17.702	14.563	15.464	15.788	16.419
SO_2	15.0	14.0	13.0	12.0	11.0	10.0	Annual	0.1047	0.1018	0.1009	0.1009	0.0952	0.0913
							24-Hour	0.585	0.580	0.596	0.626	0.602	0.595
							3-Hour	2.04	1.97	1.80	1.77	1.66	1.56
PM_{10}	13.3	13.0	11.7	11.0	11.0	9.4	Annual	0.0932	0.0945	0.0907	0.0925	0.0952	0.0855
							24-Hour	0.521	0.539	0.536	0.574	0.602	0.557
NO_x/ NO_2	20.0	19.1	17.6	16.1	15.0	13.5	Annual	0.140	0.139	0.137	0.135	0.130	0.123
CO	30.0	29.0	27.0	49.0	46.0	41.0	8-Hour	2.92	2.89	2.80	5.32	5.08	4.75
							1-Hour	6.45	6.47	4.95	9.55	9.15	8.48
Fuel Oil													
Generic	79.37	79.37	79.37	79.37	79.37	79.37	Annual	0.264	0.280	0.308	0.333	0.349	0.378
(10 g/s)							24-Hour	1.742	1.808	1.968	2.062	2.144	2.287
							8-Hour	5.180	5.375	5.780	6.041	6.276	6.679
							3-Hour	7.710	7.777	8.202	8.276	8.442	8.739
							1-Hour	11.489	12.017	13.154	13.969	14.449	15.259
SO_2	3.6	3.4	3.1	2.8	2.7	2.5	Annual	0.0120	0.0120	0.0120	0.0117	0.0119	0.0119
							24-Hour	0.079	0.077	0.077	0.073	0.073	0.072
							3-Hour	0.350	0.333	0.320	0.292	0.287	0.275
PM_{10}	30.0	30.0	30.0	30.0	30.0	30.0	Annual	0.100	0.106	0.117	0.126	0.132	0.143
							24-Hour	0.66	0.68	0.74	0.78	0.81	0.86
NO_x/ NO_2	85.3	80.0	71.4	69.1	64.8	58.1	Annual	0.284	0.282	0.278	0.290	0.285	0.277
CO	65.0	61.0	54.0	53.0	49.0	44.0	8-Hour	4.24	4.13	3.93	4.03	3.87	3.70
							1-Hour	9.41	9.24	8.95	9.33	8.92	8.46

[a] Concentrations are based on highest predicted concentrations from AERMOD using 5 years of meteorological data from 2001 to 2005 with surface and upper air data from the National Weather Service stations at Palm Beach and Miami International Airports, respectively.

Pollutant concentrations were based on a modeled or generic concentration predicted using a modeled emission rate of 79.37 lb/hr (10 g/s) for the combined cycle unit. Specific pollutant concentrations were estimated by multiplying the modeled concentration (at 10 g/s) by the ratio of the specific pollutant emission rate to the modeled emission rate of 10 g/s.

[b] Duct firing included at 100 % operating load. Duct firing based on natural gas-fired duct burner with maximum heat input rate of 475 MMBtu/hr (HHV).

[c] Based on Siemens H CT operating data which has lowest exit gas velocities among the CT vendors.

TABLE E-1D
MAXIMUM POLLUTANT CONCENTRATIONS PREDICTED FOR THE RBEC AT PALM BEACH HOUSE
FOR ONE COMBUSTION TURBINE/HRSG, SIEMENS H CT

	MAXIMUM EMISSION RATES (lb/hr)							MAXIMUM PREDICTED CONCENTRATIONS (µg/m³) [c]					
	BASELOAD [b]			75% LOAD			Averaging	BASELOAD			75% LOAD		
POLLUTANT	35°F	59°F	95°F	35°F	59°F	95°F	Time	35°F	59°F	95°F	35°F	59°F	95°F
Natural Gas													
Generic	79.37	79.37	79.37	79.37	79.37	79.37	Annual	1.349	1.426	1.559	1.741	1.809	1.940
(10 g/s)							24-Hour	14.769	15.632	17.109	19.105	19.852	21.328
							8-Hour	38.092	40.601	44.934	51.226	53.589	58.124
							3-Hour	62.523	66.950	74.520	84.861	88.627	95.792
							1-Hour	101.848	109.102	121.291	137.651	143.418	154.309
SO_2	15.0	14.0	13.0	12.0	11.0	10.0	Annual	0.2550	0.2516	0.2554	0.2632	0.2507	0.2444
							24-Hour	2.791	2.757	2.802	2.889	2.751	2.687
							3-Hour	11.82	11.81	12.21	12.83	12.28	12.07
PM_{10}	13.3	13.0	11.7	11.0	11.0	9.4	Annual	0.2269	0.2336	0.2295	0.2413	0.2507	0.2291
							24-Hour	2.484	2.560	2.519	2.648	2.751	2.519
NO_x/ NO_2	20.0	19.1	17.6	16.1	15.0	13.5	Annual	0.340	0.344	0.346	0.353	0.343	0.330
CO	30.0	29.0	27.0	49.0	46.0	41.0	8-Hour	14.40	14.84	15.29	31.63	31.06	30.03
							1-Hour	38.50	39.87	41.26	84.99	83.13	79.72
Fuel Oil													
Generic	79.37	79.37	79.37	79.37	79.37	79.37	Annual	0.485	0.522	0.593	0.654	0.694	0.769
(10 g/s)							24-Hour	5.402	5.593	6.058	6.714	7.143	7.955
							8-Hour	10.925	11.639	13.569	15.276	16.412	18.608
							3-Hour	16.198	17.683	20.633	23.243	24.989	28.391
							1-Hour	24.700	26.963	31.430	35.331	37.937	42.996
SO_2	3.6	3.4	3.1	2.8	2.7	2.5	Annual	0.0220	0.0223	0.0231	0.0231	0.0236	0.0242
							24-Hour	0.245	0.240	0.237	0.237	0.243	0.251
							3-Hour	0.735	0.758	0.806	0.820	0.850	0.894
PM_{10}	30.0	30.0	30.0	30.0	30.0	30.0	Annual	0.183	0.197	0.224	0.247	0.262	0.291
							24-Hour	2.04	2.11	2.29	2.54	2.70	3.01
NO_x/ NO_2	85.3	80.0	71.4	69.1	64.8	58.1	Annual	0.521	0.526	0.533	0.570	0.566	0.563
CO	65.0	61.0	54.0	53.0	49.0	44.0	8-Hour	8.95	8.95	9.23	10.20	10.13	10.32
							1-Hour	20.23	20.72	21.39	23.59	23.42	23.84

[a] Concentrations are based on highest predicted concentrations from AERMOD using 5 years of meteorological data from 2001 to 2005 with surface and upper air data from the National Weather Service stations at Palm Beach and Miami International Airports, respectively.

Pollutant concentrations were based on a modeled or generic concentration predicted using a modeled emission rate of 79.37 lb/hr (10 g/s) for the combined cycle unit. Specific pollutant concentrations were estimated by multiplying the modeled concentration (at 10 g/s) by the ratio of the specific pollutant emission rate to the modeled emission rate of 10 g/s.

[b] Duct firing included at 100 % operating load. Duct firing based on natural gas-fired duct burner with maximum heat input rate of 475 MMBtu/hr (HHV).

[c] Based on Siemens H CT operating data which has lowest exit gas velocities among the CT vendors.

TABLE E-2A
MAXIMUM POLLUTANT CONCENTRATIONS
FOR THE CTS/HRSGS FOR RBEC IN GENERAL GRID
PREDICTED BY OPERATING LOAD AND AIR INLET TEMPERATURE

		MPS 501G Class						SIEMENS H					
	Averaging	100% Load			75% Load			100% Load			75% Load		
Pollutant	Time	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F
Natural Gas Operation [b]													
SO_2	Annual	0.374	0.374	0.373	0.299	0.291	0.279	0.314	0.305	0.303	0.303	0.286	0.274
	24-Hour	2.07	2.10	2.16	1.83	1.81	1.78	1.76	1.74	1.79	1.88	1.81	1.78
	3-Hour	7.29	7.27	7.19	5.27	5.10	4.84	6.11	5.91	5.41	5.31	4.97	4.67
PM_{10}	Annual	0.239	0.234	0.235	0.153	0.152	0.152	0.280	0.283	0.272	0.277	0.286	0.257
	24-Hour	1.32	1.31	1.36	0.94	0.95	0.97	1.56	1.62	1.61	1.72	1.81	1.67
NO_2	Annual	0.482	0.483	0.482	0.385	0.375	0.361	0.419	0.417	0.410	0.406	0.391	0.370
CO	8-Hour	15.6	15.4	15.3	15.5	14.9	14.1	8.7	8.7	8.4	16.0	15.2	14.3
	1-Hour	34.5	34.3	27.7	27.7	26.7	25.3	19.4	19.4	14.9	28.6	27.5	25.4
Fuel Oil Operation													
SO_2	Annual	0.037	0.037	0.036	0.031	0.031	0.030	0.036	0.036	0.036	0.035	0.036	0.036
	24-Hour	0.25	0.24	0.23	0.20	0.20	0.19	0.237	0.232	0.231	0.218	0.219	0.216
	3-Hour	1.09	1.06	0.98	0.88	0.84	0.80	1.05	1.00	0.96	0.88	0.86	0.83
PM_{10}	Annual	0.379	0.379	0.375	0.392	0.392	0.386	0.299	0.317	0.350	0.378	0.396	0.429
	24-Hour	2.51	2.47	2.39	2.54	2.51	2.45	1.98	2.05	2.23	2.34	2.43	2.59
NO_2	Annual	0.755	0.749	0.739	0.625	0.618	0.609	0.852	0.845	0.833	0.870	0.854	0.831
CO	8-Hour	9.1	8.8	8.5	45.8	44.8	43.3	12.7	12.4	11.8	12.1	11.6	11.1
	1-Hour	20.2	19.7	19.2	102	100	98	28.2	27.7	26.8	28.0	26.8	25.4

Note: NA = not applicable

[a] Concentrations are based on highest concentrations predicted using five years of meteorological data from 2001 to 2005 of surface and upper air data from the National Weather Service stations at Daytona and Jacksonville International Airports, respectively.

[b] Duct firing included for 100 % operating load. Duct firing based on natural gas-fired duct burner with maximum heat input rate of 475 MMBtu/hr (HHV).

TABLE E-2B
MAXIMUM POLLUTANT CONCENTRATIONS
FOR THE CTS/HRSGS FOR RBEC AT PALM BEACH HOUSE
PREDICTED BY OPERATING LOAD AND AIR INLET TEMPERATURE

		MPS 501G Class						SIEMENS H					
	Averaging	100% Load			75% Load			100% Load			75% Load		
Pollutant	Time	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F
Natural Gas Operation [b]													
SO_2	Annual	0.301	0.306	0.311	0.258	0.253	0.246	0.255	0.252	0.255	0.263	0.251	0.244
	24-Hour	3.290	3.349	3.414	2.832	2.777	2.699	2.791	2.757	2.802	2.889	2.751	2.687
	3-Hour	13.852	14.254	14.744	12.522	12.322	12.037	11.817	11.810	12.206	12.831	12.284	12.070
PM_{10}	Annual	0.192	0.191	0.196	0.132	0.132	0.134	0.227	0.234	0.230	0.241	0.251	0.229
	24-Hour	2.105	2.094	2.149	1.446	1.452	1.469	2.484	2.560	2.519	2.648	2.751	2.519
NO_2	Annual	0.388	0.394	0.402	0.332	0.326	0.318	0.340	0.344	0.346	0.353	0.343	0.330
CO	8-Hour	25.217	25.843	26.947	30.027	29.434	28.770	14.399	14.835	15.286	31.627	31.060	30.027
	1-Hour	67.350	69.363	72.638	80.870	79.035	76.829	38.498	39.866	41.263	84.986	83.125	79.716
Fuel Oil Operation													
SO_2	Annual	0.023	0.023	0.023	0.019	0.019	0.019	0.022	0.022	0.023	0.023	0.024	0.024
	24-Hour	0.255	0.248	0.237	0.206	0.202	0.196	0.245	0.240	0.237	0.237	0.243	0.251
	3-Hour	0.763	0.766	0.792	0.647	0.657	0.669	0.735	0.758	0.806	0.820	0.850	0.894
PM_{10}	Annual	0.231	0.234	0.237	0.243	0.246	0.247	0.183	0.197	0.224	0.247	0.262	0.291
	24-Hour	2.611	2.548	2.446	2.625	2.584	2.529	2.042	2.114	2.290	2.538	2.700	3.007
NO_2	Annual	0.459	0.462	0.467	0.387	0.388	0.390	0.521	0.526	0.533	0.570	0.566	0.563
CO	8-Hour	6.356	6.247	6.446	32.801	33.253	34.037	8.948	8.945	9.232	10.201	10.133	10.316
	1-Hour	14.186	14.457	14.938	75.976	77.043	78.835	20.229	20.724	21.385	23.594	23.422	23.837

Note: NA = not applicable

[a] Concentrations are based on highest predicted concentrations from AERMOD using 5 years of meteorological data from 2001 to 2005 with surface and upper air data from the National Weather Service stations at Palm Beach and Miami International Airports, respectively.

[b] Duct firing included for 100 % operating load. Duct firing based on natural gas-fired duct burner with maximum heat input rate of 475 MMBtu/hr (HHV).

TABLE E-1B
MAXIMUM POLLUTANT CONCENTRATIONS PREDICTED FOR RBEC AT PALM BEACH HOUSE
FOR ONE COMBUSTION TURBINE/HRSG, MPS 501G CLASS CT

	MAXIMUM EMISSION RATES (lb/hr)							MAXIMUM PREDICTED CONCENTRATIONS ($\mu g/m^3$) [c]					
	BASELOAD [b]			75% LOAD			Averaging	BASELOAD			75% LOAD		
POLLUTANT	35°F	59°F	95°F	35°F	59°F	95°F	Time	35°F	59°F	95°F	35°F	59°F	95°F
Natural Gas													
Generic	79.37	79.37	79.37	79.37	79.37	79.37	Annual	1.305	1.375	1.486	1.697	1.747	1.837
(10 g/s)							24-Hour	14.284	15.064	16.298	18.629	19.172	20.165
							8-Hour	36.690	38.951	42.549	49.648	51.341	54.365
							3-Hour	60.133	64.116	70.389	82.365	85.084	89.920
							1-Hour	97.992	104.544	114.695	133.714	137.859	145.179
SO_2	18.3	17.6	16.6	12.1	11.5	10.6	Annual	0.3007	0.3057	0.3112	0.2580	0.2531	0.2459
							24-Hour	3.290	3.349	3.414	2.832	2.777	2.699
							3-Hour	13.85	14.25	14.74	12.52	12.32	12.04
PM_{10}	11.7	11.0	10.5	6.2	6.0	5.8	Annual	0.1924	0.1911	0.1959	0.1317	0.1323	0.1339
							24-Hour	2.105	2.094	2.149	1.446	1.452	1.469
NO_x/ NO_2	23.6	22.8	21.5	15.5	14.8	13.7	Annual	0.388	0.394	0.402	0.332	0.326	0.318
CO	54.5	52.7	50.3	48.0	45.5	42.0	8-Hour	25.22	25.84	26.95	30.03	29.43	28.77
							1-Hour	67.35	69.36	72.64	80.87	79.03	76.83
Fuel Oil													
Generic	79.37	79.37	79.37	79.37	79.37	79.37	Annual	0.472	0.505	0.563	0.512	0.540	0.589
(10 g/s)							24-Hour	5.341	5.506	5.804	5.529	5.674	6.031
							8-Hour	10.734	11.222	12.752	11.402	12.162	13.507
							3-Hour	15.959	17.034	19.386	17.329	18.491	20.549
							1-Hour	23.955	25.973	29.552	26.411	28.177	31.284
SO_2	3.8	3.6	3.2	3.0	2.8	2.6	Annual	0.0226	0.0227	0.0230	0.0191	0.0192	0.0192
							24-Hour	0.255	0.248	0.237	0.206	0.202	0.196
							3-Hour	0.763	0.766	0.792	0.647	0.657	0.669
PM_{10}	38.8	36.7	33.4	37.7	36.1	33.3	Annual	0.231	0.234	0.237	0.243	0.246	0.247
							24-Hour	2.61	2.55	2.45	2.62	2.58	2.53
NO_x/ NO_2	77.1	72.6	65.9	60.0	57.0	52.5	Annual	0.459	0.462	0.467	0.387	0.388	0.390
CO	47.0	44.2	40.1	228.3	217.0	200.0	8-Hour	6.36	6.25	6.45	32.80	33.25	34.04
							1-Hour	14.19	14.46	14.94	75.98	77.04	78.84

[a] Concentrations are based on highest predicted concentrations from AERMOD using 5 years of meteorological data from 2001 to 2005 with surface and upper air data from the National Weather Service stations at Palm Beach and Miami International Airports, respectively.

Pollutant concentrations were based on a modeled or generic concentration predicted using a modeled emission rate of 79.37 lb/hr (10 g/s) for the combined cycle unit. Specific pollutant concentrations were estimated by multiplying the modeled concentration (at 10 g/s) by the ratio of the specific pollutant emission rate to the modeled emission rate of 10 g/s.

[b] Duct firing included at 100 % operating load. Duct firing based on natural gas-fired duct burner with maximum heat input rate of 475 MMBtu/hr (HHV).

[c] Based on Siemens H CT operating data which has lowest exit gas velocities among the CT vendors.

TABLE E-1C
MAXIMUM POLLUTANT CONCENTRATIONS PREDICTED FOR THE RBEC IN GENERAL GRID
FOR ONE COMBUSTION TURBINE/HRSG, SIEMENS H CT

	MAXIMUM EMISSION RATES (lb/hr)							MAXIMUM PREDICTED CONCENTRATIONS ($\mu g/m^3$) [c]					
	BASELOAD [b]			75% LOAD			Averaging	BASELOAD			75% LOAD		
POLLUTANT	35°F	59°F	95°F	35°F	59°F	95°F	Time	35°F	59°F	95°F	35°F	59°F	95°F
Natural Gas													
Generic	79.37	79.37	79.37	79.37	79.37	79.37	Annual	0.554	0.577	0.616	0.667	0.687	0.724
(10 g/s)							24-Hour	3.097	3.288	3.638	4.139	4.342	4.719
							8-Hour	7.712	7.905	8.225	8.618	8.761	9.204
							3-Hour	10.784	11.164	11.018	11.698	11.942	12.364
							1-Hour	17.068	17.702	14.563	15.464	15.788	16.419
SO_2	15.0	14.0	13.0	12.0	11.0	10.0	Annual	0.1047	0.1018	0.1009	0.1009	0.0952	0.0913
							24-Hour	0.585	0.580	0.596	0.626	0.602	0.595
							3-Hour	2.04	1.97	1.80	1.77	1.66	1.56
PM_{10}	13.3	13.0	11.7	11.0	11.0	9.4	Annual	0.0932	0.0945	0.0907	0.0925	0.0952	0.0855
							24-Hour	0.521	0.539	0.536	0.574	0.602	0.557
NO_x/ NO_2	20.0	19.1	17.6	16.1	15.0	13.5	Annual	0.140	0.139	0.137	0.135	0.130	0.123
CO	30.0	29.0	27.0	49.0	46.0	41.0	8-Hour	2.92	2.89	2.80	5.32	5.08	4.75
							1-Hour	6.45	6.47	4.95	9.55	9.15	8.48
Fuel Oil													
Generic	79.37	79.37	79.37	79.37	79.37	79.37	Annual	0.264	0.280	0.308	0.333	0.349	0.378
(10 g/s)							24-Hour	1.742	1.808	1.968	2.062	2.144	2.287
							8-Hour	5.180	5.375	5.780	6.041	6.276	6.679
							3-Hour	7.710	7.777	8.202	8.276	8.442	8.739
							1-Hour	11.489	12.017	13.154	13.969	14.449	15.259
SO_2	3.6	3.4	3.1	2.8	2.7	2.5	Annual	0.0120	0.0120	0.0120	0.0117	0.0119	0.0119
							24-Hour	0.079	0.077	0.077	0.073	0.073	0.072
							3-Hour	0.350	0.333	0.320	0.292	0.287	0.275
PM_{10}	30.0	30.0	30.0	30.0	30.0	30.0	Annual	0.100	0.106	0.117	0.126	0.132	0.143
							24-Hour	0.66	0.68	0.74	0.78	0.81	0.86
NO_x/ NO_2	85.3	80.0	71.4	69.1	64.8	58.1	Annual	0.284	0.282	0.278	0.290	0.285	0.277
CO	65.0	61.0	54.0	53.0	49.0	44.0	8-Hour	4.24	4.13	3.93	4.03	3.87	3.70
							1-Hour	9.41	9.24	8.95	9.33	8.92	8.46

[a] Concentrations are based on highest predicted concentrations from AERMOD using 5 years of meteorological data from 2001 to 2005 with surface and upper air data from the National Weather Service stations at Palm Beach and Miami International Airports, respectively.

Pollutant concentrations were based on a modeled or generic concentration predicted using a modeled emission rate of 79.37 lb/hr (10 g/s) for the combined cycle unit. Specific pollutant concentrations were estimated by multiplying the modeled concentration (at 10 g/s) by the ratio of the specific pollutant emission rate to the modeled emission rate of 10 g/s.

[b] Duct firing included at 100 % operating load. Duct firing based on natural gas-fired duct burner with maximum heat input rate of 475 MMBtu/hr (HHV).

[c] Based on Siemens H CT operating data which has lowest exit gas velocities among the CT vendors.

TABLE E-1D
MAXIMUM POLLUTANT CONCENTRATIONS PREDICTED FOR THE RBEC AT PALM BEACH HOUSE
FOR ONE COMBUSTION TURBINE/HRSG, SIEMENS H CT

	MAXIMUM EMISSION RATES (lb/hr)							MAXIMUM PREDICTED CONCENTRATIONS (µg/m³) [c]					
	BASELOAD [b]			75% LOAD			Averaging	BASELOAD			75% LOAD		
POLLUTANT	35°F	59°F	95°F	35°F	59°F	95°F	Time	35°F	59°F	95°F	35°F	59°F	95°F
Natural Gas													
Generic	79.37	79.37	79.37	79.37	79.37	79.37	Annual	1.349	1.426	1.559	1.741	1.809	1.940
(10 g/s)							24-Hour	14.769	15.632	17.109	19.105	19.852	21.328
							8-Hour	38.092	40.601	44.934	51.226	53.589	58.124
							3-Hour	62.523	66.950	74.520	84.861	88.627	95.792
							1-Hour	101.848	109.102	121.291	137.651	143.418	154.309
SO_2	15.0	14.0	13.0	12.0	11.0	10.0	Annual	0.2550	0.2516	0.2554	0.2632	0.2507	0.2444
							24-Hour	2.791	2.757	2.802	2.889	2.751	2.687
							3-Hour	11.82	11.81	12.21	12.83	12.28	12.07
PM_{10}	13.3	13.0	11.7	11.0	11.0	9.4	Annual	0.2269	0.2336	0.2295	0.2413	0.2507	0.2291
							24-Hour	2.484	2.560	2.519	2.648	2.751	2.519
NO_x/ NO_2	20.0	19.1	17.6	16.1	15.0	13.5	Annual	0.340	0.344	0.346	0.353	0.343	0.330
CO	30.0	29.0	27.0	49.0	46.0	41.0	8-Hour	14.40	14.84	15.29	31.63	31.06	30.03
							1-Hour	38.50	39.87	41.26	84.99	83.13	79.72
Fuel Oil													
Generic	79.37	79.37	79.37	79.37	79.37	79.37	Annual	0.485	0.522	0.593	0.654	0.694	0.769
(10 g/s)							24-Hour	5.402	5.593	6.058	6.714	7.143	7.955
							8-Hour	10.925	11.639	13.569	15.276	16.412	18.608
							3-Hour	16.198	17.683	20.633	23.243	24.989	28.391
							1-Hour	24.700	26.963	31.430	35.331	37.937	42.996
SO_2	3.6	3.4	3.1	2.8	2.7	2.5	Annual	0.0220	0.0223	0.0231	0.0231	0.0236	0.0242
							24-Hour	0.245	0.240	0.237	0.237	0.243	0.251
							3-Hour	0.735	0.758	0.806	0.820	0.850	0.894
PM_{10}	30.0	30.0	30.0	30.0	30.0	30.0	Annual	0.183	0.197	0.224	0.247	0.262	0.291
							24-Hour	2.04	2.11	2.29	2.54	2.70	3.01
NO_x/ NO_2	85.3	80.0	71.4	69.1	64.8	58.1	Annual	0.521	0.526	0.533	0.570	0.566	0.563
CO	65.0	61.0	54.0	53.0	49.0	44.0	8-Hour	8.95	8.95	9.23	10.20	10.13	10.32
							1-Hour	20.23	20.72	21.39	23.59	23.42	23.84

[a] Concentrations are based on highest predicted concentrations from AERMOD using 5 years of meteorological data from 2001 to 2005 with surface and upper air data from the National Weather Service stations at Palm Beach and Miami International Airports, respectively.

Pollutant concentrations were based on a modeled or generic concentration predicted using a modeled emission rate of 79.37 lb/hr (10 g/s) for the combined cycle unit. Specific pollutant concentrations were estimated by multiplying the modeled concentration (at 10 g/s) by the ratio of the specific pollutant emission rate to the modeled emission rate of 10 g/s.

[b] Duct firing included at 100 % operating load. Duct firing based on natural gas-fired duct burner with maximum heat input rate of 475 MMBtu/hr (HHV).

[c] Based on Siemens H CT operating data which has lowest exit gas velocities among the CT vendors.

TABLE E-2A
MAXIMUM POLLUTANT CONCENTRATIONS
FOR THE CTS/HRSGS FOR RBEC IN GENERAL GRID
PREDICTED BY OPERATING LOAD AND AIR INLET TEMPERATURE

		MPS 501G Class						SIEMENS H					
	Averaging	100% Load			75% Load			100% Load			75% Load		
Pollutant	Time	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F
Natural Gas Operation [b]													
SO_2	Annual	0.374	0.374	0.373	0.299	0.291	0.279	0.314	0.305	0.303	0.303	0.286	0.274
	24-Hour	2.07	2.10	2.16	1.83	1.81	1.78	1.76	1.74	1.79	1.88	1.81	1.78
	3-Hour	7.29	7.27	7.19	5.27	5.10	4.84	6.11	5.91	5.41	5.31	4.97	4.67
PM_{10}	Annual	0.239	0.234	0.235	0.153	0.152	0.152	0.280	0.283	0.272	0.277	0.286	0.257
	24-Hour	1.32	1.31	1.36	0.94	0.95	0.97	1.56	1.62	1.61	1.72	1.81	1.67
NO_2	Annual	0.482	0.483	0.482	0.385	0.375	0.361	0.419	0.417	0.410	0.406	0.391	0.370
CO	8-Hour	15.6	15.4	15.3	15.5	14.9	14.1	8.7	8.7	8.4	16.0	15.2	14.3
	1-Hour	34.5	34.3	27.7	27.7	26.7	25.3	19.4	19.4	14.9	28.6	27.5	25.4
Fuel Oil Operation													
SO_2	Annual	0.037	0.037	0.036	0.031	0.031	0.030	0.036	0.036	0.036	0.035	0.036	0.036
	24-Hour	0.25	0.24	0.23	0.20	0.20	0.19	0.237	0.232	0.231	0.218	0.219	0.216
	3-Hour	1.09	1.06	0.98	0.88	0.84	0.80	1.05	1.00	0.96	0.88	0.86	0.83
PM_{10}	Annual	0.379	0.379	0.375	0.392	0.392	0.386	0.299	0.317	0.350	0.378	0.396	0.429
	24-Hour	2.51	2.47	2.39	2.54	2.51	2.45	1.98	2.05	2.23	2.34	2.43	2.59
NO_2	Annual	0.755	0.749	0.739	0.625	0.618	0.609	0.852	0.845	0.833	0.870	0.854	0.831
CO	8-Hour	9.1	8.8	8.5	45.8	44.8	43.3	12.7	12.4	11.8	12.1	11.6	11.1
	1-Hour	20.2	19.7	19.2	102	100	98	28.2	27.7	26.8	28.0	26.8	25.4

Note: NA = not applicable

[a] Concentrations are based on highest concentrations predicted using five years of meteorological data from 2001 to 2005 of surface and upper air data from the National Weather Service stations at Daytona and Jacksonville International Airports, respectively.

[b] Duct firing included for 100 % operating load. Duct firing based on natural gas-fired duct burner with maximum heat input rate of 475 MMBtu/hr (HHV).

TABLE E-2B
MAXIMUM POLLUTANT CONCENTRATIONS
FOR THE CTS/HRSGS FOR RBEC AT PALM BEACH HOUSE
PREDICTED BY OPERATING LOAD AND AIR INLET TEMPERATURE

		MPS 501G Class						SIEMENS H					
	Averaging	100% Load			75% Load			100% Load			75% Load		
Pollutant	Time	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F
Natural Gas Operation [b]													
SO_2	Annual	0.301	0.306	0.311	0.258	0.253	0.246	0.255	0.252	0.255	0.263	0.251	0.244
	24-Hour	3.290	3.349	3.414	2.832	2.777	2.699	2.791	2.757	2.802	2.889	2.751	2.687
	3-Hour	13.852	14.254	14.744	12.522	12.322	12.037	11.817	11.810	12.206	12.831	12.284	12.070
PM_{10}	Annual	0.192	0.191	0.196	0.132	0.132	0.134	0.227	0.234	0.230	0.241	0.251	0.229
	24-Hour	2.105	2.094	2.149	1.446	1.452	1.469	2.484	2.560	2.519	2.648	2.751	2.519
NO_2	Annual	0.388	0.394	0.402	0.332	0.326	0.318	0.340	0.344	0.346	0.353	0.343	0.330
CO	8-Hour	25.217	25.843	26.947	30.027	29.434	28.770	14.399	14.835	15.286	31.627	31.060	30.027
	1-Hour	67.350	69.363	72.638	80.870	79.035	76.829	38.498	39.866	41.263	84.986	83.125	79.716
Fuel Oil Operation													
SO_2	Annual	0.023	0.023	0.023	0.019	0.019	0.019	0.022	0.022	0.023	0.023	0.024	0.024
	24-Hour	0.255	0.248	0.237	0.206	0.202	0.196	0.245	0.240	0.237	0.237	0.243	0.251
	3-Hour	0.763	0.766	0.792	0.647	0.657	0.669	0.735	0.758	0.806	0.820	0.850	0.894
PM_{10}	Annual	0.231	0.234	0.237	0.243	0.246	0.247	0.183	0.197	0.224	0.247	0.262	0.291
	24-Hour	2.611	2.548	2.446	2.625	2.584	2.529	2.042	2.114	2.290	2.538	2.700	3.007
NO_2	Annual	0.459	0.462	0.467	0.387	0.388	0.390	0.521	0.526	0.533	0.570	0.566	0.563
CO	8-Hour	6.356	6.247	6.446	32.801	33.253	34.037	8.948	8.945	9.232	10.201	10.133	10.316
	1-Hour	14.186	14.457	14.938	75.976	77.043	78.835	20.229	20.724	21.385	23.594	23.422	23.837

Note: NA = not applicable

[a] Concentrations are based on highest predicted concentrations from AERMOD using 5 years of meteorological data from 2001 to 2005 with surface and upper air data from the National Weather Service stations at Palm Beach and Miami International Airports, respectively.

[b] Duct firing included for 100 % operating load. Duct firing based on natural gas-fired duct burner with maximum heat input rate of 475 MMBtu/hr (HHV).

IMPACTS FOR PREDICTED DUCT BURNERS AND CTS/HRSGS, FIRING NATURAL GAS AND MODELED WITH 10 G/S EMISSION RATE

1. SUMMARY FILE
2. EXAMPLE INPUT FILE

AERBOB RELEASE 020304

AERMOD OUTPUT FILE NUMBER 1 :GENGASMP.O01
AERMOD OUTPUT FILE NUMBER 2 :GENGASMP.O02
AERMOD OUTPUT FILE NUMBER 3 :GENGASMP.O03
AERMOD OUTPUT FILE NUMBER 4 :GENGASMP.O04
AERMOD OUTPUT FILE NUMBER 5 :GENGASMP.O05
First title for last output file is: 2001 REBEC- CT LOAD ANALYSIS, MPS 501G1 PLUS GAS 12/31/08
Second title for last output file is: GENERIC (10 g/s) EMISSION RATES FOR CC CTS

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID:	G1095D				
Annual					
	2001	0.49392	593500.	2960900.	01123124
	2002	0.59426	593600.	2961100.	02123124
	2003	0.54759	593700.	2961200.	03123124
	2004	0.52738	593500.	2960900.	04123124
	2005	0.49437	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	3.43878	593300.	2960500.	01100924
	2002	2.72319	593500.	2961200.	02062024
	2003	3.27956	593600.	2961200.	03061624
	2004	2.92874	593700.	2961300.	04082624
	2005	3.08732	593500.	2961100.	05061024
HIGH 8-Hour					
	2001	6.94881	593500.	2960600.	01100916
	2002	6.37638	593700.	2961200.	02042816
	2003	6.80873	593600.	2961200.	03062916
	2004	8.04871	594600.	2961500.	04090508
	2005	7.79586	593500.	2961300.	05102408
HIGH 3-Hour					
	2001	8.02632	593600.	2961100.	01072412
	2002	7.82606	593600.	2961200.	02072512
	2003	7.85697	593500.	2960700.	03022412
	2004	10.08589	594900.	2961000.	04092524
	2005	11.44181	593400.	2961300.	05102406
HIGH 1-Hour					
	2001	9.86751	593500.	2961600.	01091406
	2002	8.86646	593600.	2961000.	02053111
	2003	12.09231	593300.	2961000.	03120323
	2004	14.59652	594700.	2960800.	04090421
	2005	12.32447	593400.	2961300.	05102404
SOURCE GROUP ID:	G1059D				
Annual					
	2001	0.46504	593500.	2960900.	01123124
	2002	0.56141	593600.	2961100.	02123124
	2003	0.51820	593600.	2961200.	03123124
	2004	0.49907	593500.	2960900.	04123124
	2005	0.46690	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	3.15221	593300.	2960500.	01100924
	2002	2.59027	593500.	2961200.	02062024
	2003	3.10557	593600.	2961200.	03061624
	2004	2.78529	593700.	2961300.	04082624
	2005	2.90975	593700.	2961400.	05070424
HIGH 8-Hour					
	2001	6.41004	593500.	2960600.	01100916
	2002	6.03830	593500.	2960900.	02091816
	2003	6.48873	593600.	2961200.	03062916
	2004	7.76107	594600.	2961500.	04090508
	2005	7.32867	593500.	2961300.	05102408
HIGH 3-Hour					
	2001	7.56879	593600.	2961100.	01072412
	2002	7.44797	593600.	2961200.	02072512
	2003	7.45023	593500.	2960700.	03022412
	2004	9.77983	594900.	2961000.	04092524
	2005	10.90487	593400.	2961300.	05102406
HIGH 1-Hour					
	2001	9.09454	593500.	2961600.	01091406
	2002	8.38924	593600.	2961000.	02053111
	2003	11.20251	593300.	2961000.	03120323

	2004	17.24737	594700.	2960600.	04092519
	2005	11.50434	593400.	2961300.	05102404
SOURCE GROUP ID:	G1035D				
Annual					
	2001	0.44673	593500.	2960900.	01123124
	2002	0.54060	593600.	2961100.	02123124
	2003	0.50007	593600.	2961200.	03123124
	2004	0.48116	593500.	2960900.	04123124
	2005	0.44966	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	2.98357	593300.	2960500.	01100924
	2002	2.50539	593500.	2961200.	02062024
	2003	2.99426	593600.	2961200.	03061624
	2004	2.69203	593700.	2961300.	04082624
	2005	2.81986	593700.	2961400.	05070424
HIGH 8-Hour					
	2001	6.13769	593300.	2960500.	01100916
	2002	5.83353	593500.	2960900.	02091816
	2003	6.28207	593600.	2961200.	03062916
	2004	7.57983	594600.	2961500.	04090508
	2005	7.02119	593500.	2961300.	05102408
HIGH 3-Hour					
	2001	7.27756	593600.	2961100.	01072412
	2002	7.20309	593600.	2961200.	02072512
	2003	7.18893	593500.	2960700.	03022412
	2004	9.58152	594900.	2961000.	04092524
	2005	10.54333	593400.	2961300.	05102406
HIGH 1-Hour					
	2001	8.59121	593500.	2961600.	01091406
	2002	8.08461	593600.	2961000.	02053111
	2003	10.62884	593200.	2961000.	03120323
	2004	16.75591	594800.	2960700.	04092520
	2005	12.14034	593500.	2961200.	05082521
SOURCE GROUP ID:	G7595				
Annual					
	2001	0.58846	593500.	2960800.	01123124
	2002	0.69583	593600.	2961100.	02123124
	2003	0.63937	593700.	2961200.	03123124
	2004	0.61708	593500.	2960900.	04123124
	2005	0.57967	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	4.44311	593300.	2960500.	01100924
	2002	3.24087	593700.	2961500.	02030224
	2003	3.79154	593600.	2961200.	03061624
	2004	3.61699	594300.	2961500.	04090524
	2005	3.91915	593300.	2961000.	05070824
HIGH 8-Hour					
	2001	8.76965	593500.	2960600.	01100916
	2002	7.66098	593800.	2961400.	02030216
	2003	7.82709	593700.	2961100.	03062916
	2004	8.86043	594500.	2961400.	04090508
	2005	8.59408	593500.	2961300.	05102408
HIGH 3-Hour					
	2001	9.36591	593600.	2961100.	01072412
	2002	9.04918	593500.	2960800.	02120912
	2003	9.21974	593600.	2960700.	03022412
	2004	10.92890	594900.	2961000.	04092524
	2005	12.06108	593400.	2961300.	05102406
HIGH 1-Hour					
	2001	11.33652	593200.	2960400.	01100918
	2002	10.26867	593600.	2961000.	02053111
	2003	14.55599	593300.	2961000.	03120323
	2004	15.94934	594000.	2960100.	04090406
	2005	13.48022	593400.	2960900.	05082519
SOURCE GROUP ID:	G7559				
Annual					
	2001	0.56349	593500.	2960800.	01123124
	2002	0.66982	593600.	2961100.	02123124
	2003	0.61601	593700.	2961200.	03123124
	2004	0.59375	593500.	2960900.	04123124
	2005	0.55792	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	4.17160	593300.	2960500.	01100924
	2002	3.06774	593700.	2961500.	02030224

	2003	3.66669	593600.	2961200.	03061624
	2004	3.40469	594400.	2961500.	04090524
	2005	3.69556	593300.	2961000.	05070824
HIGH 8-Hour					
	2001	8.29348	593500.	2960600.	01100916
	2002	7.27088	593700.	2961300.	02092516
	2003	7.53756	593700.	2961100.	03062916
	2004	8.64468	594600.	2961500.	04090508
	2005	8.29346	593500.	2961300.	05102408
HIGH 3-Hour					
	2001	9.03776	593600.	2961100.	01072412
	2002	8.64934	593600.	2961200.	02072512
	2003	8.79309	593600.	2960700.	03022412
	2004	10.72269	594900.	2961000.	04092524
	2005	11.73046	593400.	2961300.	05102406
HIGH 1-Hour					
	2001	10.71412	593200.	2960400.	01100918
	2002	9.92440	593600.	2961000.	02053111
	2003	13.96468	593300.	2961000.	03120323
	2004	15.52226	594000.	2960100.	04090406
	2005	14.04203	593800.	2961400.	05070906
SOURCE GROUP ID:	G7535				
Annual					
	2001	0.54939	593500.	2960800.	01123124
	2002	0.65517	593600.	2961100.	02123124
	2003	0.60280	593700.	2961200.	03123124
	2004	0.58065	593500.	2960900.	04123124
	2005	0.54555	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	4.01955	593300.	2960500.	01100924
	2002	2.97371	593600.	2961100.	02062024
	2003	3.59397	593600.	2961200.	03061624
	2004	3.29638	594400.	2961500.	04090524
	2005	3.56843	593300.	2961000.	05070824
HIGH 8-Hour					
	2001	8.01821	593500.	2960600.	01100916
	2002	7.07079	593700.	2961300.	02092516
	2003	7.38397	593700.	2961100.	03062916
	2004	8.53100	594600.	2961500.	04090508
	2005	8.12111	593500.	2961300.	05102408
HIGH 3-Hour					
	2001	8.84675	593600.	2961100.	01072412
	2002	8.49650	593600.	2961200.	02072512
	2003	8.58829	593600.	2960700.	03022412
	2004	10.60092	594900.	2961000.	04092524
	2005	11.56279	593400.	2961300.	05102406
HIGH 1-Hour					
	2001	11.39285	593600.	2961500.	01091406
	2002	9.72367	593600.	2961000.	02053111
	2003	13.61189	593300.	2961000.	03120323
	2004	15.26465	594000.	2960100.	04090406
	2005	13.70669	593700.	2961500.	05070906

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

```
CO STARTING
  TITLEONE 2001 REBEC- CT LOAD ANALYSIS, MPS 501G1 PLUS GAS 12/31/08
  TITLETWO GENERIC (10 g/s) EMISSION RATES FOR CC CTS
  MODELOPT DFAULT CONC NOWARN
  AVERTIME PERIOD 24 8 3 1
  POLLUTID GEN
  RUNORNOT RUN
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
  LOCATION GA1095 POINT 594125.983 2960797.999 1.000
  LOCATION GB1095 POINT 594172.071 2960797.963 1.000
  LOCATION GC1095 POINT 594274.233 2960797.946 1.000

  LOCATION GA1059 POINT 594125.983 2960797.999 1.000
  LOCATION GB1059 POINT 594172.071 2960797.963 1.000
  LOCATION GC1059 POINT 594274.233 2960797.946 1.000

  LOCATION GA1035 POINT 594125.983 2960797.999 1.000
  LOCATION GB1035 POINT 594172.071 2960797.963 1.000
  LOCATION GC1035 POINT 594274.233 2960797.946 1.000

  LOCATION GA7595 POINT 594125.983 2960797.999 1.000
  LOCATION GB7595 POINT 594172.071 2960797.963 1.000
  LOCATION GC7595 POINT 594274.233 2960797.946 1.000

  LOCATION GA7559 POINT 594125.983 2960797.999 1.000
  LOCATION GB7559 POINT 594172.071 2960797.963 1.000
  LOCATION GC7559 POINT 594274.233 2960797.946 1.000

  LOCATION GA7535 POINT 594125.983 2960797.999 1.000
  LOCATION GB7535 POINT 594172.071 2960797.963 1.000
  LOCATION GC7535 POINT 594274.233 2960797.946 1.000

** Source Parameters **
** Baseload, 95 F with duct firing
  SRCPARAM GA1095 3.3333  45.4  357.5  17.28  6.71
  SRCPARAM GB1095 3.3333  45.4  357.5  17.28  6.71
  SRCPARAM GC1095 3.3333  45.4  357.5  17.28  6.71
** Baseload, 59 F with duct firing
  SRCPARAM GA1059 3.3333  45.4  357.9  18.39  6.71
  SRCPARAM GB1059 3.3333  45.4  357.9  18.39  6.71
  SRCPARAM GC1059 3.3333  45.4  357.9  18.39  6.71
** Baseload, 35 F with duct firing
  SRCPARAM GA1035 3.3333  45.4  358.6  19.07  6.71
  SRCPARAM GB1035 3.3333  45.4  358.6  19.07  6.71
  SRCPARAM GC1035 3.3333  45.4  358.6  19.07  6.71
** 75% Load, 95 F
  SRCPARAM GA7595 3.3333  45.4  359.3  14.03  6.71
  SRCPARAM GB7595 3.3333  45.4  359.3  14.03  6.71
  SRCPARAM GC7595 3.3333  45.4  359.3  14.03  6.71
** 75% Load, 59 F
  SRCPARAM GA7559 3.3333  45.4  358.2  14.86  6.71
  SRCPARAM GB7559 3.3333  45.4  358.2  14.86  6.71
  SRCPARAM GC7559 3.3333  45.4  358.2  14.86  6.71
** 75% Load, 35 F
  SRCPARAM GA7535 3.3333  45.4  357.6  15.36  6.71
  SRCPARAM GB7535 3.3333  45.4  357.6  15.36  6.71
  SRCPARAM GC7535 3.3333  45.4  357.6  15.36  6.71

** Building Downwash **
SO BUILDHGT GA1035-GA7595     29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GA1035-GA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GA1035-GA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GA1035-GA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GA1035-GA7595     23.47  23.47  23.47  23.47  23.47  23.47
```

```
SO BUILDHGT GA1035-GA7595      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID GA1035-GA7595      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID GA1035-GA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID GA1035-GA7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID GA1035-GA7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID GA1035-GA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID GA1035-GA7595      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN GA1035-GA7595      10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN GA1035-GA7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN GA1035-GA7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN GA1035-GA7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN GA1035-GA7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN GA1035-GA7595      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    GA1035-GA7595     -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    GA1035-GA7595     -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    GA1035-GA7595      -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    GA1035-GA7595       4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    GA1035-GA7595      -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    GA1035-GA7595     -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    GA1035-GA7595     -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    GA1035-GA7595     -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    GA1035-GA7595     -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    GA1035-GA7595       3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    GA1035-GA7595      18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    GA1035-GA7595      14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT GB1035-GB7595      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT GB1035-GB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GB1035-GB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GB1035-GB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GB1035-GB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GB1035-GB7595      23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID GB1035-GB7595      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID GB1035-GB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID GB1035-GB7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID GB1035-GB7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID GB1035-GB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID GB1035-GB7595      27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN GB1035-GB7595      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN GB1035-GB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN GB1035-GB7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN GB1035-GB7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN GB1035-GB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN GB1035-GB7595      25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    GB1035-GB7595     -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    GB1035-GB7595     -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    GB1035-GB7595      -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    GB1035-GB7595       4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    GB1035-GB7595      39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    GB1035-GB7595     -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    GB1035-GB7595     -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    GB1035-GB7595      -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    GB1035-GB7595     -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    GB1035-GB7595       3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    GB1035-GB7595       2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    GB1035-GB7595      14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT GC1035-GC7595      29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT GC1035-GC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GC1035-GC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GC1035-GC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GC1035-GC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GC1035-GC7595      23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID GC1035-GC7595      18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID GC1035-GC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID GC1035-GC7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID GC1035-GC7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID GC1035-GC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID GC1035-GC7595      27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN GC1035-GC7595      10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN GC1035-GC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN GC1035-GC7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN GC1035-GC7595      28.87  29.43  29.09  27.87  25.81  22.95
```

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SO BUILDLEN GC1035-GC7595      19.41   15.27   10.67   15.27   19.41   22.95
SO BUILDLEN GC1035-GC7595      25.81   27.87   29.09   29.43   10.39    7.41
SO XBADJ    GC1035-GC7595     -87.49 -109.62 -111.69  -28.71  -25.26  -21.04
SO XBADJ    GC1035-GC7595    -112.31 -111.55 -107.40   -4.08   -2.88   -1.60
SO XBADJ    GC1035-GC7595      -0.27    1.08    2.38    3.62    4.75    5.73
SO XBADJ    GC1035-GC7595       4.68    3.50    2.20    0.84   -0.54   -1.91
SO XBADJ    GC1035-GC7595      -3.22   -4.44   -5.52  -11.19  -16.52  -21.36
SO XBADJ    GC1035-GC7595     -25.54  -28.95  -31.47  -33.05  -87.46  -87.25
SO YBADJ    GC1035-GC7595     -14.43   23.32    8.08  -12.64  -15.01  -16.93
SO YBADJ    GC1035-GC7595      16.51   -1.56  -19.58  -19.12  -18.21  -16.75
SO YBADJ    GC1035-GC7595     -14.78  -12.36   -9.56   -6.48   -3.20    0.18
SO YBADJ    GC1035-GC7595       3.56    6.82    9.88   12.64   15.01   16.93
SO YBADJ    GC1035-GC7595      18.33   19.18   19.44   19.12   18.21   16.75
SO YBADJ    GC1035-GC7595      14.78   12.36    9.56    6.48   14.59    0.08

  SRCGROUP G1095D GA1095 GB1095 GC1095
  SRCGROUP G1059D GA1059 GB1059 GC1059
  SRCGROUP G1035D GA1035 GB1035 GC1035
  SRCGROUP G7595 GA7595 GB7595 GC7595
  SRCGROUP G7559 GA7559 GB7559 GC7559
  SRCGROUP G7535 GA7535 GB7535 GC7535

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
RE STARTING
  INCLUDED RIVFHCS.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
  SURFFILE C:\amodmet\PBIMIA01.SFC
  PROFFILE C:\amodmet\PBIMIA01.PFL
  SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
  UAIRDATA 92803 2001 MIAMI/FIU
  PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE FIRST
OU FINISHED
**
```

AERBOB RELEASE 020304
AERMOD OUTPUT FILE NUMBER 1 :GENGMPCD.O01
AERMOD OUTPUT FILE NUMBER 2 :GENGMPCD.O02
AERMOD OUTPUT FILE NUMBER 3 :GENGMPCD.O03
AERMOD OUTPUT FILE NUMBER 4 :GENGMPCD.O04
AERMOD OUTPUT FILE NUMBER 5 :GENGMPCD.O05
First title for last output file is: 2001 REBEC- CT LOAD ANALYSIS, MPS 501G1 PLUS GAS CONDO 2/31/08
Second title for last output file is: GENERIC (10 g/s) EMISSION RATES FOR CC CTS

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: G1095D					
Annual					
	2001	0.92843	594330.	2960240.	01123124
	2002	1.06310	594330.	2960240.	02123124
	2003	1.08226	594330.	2960240.	03123124
	2004	1.01309	594330.	2960240.	04123124
	2005	1.48576	594330.	2960240.	05123124
HIGH 24-Hour					
	2001	14.10366	594330.	2960240.	01110924
	2002	10.27351	594330.	2960240.	02112524
	2003	14.33516	594330.	2960240.	03090924
	2004	13.93435	594280.	2960240.	04101624
	2005	16.29827	594330.	2960240.	05102824
HIGH 8-Hour					
	2001	40.29099	594330.	2960240.	01100308
	2002	26.09833	594330.	2960240.	02011908
	2003	30.31377	594280.	2960240.	03090924
	2004	41.29173	594280.	2960240.	04101624
	2005	42.54916	594280.	2960240.	05122324
HIGH 3-Hour					
	2001	63.60485	594330.	2960240.	01091706
	2002	47.52190	594330.	2960240.	02010821
	2003	70.38879	594280.	2960240.	03111321
	2004	65.90333	594280.	2960240.	04101621
	2005	68.05148	594280.	2960240.	05102721
HIGH 1-Hour					
	2001	93.86166	594330.	2960240.	01082604
	2002	98.97216	594330.	2960240.	02040402
	2003	107.25648	594305.	2960240.	03091124
	2004	97.04092	594280.	2960240.	04101621
	2005	114.69453	594280.	2960240.	05072204
SOURCE GROUP ID: G1059D					
Annual					
	2001	0.85575	594330.	2960240.	01123124
	2002	0.98478	594330.	2960240.	02123124
	2003	1.00273	594330.	2960240.	03123124
	2004	0.94105	594330.	2960240.	04123124
	2005	1.37496	594330.	2960240.	05123124
HIGH 24-Hour					
	2001	12.92035	594330.	2960240.	01110924
	2002	9.41884	594330.	2960240.	02112524
	2003	13.11292	594330.	2960240.	03090924
	2004	12.77831	594280.	2960240.	04101624
	2005	15.06422	594330.	2960240.	05102824
HIGH 8-Hour					
	2001	36.70204	594330.	2960240.	01100308
	2002	23.89854	594330.	2960240.	02011908
	2003	27.66236	594305.	2960240.	03090924
	2004	37.71187	594280.	2960240.	04101624
	2005	38.95112	594280.	2960240.	05122324
HIGH 3-Hour					
	2001	57.87738	594330.	2960240.	01091706
	2002	43.44948	594330.	2960240.	02010821
	2003	64.11589	594280.	2960240.	03111321
	2004	60.25204	594280.	2960240.	04101621
	2005	62.11363	594280.	2960240.	05102721
HIGH 1-Hour					
	2001	85.53506	594330.	2960240.	01082604
	2002	90.12915	594330.	2960240.	02040402

2003	97.72466	594305.	2960240.	03091124
2004	88.41019	594280.	2960240.	04101621
2005	104.54362	594280.	2960240.	05072204

SOURCE GROUP ID: G1035D

Annual

2001	0.81033	594330.	2960240.	01123124
2002	0.93566	594330.	2960240.	02123124
2003	0.95285	594330.	2960240.	03123124
2004	0.89583	594330.	2960240.	04123124
2005	1.30538	594330.	2960240.	05123124

HIGH 24-Hour

2001	12.17863	594330.	2960240.	01110924
2002	8.88254	594330.	2960240.	02112524
2003	12.33461	594330.	2960240.	03090924
2004	12.04681	594280.	2960240.	04101624
2005	14.28390	594330.	2960240.	05102824

HIGH 8-Hour

2001	34.44937	594330.	2960240.	01100308
2002	22.51916	594330.	2960240.	02011908
2003	25.97879	594305.	2960240.	03090924
2004	35.44889	594280.	2960240.	04101624
2005	36.69040	594280.	2960240.	05122324

HIGH 3-Hour

2001	54.25778	594330.	2960240.	01091706
2002	40.92045	594330.	2960240.	02010821
2003	60.13311	594280.	2960240.	03111321
2004	56.66740	594280.	2960240.	04101621
2005	58.35804	594280.	2960240.	05102721

HIGH 1-Hour

2001	80.19019	594330.	2960240.	01082604
2002	84.55088	594330.	2960240.	02040402
2003	91.62402	594305.	2960240.	03091124
2004	82.95583	594280.	2960240.	04101621
2005	97.99232	594280.	2960240.	05072204

SOURCE GROUP ID: G7595

Annual

2001	1.16074	594330.	2960240.	01123124
2002	1.31168	594330.	2960240.	02123124
2003	1.33466	594330.	2960240.	03123124
2004	1.24263	594330.	2960240.	04123124
2005	1.83705	594330.	2960240.	05123124

HIGH 24-Hour

2001	17.88466	594330.	2960240.	01110924
2002	13.01052	594280.	2960240.	02112524
2003	18.11945	594330.	2960240.	03090924
2004	17.54089	594280.	2960240.	04101624
2005	20.16450	594280.	2960240.	05122324

HIGH 8-Hour

2001	51.75040	594330.	2960240.	01100308
2002	33.12107	594330.	2960240.	02011908
2003	38.48532	594280.	2960240.	03090924
2004	52.50146	594280.	2960240.	04101624
2005	54.36475	594330.	2960240.	05101108

HIGH 3-Hour

2001	81.63096	594330.	2960240.	01091706
2002	61.08240	594280.	2960240.	02121706
2003	89.91955	594280.	2960240.	03111321
2004	83.45336	594280.	2960240.	04101621
2005	86.59664	594280.	2960240.	05102721

HIGH 1-Hour

2001	119.16767	594330.	2960240.	01082604
2002	126.81297	594330.	2960240.	02040402
2003	136.38829	594305.	2960240.	03091124
2004	124.11192	594280.	2960240.	04101621
2005	145.17870	594280.	2960240.	05072204

SOURCE GROUP ID: G7559

Annual

2001	1.10151	594330.	2960240.	01123124
2002	1.24839	594330.	2960240.	02123124
2003	1.27036	594330.	2960240.	03123124
2004	1.18379	594330.	2960240.	04123124
2005	1.74739	594330.	2960240.	05123124

HIGH 24-Hour

2001	16.92487	594330.	2960240.	01110924
2002	12.30907	594330.	2960240.	02112524
2003	17.18750	594330.	2960240.	03090924
2004	16.64027	594280.	2960240.	04101624
2005	19.17200	594330.	2960240.	05102824

HIGH 8-Hour

2001	48.85340	594330.	2960240.	01100308
2002	31.33764	594330.	2960240.	02011908
2003	36.49581	594280.	2960240.	03090924
2004	49.69983	594280.	2960240.	04101624
2005	51.34075	594330.	2960240.	05101108

HIGH 3-Hour

2001	77.13670	594330.	2960240.	01091706
2002	57.34350	594280.	2960240.	02121706
2003	85.08350	594280.	2960240.	03111321
2004	79.09131	594280.	2960240.	04101621
2005	81.96806	594280.	2960240.	05102721

HIGH 1-Hour

2001	113.02718	594330.	2960240.	01082604
2002	119.83269	594330.	2960240.	02040402
2003	129.27895	594305.	2960240.	03091124
2004	117.34589	594280.	2960240.	04101621
2005	137.85902	594280.	2960240.	05072204

SOURCE GROUP ID: G7535

Annual

2001	1.06829	594330.	2960240.	01123124
2002	1.21277	594330.	2960240.	02123124
2003	1.23414	594330.	2960240.	03123124
2004	1.15070	594330.	2960240.	04123124
2005	1.69711	594330.	2960240.	05123124

HIGH 24-Hour

2001	16.38705	594330.	2960240.	01110924
2002	11.92122	594330.	2960240.	02112524
2003	16.66282	594330.	2960240.	03090924
2004	16.13286	594280.	2960240.	04101624
2005	18.62884	594330.	2960240.	05102824

HIGH 8-Hour

2001	47.23261	594330.	2960240.	01100308
2002	30.33798	594330.	2960240.	02011908
2003	35.37393	594280.	2960240.	03090924
2004	48.12406	594280.	2960240.	04101624
2005	49.64826	594330.	2960240.	05101108

HIGH 3-Hour

2001	74.61686	594330.	2960240.	01091706
2002	55.38259	594330.	2960240.	02010821
2003	82.36459	594280.	2960240.	03111321
2004	76.63283	594280.	2960240.	04101621
2005	79.36220	594280.	2960240.	05102721

HIGH 1-Hour

2001	109.55801	594330.	2960240.	01082604
2002	115.90961	594330.	2960240.	02040402
2003	125.26433	594305.	2960240.	03091124
2004	113.54121	594280.	2960240.	04101621
2005	133.71426	594280.	2960240.	05072204

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

```
CO STARTING
  TITLEONE 2001 REBEC- CT LOAD ANALYSIS, MPS 501G1 PLUS GAS CONDO 2/31/08
  TITLETWO GENERIC (10 g/s) EMISSION RATES FOR CC CTS
  MODELOPT DFAULT CONC NOWARN
  AVERTIME PERIOD 24 8 3 1
  POLLUTID GEN
  RUNORNOT RUN
  FLAGPOLE
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
  LOCATION GA1095 POINT 594125.983 2960797.999 1.000
  LOCATION GB1095 POINT 594172.071 2960797.963 1.000
  LOCATION GC1095 POINT 594274.233 2960797.946 1.000

  LOCATION GA1059 POINT 594125.983 2960797.999 1.000
  LOCATION GB1059 POINT 594172.071 2960797.963 1.000
  LOCATION GC1059 POINT 594274.233 2960797.946 1.000

  LOCATION GA1035 POINT 594125.983 2960797.999 1.000
  LOCATION GB1035 POINT 594172.071 2960797.963 1.000
  LOCATION GC1035 POINT 594274.233 2960797.946 1.000

  LOCATION GA7595 POINT 594125.983 2960797.999 1.000
  LOCATION GB7595 POINT 594172.071 2960797.963 1.000
  LOCATION GC7595 POINT 594274.233 2960797.946 1.000

  LOCATION GA7559 POINT 594125.983 2960797.999 1.000
  LOCATION GB7559 POINT 594172.071 2960797.963 1.000
  LOCATION GC7559 POINT 594274.233 2960797.946 1.000

  LOCATION GA7535 POINT 594125.983 2960797.999 1.000
  LOCATION GB7535 POINT 594172.071 2960797.963 1.000
  LOCATION GC7535 POINT 594274.233 2960797.946 1.000

** Source Parameters **
** Baseload, 95 F with duct firing
  SRCPARAM GA1095 3.3333  45.4  357.5  17.28  6.71
  SRCPARAM GB1095 3.3333  45.4  357.5  17.28  6.71
  SRCPARAM GC1095 3.3333  45.4  357.5  17.28  6.71
** Baseload, 59 F with duct firing
  SRCPARAM GA1059 3.3333  45.4  357.9  18.39  6.71
  SRCPARAM GB1059 3.3333  45.4  357.9  18.39  6.71
  SRCPARAM GC1059 3.3333  45.4  357.9  18.39  6.71
** Baseload, 35 F with duct firing
  SRCPARAM GA1035 3.3333  45.4  358.6  19.07  6.71
  SRCPARAM GB1035 3.3333  45.4  358.6  19.07  6.71
  SRCPARAM GC1035 3.3333  45.4  358.6  19.07  6.71
** 75% Load, 95 F
  SRCPARAM GA7595 3.3333  45.4  359.3  14.03  6.71
  SRCPARAM GB7595 3.3333  45.4  359.3  14.03  6.71
  SRCPARAM GC7595 3.3333  45.4  359.3  14.03  6.71
** 75% Load, 59 F
  SRCPARAM GA7559 3.3333  45.4  358.2  14.86  6.71
  SRCPARAM GB7559 3.3333  45.4  358.2  14.86  6.71
  SRCPARAM GC7559 3.3333  45.4  358.2  14.86  6.71
** 75% Load, 35 F
  SRCPARAM GA7535 3.3333  45.4  357.6  15.36  6.71
  SRCPARAM GB7535 3.3333  45.4  357.6  15.36  6.71
  SRCPARAM GC7535 3.3333  45.4  357.6  15.36  6.71

** Building Downwash **
SO BUILDHGT GA1035-GA7595     29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GA1035-GA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GA1035-GA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GA1035-GA7595     23.47  23.47  23.47  23.47  23.47  23.47
```

SO BUILDHGT	GA1035-GA7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GA1035-GA7595	23.47	23.47	23.47	29.57	29.57	29.57
SO BUILDWID	GA1035-GA7595	18.85	19.41	22.95	25.81	27.87	29.09
SO BUILDWID	GA1035-GA7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	GA1035-GA7595	27.87	25.81	22.95	19.41	15.27	10.67
SO BUILDWID	GA1035-GA7595	15.27	19.41	22.95	25.81	27.87	29.09
SO BUILDWID	GA1035-GA7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	GA1035-GA7595	27.87	25.81	22.95	19.29	18.85	17.83
SO BUILDLEN	GA1035-GA7595	10.39	29.43	29.09	27.87	25.81	22.95
SO BUILDLEN	GA1035-GA7595	19.41	15.27	10.67	15.27	19.41	22.95
SO BUILDLEN	GA1035-GA7595	25.81	27.87	29.09	29.43	28.87	27.43
SO BUILDLEN	GA1035-GA7595	28.87	29.43	29.09	27.87	25.81	22.95
SO BUILDLEN	GA1035-GA7595	19.41	15.27	10.67	15.27	19.41	22.95
SO BUILDLEN	GA1035-GA7595	25.81	27.87	29.09	13.06	10.39	7.41
SO XBADJ	GA1035-GA7595	-87.54	-32.91	-31.26	-28.65	-25.18	-20.94
SO XBADJ	GA1035-GA7595	-16.07	-10.71	-5.02	-3.94	-2.74	-1.46
SO XBADJ	GA1035-GA7595	-0.14	1.19	2.48	3.70	4.80	5.76
SO XBADJ	GA1035-GA7595	4.69	3.48	2.17	0.78	-0.62	-2.01
SO XBADJ	GA1035-GA7595	-3.34	-4.56	-5.65	-11.33	-16.66	-21.49
SO XBADJ	GA1035-GA7595	-25.67	-29.06	-31.57	-100.73	-87.54	-87.32
SO YBADJ	GA1035-GA7595	-14.51	-6.96	-10.01	-12.76	-15.13	-17.03
SO YBADJ	GA1035-GA7595	-18.41	-19.24	-19.48	-19.13	-18.20	-16.71
SO YBADJ	GA1035-GA7595	-14.72	-12.28	-9.46	-6.36	-3.07	0.32
SO YBADJ	GA1035-GA7595	3.69	6.96	10.01	12.76	15.13	17.03
SO YBADJ	GA1035-GA7595	18.41	19.24	19.48	19.13	18.20	16.71
SO YBADJ	GA1035-GA7595	14.72	12.28	9.46	-14.45	14.53	0.01
SO BUILDHGT	GB1035-GB7595	29.57	29.57	29.57	23.47	23.47	23.47
SO BUILDHGT	GB1035-GB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GB1035-GB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GB1035-GB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GB1035-GB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GB1035-GB7595	23.47	23.47	23.47	23.17	29.57	29.57
SO BUILDWID	GB1035-GB7595	18.85	19.29	19.15	25.81	27.87	29.09
SO BUILDWID	GB1035-GB7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	GB1035-GB7595	27.87	25.81	22.95	19.41	15.27	10.67
SO BUILDWID	GB1035-GB7595	15.27	19.41	22.95	25.81	27.87	29.09
SO BUILDWID	GB1035-GB7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	GB1035-GB7595	27.87	25.81	22.95	27.91	18.85	17.83
SO BUILDLEN	GB1035-GB7595	10.39	13.06	15.33	27.87	25.81	22.95
SO BUILDLEN	GB1035-GB7595	19.41	15.27	10.67	15.27	19.41	22.95
SO BUILDLEN	GB1035-GB7595	25.81	27.87	29.09	29.43	28.87	27.43
SO BUILDLEN	GB1035-GB7595	28.87	29.43	29.09	27.87	25.81	22.95
SO BUILDLEN	GB1035-GB7595	19.41	15.27	10.67	15.27	19.41	22.95
SO BUILDLEN	GB1035-GB7595	25.81	27.87	29.09	47.73	10.39	7.41
SO XBADJ	GB1035-GB7595	-87.51	-100.83	-103.09	-58.25	-60.46	-60.84
SO XBADJ	GB1035-GB7595	-59.36	-56.09	-51.10	-4.13	-2.91	-1.59
SO XBADJ	GB1035-GB7595	-0.23	1.14	2.48	3.74	4.89	5.88
SO XBADJ	GB1035-GB7595	4.85	3.67	2.38	30.38	34.66	37.88
SO XBADJ	GB1035-GB7595	39.96	40.82	40.44	-11.14	-16.50	-21.36
SO XBADJ	GB1035-GB7595	-25.58	-29.01	-31.57	-109.53	-87.41	-87.24
SO YBADJ	GB1035-GB7595	-14.22	14.74	-1.86	22.56	14.53	6.05
SO YBADJ	GB1035-GB7595	-2.62	-11.20	-19.44	-19.29	-18.38	-16.92
SO YBADJ	GB1035-GB7595	-14.95	-12.52	-9.71	-6.61	-3.31	0.10
SO YBADJ	GB1035-GB7595	3.50	6.80	9.89	-22.56	-14.53	-6.05
SO YBADJ	GB1035-GB7595	2.62	11.20	19.44	19.29	18.38	16.92
SO YBADJ	GB1035-GB7595	14.95	12.52	9.71	-23.01	14.79	0.29
SO BUILDHGT	GC1035-GC7595	29.57	23.17	23.17	23.47	23.47	23.47
SO BUILDHGT	GC1035-GC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GC1035-GC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GC1035-GC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GC1035-GC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GC1035-GC7595	23.47	23.47	23.47	23.47	29.57	29.57
SO BUILDWID	GC1035-GC7595	18.85	27.91	34.24	25.81	27.87	29.09
SO BUILDWID	GC1035-GC7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	GC1035-GC7595	27.87	25.81	22.95	19.41	15.27	10.67
SO BUILDWID	GC1035-GC7595	15.27	19.41	22.95	25.81	27.87	29.09
SO BUILDWID	GC1035-GC7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	GC1035-GC7595	27.87	25.81	22.95	19.41	18.85	17.83
SO BUILDLEN	GC1035-GC7595	10.39	47.73	46.38	27.87	25.81	22.95
SO BUILDLEN	GC1035-GC7595	19.41	15.27	10.67	15.27	19.41	22.95
SO BUILDLEN	GC1035-GC7595	25.81	27.87	29.09	29.43	28.87	27.43

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SO BUILDLEN GC1035-GC7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN GC1035-GC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN GC1035-GC7595      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    GC1035-GC7595     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    GC1035-GC7595    -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    GC1035-GC7595      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    GC1035-GC7595       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    GC1035-GC7595      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    GC1035-GC7595     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    GC1035-GC7595     -14.43  23.32   8.08 -12.64 -15.01 -16.93
SO YBADJ    GC1035-GC7595      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    GC1035-GC7595     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    GC1035-GC7595       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    GC1035-GC7595      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    GC1035-GC7595      14.78  12.36   9.56   6.48  14.59   0.08

  SRCGROUP G1095D GA1095 GB1095 GC1095
  SRCGROUP G1059D GA1059 GB1059 GC1059
  SRCGROUP G1035D GA1035 GB1035 GC1035
  SRCGROUP G7595 GA7595 GB7595 GC7595
  SRCGROUP G7559 GA7559 GB7559 GC7559
  SRCGROUP G7535 GA7535 GB7535 GC7535

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
RE STARTING
  INCLUDED RIV1COND.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
  SURFFILE C:\amodmet\PBIMIA01.SFC
  PROFFILE C:\amodmet\PBIMIA01.PFL
  SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
  UAIRDATA 92803 2001 MIAMI/FIU
  PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE FIRST
OU FINISHED
**
```

AERBOB RELEASE 020304
AERMOD OUTPUT FILE NUMBER 1 :GENGAS.O01
AERMOD OUTPUT FILE NUMBER 2 :GENGAS.O02
AERMOD OUTPUT FILE NUMBER 3 :GENGAS.O03
AERMOD OUTPUT FILE NUMBER 4 :GENGAS.O04
AERMOD OUTPUT FILE NUMBER 5 :GENGAS.O05
First title for last output file is: 2001 RBEC- CT LOAD ANALYSIS, SIEMENS GAS 12/31/08
Second title for last output file is: GENERIC (10 g/s) EMISSION RATES FOR CC CTS

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: G1095D					
Annual					
	2001	0.51284	593500.	2960900.	01123124
	2002	0.61571	593600.	2961100.	02123124
	2003	0.56705	593700.	2961200.	03123124
	2004	0.54601	593500.	2960900.	04123124
	2005	0.51236	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	3.63836	593300.	2960500.	01100924
	2002	2.81082	593500.	2961200.	02062024
	2003	3.39174	593600.	2961200.	03061624
	2004	3.04231	594400.	2961600.	04090524
	2005	3.24094	593300.	2961000.	05070824
HIGH 8-Hour					
	2001	7.32886	593500.	2960600.	01100916
	2002	6.60099	593700.	2961200.	02042816
	2003	7.01136	593600.	2961200.	03062916
	2004	8.22470	594600.	2961500.	04090508
	2005	7.88923	593500.	2961300.	05102408
HIGH 3-Hour					
	2001	8.32028	593600.	2961100.	01072412
	2002	8.06642	593600.	2961200.	02072512
	2003	8.11788	593500.	2960700.	03022412
	2004	10.27460	594900.	2961000.	04092524
	2005	11.01758	593400.	2961300.	05102406
HIGH 1-Hour					
	2001	10.35135	593500.	2961600.	01091406
	2002	9.17284	593600.	2961000.	02053111
	2003	12.64923	593300.	2961000.	03120323
	2004	14.56279	594000.	2960100.	04090406
	2005	12.79879	593700.	2961500.	05070906
SOURCE GROUP ID: G1059D					
Annual					
	2001	0.47863	593500.	2960900.	01123124
	2002	0.57688	593600.	2961100.	02123124
	2003	0.53170	593700.	2961200.	03123124
	2004	0.51240	593500.	2960900.	04123124
	2005	0.47983	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	3.28813	593300.	2960500.	01100924
	2002	2.65302	593500.	2961200.	02062024
	2003	3.18742	593600.	2961200.	03061624
	2004	2.85292	593700.	2961300.	04082624
	2005	2.97496	593500.	2961100.	05061024
HIGH 8-Hour					
	2001	6.67154	593500.	2960600.	01100916
	2002	6.19289	593700.	2961200.	02042816
	2003	6.64073	593600.	2961200.	03062916
	2004	7.90502	594600.	2961500.	04090508
	2005	7.55143	593500.	2961300.	05102408
HIGH 3-Hour					
	2001	7.78527	593600.	2961100.	01072412
	2002	7.62672	593600.	2961200.	02072512
	2003	7.64515	593500.	2960700.	03022412
	2004	9.93192	594900.	2961000.	04092524
	2005	11.16433	593400.	2961300.	05102406
HIGH 1-Hour					
	2001	9.46820	593500.	2961600.	01091406
	2002	8.61608	593600.	2961000.	02053111

2003	11.63569	593300.	2961000.	03120323
2004	17.70155	594700.	2960600.	04092519
2005	11.90218	593400.	2961300.	05102404

SOURCE GROUP ID: G1035D

Annual

2001	0.45859	593500.	2960900.	01123124
2002	0.55411	593600.	2961100.	02123124
2003	0.51177	593600.	2961200.	03123124
2004	0.49279	593500.	2960900.	04123124
2005	0.46084	593500.	2960900.	05123124

HIGH 24-Hour

2001	3.09683	593300.	2960500.	01100924
2002	2.56047	593500.	2961200.	02062024
2003	3.06621	593600.	2961200.	03061624
2004	2.75214	593700.	2961300.	04082624
2005	2.87736	593700.	2961400.	05070424

HIGH 8-Hour

2001	6.31911	593500.	2960600.	01100916
2002	5.96504	593500.	2960900.	02091816
2003	6.41707	593600.	2961200.	03062916
2004	7.71209	594600.	2961500.	04090508
2005	7.22535	593500.	2961300.	05102408

HIGH 3-Hour

2001	7.46822	593600.	2961100.	01072412
2002	7.36176	593600.	2961200.	02072512
2003	7.36272	593500.	2960700.	03022412
2004	9.72580	594900.	2961000.	04092524
2005	10.78360	593400.	2961300.	05102406

HIGH 1-Hour

2001	8.92977	593500.	2961600.	01091406
2002	8.28534	593600.	2961000.	02053111
2003	11.01839	593300.	2961000.	03120323
2004	17.06849	594700.	2960600.	04092519
2005	11.32878	593400.	2961300.	05102404

SOURCE GROUP ID: G7595

Annual

2001	0.61534	593500.	2960800.	01123124
2002	0.72423	593600.	2961100.	02123124
2003	0.66511	593700.	2961200.	03123124
2004	0.64210	593500.	2960900.	04123124
2005	0.60293	593500.	2960900.	05123124

HIGH 24-Hour

2001	4.71910	593300.	2960500.	01100924
2002	3.41826	593700.	2961500.	02030224
2003	3.93100	593600.	2961200.	03061624
2004	3.82945	594300.	2961500.	04090524
2005	4.14676	593300.	2961000.	05070824

HIGH 8-Hour

2001	9.20402	593500.	2960600.	01100916
2002	8.03519	593800.	2961400.	02030216
2003	8.18164	593700.	2961100.	03062916
2004	9.12813	594500.	2961400.	04090508
2005	8.88932	593500.	2961300.	05102408

HIGH 3-Hour

2001	9.76449	593600.	2961100.	01072412
2002	9.54241	593500.	2960800.	02120912
2003	9.75547	593600.	2960700.	03022412
2004	11.11275	594900.	2961000.	04092524
2005	12.36429	593400.	2961300.	05102406

HIGH 1-Hour

2001	11.98354	593300.	2960400.	01100918
2002	10.62551	593600.	2961000.	02053111
2003	15.11463	593300.	2961000.	03120323
2004	16.41891	594000.	2960200.	04090406
2005	14.34394	593400.	2960900.	05082519

SOURCE GROUP ID: G7559

Annual

2001	0.57977	593500.	2960800.	01123124
2002	0.68701	593600.	2961100.	02123124
2003	0.63152	593700.	2961200.	03123124
2004	0.60901	593500.	2960900.	04123124
2005	0.57228	593500.	2960900.	05123124

HIGH 24-Hour

2001	4.34181	593300.	2960500.	01100924
2002	3.17368	593700.	2961500.	02030224
2003	3.75105	593600.	2961200.	03061624
2004	3.52847	594300.	2961500.	04090524
2005	3.83756	593300.	2961000.	05070824

HIGH 8-Hour

2001	8.57847	593500.	2960600.	01100916
2002	7.50008	593800.	2961400.	02030216
2003	7.72391	593700.	2961100.	03062916
2004	8.76072	594600.	2961500.	04090508
2005	8.48623	593500.	2961300.	05102408

HIGH 3-Hour

2001	9.25646	593600.	2961100.	01072412
2002	8.87711	593500.	2960800.	02120912
2003	9.05741	593600.	2960700.	03022412
2004	10.84819	594900.	2961000.	04092524
2005	11.94236	593400.	2961300.	05102406

HIGH 1-Hour

2001	11.11676	593200.	2960400.	01100918
2002	10.15205	593600.	2961000.	02053111
2003	14.33739	593300.	2961000.	03120323
2004	15.78765	594000.	2960100.	04090406
2005	14.53353	593800.	2961400.	05070906

SOURCE GROUP ID: G7535

Annual

2001	0.56089	593500.	2960800.	01123124
2002	0.66727	593600.	2961100.	02123124
2003	0.61378	593700.	2961200.	03123124
2004	0.59137	593500.	2960900.	04123124
2005	0.55576	593500.	2960900.	05123124

HIGH 24-Hour

2001	4.13938	593300.	2960500.	01100924
2002	3.04625	593700.	2961500.	02030224
2003	3.65540	593600.	2961200.	03061624
2004	3.37848	594400.	2961500.	04090524
2005	3.66943	593300.	2961000.	05070824

HIGH 8-Hour

2001	8.22371	593500.	2960600.	01100916
2002	7.22295	593700.	2961300.	02092516
2003	7.50826	593700.	2961100.	03062916
2004	8.61814	594600.	2961500.	04090508
2005	8.25532	593500.	2961300.	05102408

HIGH 3-Hour

2001	9.00554	593600.	2961100.	01072412
2002	8.62567	593600.	2961200.	02072512
2003	8.74283	593600.	2960700.	03022412
2004	10.69402	594900.	2961000.	04092524
2005	11.69838	593400.	2961300.	05102406

HIGH 1-Hour

2001	10.64380	593200.	2960400.	01100918
2002	9.88925	593600.	2961000.	02053111
2003	13.88954	593300.	2961000.	03120323
2004	15.46431	594000.	2960100.	04090406
2005	13.96876	593700.	2961500.	05070906

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

```
CO STARTING
  TITLEONE 2001 RBEC- CT LOAD ANALYSIS, SIEMENS GAS 12/31/08
  TITLETWO GENERIC (10 g/s) EMISSION RATES FOR CC CTS
  MODELOPT DFAULT CONC NOWARN
  AVERTIME PERIOD 24 8 3 1
  POLLUTID GEN
  RUNORNOT RUN
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
  LOCATION GA1095 POINT 594125.983 2960797.999 1.000
  LOCATION GB1095 POINT 594172.071 2960797.963 1.000
  LOCATION GC1095 POINT 594274.233 2960797.946 1.000

  LOCATION GA1059 POINT 594125.983 2960797.999 1.000
  LOCATION GB1059 POINT 594172.071 2960797.963 1.000
  LOCATION GC1059 POINT 594274.233 2960797.946 1.000

  LOCATION GA1035 POINT 594125.983 2960797.999 1.000
  LOCATION GB1035 POINT 594172.071 2960797.963 1.000
  LOCATION GC1035 POINT 594274.233 2960797.946 1.000

  LOCATION GA7595 POINT 594125.983 2960797.999 1.000
  LOCATION GB7595 POINT 594172.071 2960797.963 1.000
  LOCATION GC7595 POINT 594274.233 2960797.946 1.000

  LOCATION GA7559 POINT 594125.983 2960797.999 1.000
  LOCATION GB7559 POINT 594172.071 2960797.963 1.000
  LOCATION GC7559 POINT 594274.233 2960797.946 1.000

  LOCATION GA7535 POINT 594125.983 2960797.999 1.000
  LOCATION GB7535 POINT 594172.071 2960797.963 1.000
  LOCATION GC7535 POINT 594274.233 2960797.946 1.000

** Source Parameters **
** Baseload, 95 F with duct firing
  SRCPARAM GA1095 3.3333  45.4  357.5  16.57  6.71
  SRCPARAM GB1095 3.3333  45.4  357.5  16.57  6.71
  SRCPARAM GC1095 3.3333  45.4  357.5  16.57  6.71
** Baseload, 59 F with duct firing
  SRCPARAM GA1059 3.3333  45.4  357.9  17.82  6.71
  SRCPARAM GB1059 3.3333  45.4  357.9  17.82  6.71
  SRCPARAM GC1059 3.3333  45.4  357.9  17.82  6.71
** Baseload, 35 F with duct firing
  SRCPARAM GA1035 3.3333  45.4  358.6  18.54  6.71
  SRCPARAM GB1035 3.3333  45.4  358.6  18.54  6.71
  SRCPARAM GC1035 3.3333  45.4  358.6  18.54  6.71
** 75% Load, 95 F
  SRCPARAM GA7595 3.3333  45.4  359.3  13.37  6.71
  SRCPARAM GB7595 3.3333  45.4  359.3  13.37  6.71
  SRCPARAM GC7595 3.3333  45.4  359.3  13.37  6.71
** 75% Load, 59 F
  SRCPARAM GA7559 3.3333  45.4  358.2  14.41  6.71
  SRCPARAM GB7559 3.3333  45.4  358.2  14.41  6.71
  SRCPARAM GC7559 3.3333  45.4  358.2  14.41  6.71
** 75% Load, 35 F
  SRCPARAM GA7535 3.3333  45.4  357.6  15.02  6.71
  SRCPARAM GB7535 3.3333  45.4  357.6  15.02  6.71
  SRCPARAM GC7535 3.3333  45.4  357.6  15.02  6.71

** Building Downwash **
SO BUILDHGT GA1035-GA7595     29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GA1035-GA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GA1035-GA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GA1035-GA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GA1035-GA7595     23.47  23.47  23.47  23.47  23.47  23.47
```

```
SO BUILDHGT GA1035-GA7595     23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID GA1035-GA7595     18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID GA1035-GA7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID GA1035-GA7595     27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID GA1035-GA7595     15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID GA1035-GA7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID GA1035-GA7595     27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN GA1035-GA7595     10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN GA1035-GA7595     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN GA1035-GA7595     25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN GA1035-GA7595     28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN GA1035-GA7595     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN GA1035-GA7595     25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    GA1035-GA7595    -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    GA1035-GA7595    -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    GA1035-GA7595     -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    GA1035-GA7595      4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    GA1035-GA7595     -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    GA1035-GA7595    -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    GA1035-GA7595    -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    GA1035-GA7595    -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    GA1035-GA7595    -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    GA1035-GA7595      3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    GA1035-GA7595     18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    GA1035-GA7595     14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT GB1035-GB7595     29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT GB1035-GB7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GB1035-GB7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GB1035-GB7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GB1035-GB7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GB1035-GB7595     23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID GB1035-GB7595     18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID GB1035-GB7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID GB1035-GB7595     27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID GB1035-GB7595     15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID GB1035-GB7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID GB1035-GB7595     27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN GB1035-GB7595     10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN GB1035-GB7595     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN GB1035-GB7595     25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN GB1035-GB7595     28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN GB1035-GB7595     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN GB1035-GB7595     25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    GB1035-GB7595    -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    GB1035-GB7595    -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    GB1035-GB7595     -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    GB1035-GB7595      4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    GB1035-GB7595     39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    GB1035-GB7595    -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    GB1035-GB7595    -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    GB1035-GB7595     -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    GB1035-GB7595    -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    GB1035-GB7595      3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    GB1035-GB7595      2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    GB1035-GB7595     14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT GC1035-GC7595     29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT GC1035-GC7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GC1035-GC7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GC1035-GC7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GC1035-GC7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GC1035-GC7595     23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID GC1035-GC7595     18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID GC1035-GC7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID GC1035-GC7595     27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID GC1035-GC7595     15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID GC1035-GC7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID GC1035-GC7595     27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN GC1035-GC7595     10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN GC1035-GC7595     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN GC1035-GC7595     25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN GC1035-GC7595     28.87  29.43  29.09  27.87  25.81  22.95
```

```
SO BUILDLEN GC1035-GC7595      19.41   15.27   10.67   15.27   19.41   22.95
SO BUILDLEN GC1035-GC7595      25.81   27.87   29.09   29.43   10.39    7.41
SO XBADJ    GC1035-GC7595     -87.49 -109.62 -111.69  -28.71  -25.26  -21.04
SO XBADJ    GC1035-GC7595    -112.31 -111.55 -107.40   -4.08   -2.88   -1.60
SO XBADJ    GC1035-GC7595      -0.27    1.08    2.38    3.62    4.75    5.73
SO XBADJ    GC1035-GC7595       4.68    3.50    2.20    0.84   -0.54   -1.91
SO XBADJ    GC1035-GC7595      -3.22   -4.44   -5.52  -11.19  -16.52  -21.36
SO XBADJ    GC1035-GC7595     -25.54  -28.95  -31.47  -33.05  -87.46  -87.25
SO YBADJ    GC1035-GC7595     -14.43   23.32    8.08  -12.64  -15.01  -16.93
SO YBADJ    GC1035-GC7595      16.51   -1.56  -19.58  -19.12  -18.21  -16.75
SO YBADJ    GC1035-GC7595     -14.78  -12.36   -9.56   -6.48   -3.20    0.18
SO YBADJ    GC1035-GC7595       3.56    6.82    9.88   12.64   15.01   16.93
SO YBADJ    GC1035-GC7595      18.33   19.18   19.44   19.12   18.21   16.75
SO YBADJ    GC1035-GC7595      14.78   12.36    9.56    6.48   14.59    0.08

  SRCGROUP G1095D GA1095 GB1095 GC1095
  SRCGROUP G1059D GA1059 GB1059 GC1059
  SRCGROUP G1035D GA1035 GB1035 GC1035
  SRCGROUP G7595 GA7595 GB7595 GC7595
  SRCGROUP G7559 GA7559 GB7559 GC7559
  SRCGROUP G7535 GA7535 GB7535 GC7535

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
RE STARTING
  INCLUDED RIVFHCS.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
**   SURFFILE C:\amodmet\PBIMIA01.SFC
**   PROFFILE C:\amodmet\PBIMIA01.PFL
  SURFFILE PBIMIA01.SFC
  PROFFILE PBIMIA01.PFL
  SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
  UAIRDATA 92803 2001 MIAMI/FIU
  PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE FIRST
OU FINISHED
**
```

AERBOB RELEASE 020304
AERMOD OUTPUT FILE NUMBER 1 :GENGASCD.O01
AERMOD OUTPUT FILE NUMBER 2 :GENGASCD.O02
AERMOD OUTPUT FILE NUMBER 3 :GENGASCD.O03
AERMOD OUTPUT FILE NUMBER 4 :GENGASCD.O04
AERMOD OUTPUT FILE NUMBER 5 :GENGASCD.O05
First title for last output file is: 2001 RBEC- CT LOAD ANALYSIS, SIEMENS GAS CONDO 12/31/08
Second title for last output file is: GENERIC (10 g/s) EMISSION RATES FOR CC CTS

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: G1095D					
Annual					
	2001	0.97670	594330.	2960240.	01123124
	2002	1.11491	594330.	2960240.	02123124
	2003	1.13483	594330.	2960240.	03123124
	2004	1.06076	594330.	2960240.	04123124
	2005	1.55903	594330.	2960240.	05123124
HIGH 24-Hour					
	2001	14.88980	594330.	2960240.	01110924
	2002	10.84097	594330.	2960240.	02112524
	2003	15.13847	594330.	2960240.	03090924
	2004	14.69589	594280.	2960240.	04101624
	2005	17.10882	594330.	2960240.	05102824
HIGH 8-Hour					
	2001	42.67643	594330.	2960240.	01100308
	2002	27.55903	594330.	2960240.	02011908
	2003	32.06120	594280.	2960240.	03090924
	2004	43.65406	594280.	2960240.	04101624
	2005	44.93356	594280.	2960240.	05122324
HIGH 3-Hour					
	2001	67.39314	594330.	2960240.	01091706
	2002	50.23542	594330.	2960240.	02010821
	2003	74.52006	594280.	2960240.	03111321
	2004	69.62098	594280.	2960240.	04101621
	2005	71.96679	594280.	2960240.	05102721
HIGH 1-Hour					
	2001	99.29665	594330.	2960240.	01082604
	2002	104.81757	594330.	2960240.	02040402
	2003	113.49023	594305.	2960240.	03091124
	2004	102.73814	594280.	2960240.	04101621
	2005	121.29112	594280.	2960240.	05072204
SOURCE GROUP ID: G1059D					
Annual					
	2001	0.88913	594330.	2960240.	01123124
	2002	1.02089	594330.	2960240.	02123124
	2003	1.03944	594330.	2960240.	03123124
	2004	0.97432	594330.	2960240.	04123124
	2005	1.42603	594330.	2960240.	05123124
HIGH 24-Hour					
	2001	13.46022	594330.	2960240.	01110924
	2002	9.80868	594330.	2960240.	02112524
	2003	13.66469	594330.	2960240.	03090924
	2004	13.30530	594280.	2960240.	04101624
	2005	15.63165	594330.	2960240.	05102824
HIGH 8-Hour					
	2001	38.33117	594330.	2960240.	01100308
	2002	24.90286	594330.	2960240.	02011908
	2003	28.84463	594280.	2960240.	03090924
	2004	39.33972	594280.	2960240.	04101624
	2005	40.60067	594280.	2960240.	05122324
HIGH 3-Hour					
	2001	60.46532	594330.	2960240.	01091706
	2002	45.33110	594330.	2960240.	02010821
	2003	66.95037	594280.	2960240.	03111321
	2004	62.82168	594280.	2960240.	04101621
	2005	64.81501	594280.	2960240.	05102721
HIGH 1-Hour					
	2001	89.28211	594330.	2960240.	01082604
	2002	94.15074	594330.	2960240.	02040402

2003	102.02393	594305.	2960240.	03091124
2004	92.33178	594280.	2960240.	04101621
2005	109.10194	594280.	2960240.	05072204

SOURCE GROUP ID: G1035D

Annual

2001	0.83862	594330.	2960240.	01123124
2002	0.96647	594330.	2960240.	02123124
2003	0.98418	594330.	2960240.	03123124
2004	0.92430	594330.	2960240.	04123124
2005	1.34899	594330.	2960240.	05123124

HIGH 24-Hour

2001	12.63457	594330.	2960240.	01110924
2002	9.21188	594330.	2960240.	02112524
2003	12.80033	594330.	2960240.	03090924
2004	12.49376	594280.	2960240.	04101624
2005	14.76859	594330.	2960240.	05102824

HIGH 8-Hour

2001	35.81983	594330.	2960240.	01100308
2002	23.36782	594330.	2960240.	02011908
2003	26.97547	594305.	2960240.	03090924
2004	36.82542	594280.	2960240.	04101624
2005	38.09232	594280.	2960240.	05122324

HIGH 3-Hour

2001	56.43399	594330.	2960240.	01091706
2002	42.51685	594330.	2960240.	02010821
2003	62.52252	594280.	2960240.	03111321
2004	58.84412	594280.	2960240.	04101621
2005	60.64386	594280.	2960240.	05102721

HIGH 1-Hour

2001	83.35609	594330.	2960240.	01082604
2002	87.94789	594330.	2960240.	02040402
2003	95.25778	594305.	2960240.	03091124
2004	86.26907	594280.	2960240.	04101621
2005	101.84787	594280.	2960240.	05072204

SOURCE GROUP ID: G7595

Annual

2001	1.22923	594330.	2960240.	01123124
2002	1.38392	594330.	2960240.	02123124
2003	1.40779	594330.	2960240.	03123124
2004	1.30920	594330.	2960240.	04123124
2005	1.93982	594330.	2960240.	05123124

HIGH 24-Hour

2001	19.01042	594330.	2960240.	01110924
2002	13.88865	594280.	2960240.	02112524
2003	19.25945	594330.	2960240.	03090924
2004	18.60112	594280.	2960240.	04101624
2005	21.32758	594280.	2960240.	05122324

HIGH 8-Hour

2001	55.20316	594330.	2960240.	01100308
2002	35.20324	594330.	2960240.	02011908
2003	40.95810	594280.	2960240.	03090924
2004	55.82064	594280.	2960240.	04101624
2005	58.12354	594330.	2960240.	05101108

HIGH 3-Hour

2001	87.08614	594330.	2960240.	01091706
2002	65.29417	594280.	2960240.	02121706
2003	95.79179	594280.	2960240.	03111321
2004	88.62476	594280.	2960240.	04101621
2005	92.06842	594280.	2960240.	05102721

HIGH 1-Hour

2001	126.75564	594330.	2960240.	01082604
2002	135.07085	594330.	2960240.	02040402
2003	145.08868	594305.	2960240.	03091124
2004	132.14502	594280.	2960240.	04101621
2005	154.30948	594280.	2960240.	05072204

SOURCE GROUP ID: G7559

Annual

2001	1.14269	594330.	2960240.	01123124
2002	1.29199	594330.	2960240.	02123124
2003	1.31458	594330.	2960240.	03123124
2004	1.22402	594330.	2960240.	04123124
2005	1.80911	594330.	2960240.	05123124

HIGH 24-Hour

2001	17.60162	594330.	2960240.	01110924
2002	12.79716	594330.	2960240.	02112524
2003	17.87519	594330.	2960240.	03090924
2004	17.28307	594280.	2960240.	04101624
2005	19.85194	594280.	2960240.	05122324

HIGH 8-Hour

2001	50.92372	594330.	2960240.	01100308
2002	32.59122	594330.	2960240.	02011908
2003	37.98949	594280.	2960240.	03090924
2004	51.70745	594280.	2960240.	04101624
2005	53.58940	594330.	2960240.	05101108

HIGH 3-Hour

2001	80.41337	594330.	2960240.	01091706
2002	59.85619	594280.	2960240.	02121706
2003	88.62656	594280.	2960240.	03111321
2004	82.22915	594280.	2960240.	04101621
2005	85.28316	594280.	2960240.	05102721

HIGH 1-Hour

2001	117.63413	594330.	2960240.	01082604
2002	124.82344	594330.	2960240.	02040402
2003	134.56111	594305.	2960240.	03091124
2004	122.20458	594280.	2960240.	04101621
2005	143.41833	594280.	2960240.	05072204

SOURCE GROUP ID: G7535

Annual

2001	1.09730	594330.	2960240.	01123124
2002	1.24359	594330.	2960240.	02123124
2003	1.26541	594330.	2960240.	03123124
2004	1.17914	594330.	2960240.	04123124
2005	1.74064	594330.	2960240.	05123124

HIGH 24-Hour

2001	16.86319	594330.	2960240.	01110924
2002	12.26462	594330.	2960240.	02112524
2003	17.14783	594330.	2960240.	03090924
2004	16.58698	594280.	2960240.	04101624
2005	19.10457	594330.	2960240.	05102824

HIGH 8-Hour

2001	48.68673	594330.	2960240.	01100308
2002	31.22045	594330.	2960240.	02011908
2003	36.42850	594280.	2960240.	03090924
2004	49.54043	594280.	2960240.	04101624
2005	51.22573	594330.	2960240.	05101108

HIGH 3-Hour

2001	76.92093	594330.	2960240.	01091706
2002	57.02426	594280.	2960240.	02121706
2003	84.86134	594280.	2960240.	03111321
2004	78.85012	594280.	2960240.	04101621
2005	81.70301	594280.	2960240.	05102721

HIGH 1-Hour

2001	112.81530	594330.	2960240.	01082604
2002	119.42855	594330.	2960240.	02040402
2003	128.99883	594305.	2960240.	03091124
2004	116.96784	594280.	2960240.	04101621
2005	137.65092	594280.	2960240.	05072204

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

```
CO STARTING
  TITLEONE 2001 RBEC- CT LOAD ANALYSIS, SIEMENS GAS CONDO 12/31/08
  TITLETWO GENERIC (10 g/s) EMISSION RATES FOR CC CTS
  MODELOPT DFAULT CONC NOWARN
  AVERTIME PERIOD 24 8 3 1
  POLLUTID GEN
  RUNORNOT RUN
  FLAGPOLE
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
  LOCATION GA1095 POINT 594125.983 2960797.999 1.000
  LOCATION GB1095 POINT 594172.071 2960797.963 1.000
  LOCATION GC1095 POINT 594274.233 2960797.946 1.000

  LOCATION GA1059 POINT 594125.983 2960797.999 1.000
  LOCATION GB1059 POINT 594172.071 2960797.963 1.000
  LOCATION GC1059 POINT 594274.233 2960797.946 1.000

  LOCATION GA1035 POINT 594125.983 2960797.999 1.000
  LOCATION GB1035 POINT 594172.071 2960797.963 1.000
  LOCATION GC1035 POINT 594274.233 2960797.946 1.000

  LOCATION GA7595 POINT 594125.983 2960797.999 1.000
  LOCATION GB7595 POINT 594172.071 2960797.963 1.000
  LOCATION GC7595 POINT 594274.233 2960797.946 1.000

  LOCATION GA7559 POINT 594125.983 2960797.999 1.000
  LOCATION GB7559 POINT 594172.071 2960797.963 1.000
  LOCATION GC7559 POINT 594274.233 2960797.946 1.000

  LOCATION GA7535 POINT 594125.983 2960797.999 1.000
  LOCATION GB7535 POINT 594172.071 2960797.963 1.000
  LOCATION GC7535 POINT 594274.233 2960797.946 1.000

** Source Parameters **
** Baseload, 95 F with duct firing
  SRCPARAM GA1095 3.3333  45.4  357.5  16.57  6.71
  SRCPARAM GB1095 3.3333  45.4  357.5  16.57  6.71
  SRCPARAM GC1095 3.3333  45.4  357.5  16.57  6.71
** Baseload, 59 F with duct firing
  SRCPARAM GA1059 3.3333  45.4  357.9  17.82  6.71
  SRCPARAM GB1059 3.3333  45.4  357.9  17.82  6.71
  SRCPARAM GC1059 3.3333  45.4  357.9  17.82  6.71
** Baseload, 35 F with duct firing
  SRCPARAM GA1035 3.3333  45.4  358.6  18.54  6.71
  SRCPARAM GB1035 3.3333  45.4  358.6  18.54  6.71
  SRCPARAM GC1035 3.3333  45.4  358.6  18.54  6.71
** 75% Load, 95 F
  SRCPARAM GA7595 3.3333  45.4  359.3  13.37  6.71
  SRCPARAM GB7595 3.3333  45.4  359.3  13.37  6.71
  SRCPARAM GC7595 3.3333  45.4  359.3  13.37  6.71
** 75% Load, 59 F
  SRCPARAM GA7559 3.3333  45.4  358.2  14.41  6.71
  SRCPARAM GB7559 3.3333  45.4  358.2  14.41  6.71
  SRCPARAM GC7559 3.3333  45.4  358.2  14.41  6.71
** 75% Load, 35 F
  SRCPARAM GA7535 3.3333  45.4  357.6  15.02  6.71
  SRCPARAM GB7535 3.3333  45.4  357.6  15.02  6.71
  SRCPARAM GC7535 3.3333  45.4  357.6  15.02  6.71

** Building Downwash **
SO BUILDHGT GA1035-GA7595     29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GA1035-GA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GA1035-GA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT GA1035-GA7595     23.47  23.47  23.47  23.47  23.47  23.47
```

SO BUILDHGT	GA1035-GA7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GA1035-GA7595	23.47	23.47	23.47	29.57	29.57	29.57
SO BUILDWID	GA1035-GA7595	18.85	19.41	22.95	25.81	27.87	29.09
SO BUILDWID	GA1035-GA7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	GA1035-GA7595	27.87	25.81	22.95	19.41	15.27	10.67
SO BUILDWID	GA1035-GA7595	15.27	19.41	22.95	25.81	27.87	29.09
SO BUILDWID	GA1035-GA7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	GA1035-GA7595	27.87	25.81	22.95	19.29	18.85	17.83
SO BUILDLEN	GA1035-GA7595	10.39	29.43	29.09	27.87	25.81	22.95
SO BUILDLEN	GA1035-GA7595	19.41	15.27	10.67	15.27	19.41	22.95
SO BUILDLEN	GA1035-GA7595	25.81	27.87	29.09	29.43	28.87	27.43
SO BUILDLEN	GA1035-GA7595	28.87	29.43	29.09	27.87	25.81	22.95
SO BUILDLEN	GA1035-GA7595	19.41	15.27	10.67	15.27	19.41	22.95
SO BUILDLEN	GA1035-GA7595	25.81	27.87	29.09	13.06	10.39	7.41
SO XBADJ	GA1035-GA7595	-87.54	-32.91	-31.26	-28.65	-25.18	-20.94
SO XBADJ	GA1035-GA7595	-16.07	-10.71	-5.02	-3.94	-2.74	-1.46
SO XBADJ	GA1035-GA7595	-0.14	1.19	2.48	3.70	4.80	5.76
SO XBADJ	GA1035-GA7595	4.69	3.48	2.17	0.78	-0.62	-2.01
SO XBADJ	GA1035-GA7595	-3.34	-4.56	-5.65	-11.33	-16.66	-21.49
SO XBADJ	GA1035-GA7595	-25.67	-29.06	-31.57	-100.73	-87.54	-87.32
SO YBADJ	GA1035-GA7595	-14.51	-6.96	-10.01	-12.76	-15.13	-17.03
SO YBADJ	GA1035-GA7595	-18.41	-19.24	-19.48	-19.13	-18.20	-16.71
SO YBADJ	GA1035-GA7595	-14.72	-12.28	-9.46	-6.36	-3.07	0.32
SO YBADJ	GA1035-GA7595	3.69	6.96	10.01	12.76	15.13	17.03
SO YBADJ	GA1035-GA7595	18.41	19.24	19.48	19.13	18.20	16.71
SO YBADJ	GA1035-GA7595	14.72	12.28	9.46	-14.45	14.53	0.01
SO BUILDHGT	GB1035-GB7595	29.57	29.57	29.57	23.47	23.47	23.47
SO BUILDHGT	GB1035-GB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GB1035-GB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GB1035-GB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GB1035-GB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GB1035-GB7595	23.47	23.47	23.47	23.17	29.57	29.57
SO BUILDWID	GB1035-GB7595	18.85	19.29	19.15	25.81	27.87	29.09
SO BUILDWID	GB1035-GB7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	GB1035-GB7595	27.87	25.81	22.95	19.41	15.27	10.67
SO BUILDWID	GB1035-GB7595	15.27	19.41	22.95	25.81	27.87	29.09
SO BUILDWID	GB1035-GB7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	GB1035-GB7595	27.87	25.81	22.95	27.91	18.85	17.83
SO BUILDLEN	GB1035-GB7595	10.39	13.06	15.33	27.87	25.81	22.95
SO BUILDLEN	GB1035-GB7595	19.41	15.27	10.67	15.27	19.41	22.95
SO BUILDLEN	GB1035-GB7595	25.81	27.87	29.09	29.43	28.87	27.43
SO BUILDLEN	GB1035-GB7595	28.87	29.43	29.09	27.87	25.81	22.95
SO BUILDLEN	GB1035-GB7595	19.41	15.27	10.67	15.27	19.41	22.95
SO BUILDLEN	GB1035-GB7595	25.81	27.87	29.09	47.73	10.39	7.41
SO XBADJ	GB1035-GB7595	-87.51	-100.83	-103.09	-58.25	-60.46	-60.84
SO XBADJ	GB1035-GB7595	-59.36	-56.09	-51.10	-4.13	-2.91	-1.59
SO XBADJ	GB1035-GB7595	-0.23	1.14	2.48	3.74	4.89	5.88
SO XBADJ	GB1035-GB7595	4.85	3.67	2.38	30.38	34.66	37.88
SO XBADJ	GB1035-GB7595	39.96	40.82	40.44	-11.14	-16.50	-21.36
SO XBADJ	GB1035-GB7595	-25.58	-29.01	-31.57	-109.53	-87.41	-87.24
SO YBADJ	GB1035-GB7595	-14.22	14.74	-1.86	22.56	14.53	6.05
SO YBADJ	GB1035-GB7595	-2.62	-11.20	-19.44	-19.29	-18.38	-16.92
SO YBADJ	GB1035-GB7595	-14.95	-12.52	-9.71	-6.61	-3.31	0.10
SO YBADJ	GB1035-GB7595	3.50	6.80	9.89	-22.56	-14.53	-6.05
SO YBADJ	GB1035-GB7595	2.62	11.20	19.44	19.29	18.38	16.92
SO YBADJ	GB1035-GB7595	14.95	12.52	9.71	-23.01	14.79	0.29
SO BUILDHGT	GC1035-GC7595	29.57	23.17	23.17	23.47	23.47	23.47
SO BUILDHGT	GC1035-GC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GC1035-GC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GC1035-GC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GC1035-GC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	GC1035-GC7595	23.47	23.47	23.47	23.47	29.57	29.57
SO BUILDWID	GC1035-GC7595	18.85	27.91	34.24	25.81	27.87	29.09
SO BUILDWID	GC1035-GC7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	GC1035-GC7595	27.87	25.81	22.95	19.41	15.27	10.67
SO BUILDWID	GC1035-GC7595	15.27	19.41	22.95	25.81	27.87	29.09
SO BUILDWID	GC1035-GC7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	GC1035-GC7595	27.87	25.81	22.95	19.41	18.85	17.83
SO BUILDLEN	GC1035-GC7595	10.39	47.73	46.38	27.87	25.81	22.95
SO BUILDLEN	GC1035-GC7595	19.41	15.27	10.67	15.27	19.41	22.95
SO BUILDLEN	GC1035-GC7595	25.81	27.87	29.09	29.43	28.87	27.43

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SO BUILDLEN GC1035-GC7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN GC1035-GC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN GC1035-GC7595      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    GC1035-GC7595     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    GC1035-GC7595    -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    GC1035-GC7595      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    GC1035-GC7595       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    GC1035-GC7595      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    GC1035-GC7595     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    GC1035-GC7595     -14.43  23.32   8.08 -12.64 -15.01 -16.93
SO YBADJ    GC1035-GC7595      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    GC1035-GC7595     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    GC1035-GC7595       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    GC1035-GC7595      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    GC1035-GC7595      14.78  12.36   9.56   6.48  14.59   0.08

  SRCGROUP G1095D GA1095 GB1095 GC1095
  SRCGROUP G1059D GA1059 GB1059 GC1059
  SRCGROUP G1035D GA1035 GB1035 GC1035
  SRCGROUP G7595 GA7595 GB7595 GC7595
  SRCGROUP G7559 GA7559 GB7559 GC7559
  SRCGROUP G7535 GA7535 GB7535 GC7535

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
RE STARTING
  INCLUDED RIV1COND.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
**   SURFFILE C:\amodmet\PBIMIA01.SFC
**   PROFFILE C:\amodmet\PBIMIA01.PFL
  SURFFILE PBIMIA01.SFC
  PROFFILE PBIMIA01.PFL
  SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
  UAIRDATA 92803 2001 MIAMI/FIU
  PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE FIRST
OU FINISHED
**
```

PREDICTED IMPACT FOR CTS/HRSGS FIRING FUEL OIL AND MODELED WITH 10 G/S EMISSION RATE

1. SUMMARY FILE
2. EXAMPLE INPUT FILE

AERBOB RELEASE 020304
AERMOD OUTPUT FILE NUMBER 1 :GENOILMP.O01
AERMOD OUTPUT FILE NUMBER 2 :GENOILMP.O02
AERMOD OUTPUT FILE NUMBER 3 :GENOILMP.O03
AERMOD OUTPUT FILE NUMBER 4 :GENOILMP.O04
AERMOD OUTPUT FILE NUMBER 5 :GENOILMP.O05
First title for last output file is: 2001 RBEC- LOAD ANALYSIS, MPS 501G1 PLUS OIL 12/31/08
Second title for last output file is: GENERIC (10 g/s) EMISSION RATES FOR CC CTS

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: O1095					
Annual					
	2001	0.23622	593400.	2960800.	01123124
	2002	0.29644	593500.	2961200.	02123124
	2003	0.27921	593600.	2961300.	03123124
	2004	0.26847	593500.	2961000.	04123124
	2005	0.24770	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	1.61897	593300.	2960500.	01100924
	2002	1.47615	593700.	2961600.	02030224
	2003	1.63773	593600.	2961200.	03061624
	2004	1.89373	594600.	2961500.	04090524
	2005	1.74009	593300.	2961200.	05061024
HIGH 8-Hour					
	2001	4.12325	593300.	2960500.	01100916
	2002	3.85218	593700.	2961600.	02030216
	2003	3.67399	593600.	2961200.	03062916
	2004	5.60695	594700.	2961600.	04090508
	2005	4.10070	593300.	2961400.	05102408
HIGH 3-Hour					
	2001	4.33023	593600.	2960200.	01050615
	2002	4.52202	593400.	2961100.	02040812
	2003	4.43767	593600.	2961300.	03040812
	2004	8.02710	594700.	2961500.	04090503
	2005	6.48721	593200.	2961400.	05102406
HIGH 1-Hour					
	2001	4.82647	593400.	2960800.	01042212
	2002	5.11927	593500.	2961100.	02081511
	2003	5.23755	592800.	2961100.	03120323
	2004	12.68600	594800.	2960700.	04092520
	2005	8.52345	593400.	2961300.	05102407
SOURCE GROUP ID: O1059					
Annual					
	2001	0.21594	593400.	2960800.	01123124
	2002	0.27286	593500.	2961200.	02123124
	2003	0.25716	593600.	2961300.	03123124
	2004	0.24695	593500.	2961000.	04123124
	2005	0.22768	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	1.48594	593200.	2960500.	01100924
	2002	1.37153	593700.	2961600.	02030224
	2003	1.50293	593600.	2961200.	03061624
	2004	1.77675	594700.	2961600.	04090524
	2005	1.61467	593300.	2961200.	05061024
HIGH 8-Hour					
	2001	3.80768	593300.	2960500.	01100916
	2002	3.59694	593700.	2961600.	02030216
	2003	3.38469	593600.	2961200.	03062916
	2004	5.28306	594700.	2961600.	04090508
	2005	3.70597	593300.	2961400.	05102408
HIGH 3-Hour					
	2001	4.04435	593600.	2960200.	01050615
	2002	4.21954	593400.	2961100.	02040812
	2003	4.11436	593600.	2961300.	03040812
	2004	7.85522	594700.	2961500.	04090503
	2005	5.89085	593200.	2961400.	05102406
HIGH 1-Hour					
	2001	4.51538	593400.	2960800.	01042212
	2002	4.80441	593500.	2961100.	02081511

2003	4.66109	595000.	2960600.	03041012
2004	11.76862	594900.	2960700.	04092520
2005	8.01696	593400.	2961300.	05102407

SOURCE GROUP ID: O1035

Annual

2001	0.20395	593400.	2960800.	01123124
2002	0.25877	593500.	2961200.	02123124
2003	0.24400	593600.	2961300.	03123124
2004	0.23416	593500.	2961000.	04123124
2005	0.21581	593500.	2960900.	05123124

HIGH 24-Hour

2001	1.42078	593200.	2960500.	01100924
2002	1.31053	593700.	2961600.	02030224
2003	1.42323	593600.	2961200.	03061624
2004	1.71341	594700.	2961600.	04090524
2005	1.54035	593300.	2961200.	05061024

HIGH 8-Hour

2001	3.64061	593300.	2960500.	01100916
2002	3.44793	593700.	2961600.	02030216
2003	3.21116	593600.	2961200.	03062916
2004	5.09675	594700.	2961600.	04090508
2005	3.46574	593300.	2961400.	05102408

HIGH 3-Hour

2001	3.86929	593600.	2960200.	01050615
2002	4.03297	593400.	2961100.	02040812
2003	3.91742	593600.	2961300.	03040812
2004	7.61545	594700.	2961500.	04090503
2005	5.51228	593200.	2961400.	05102406

HIGH 1-Hour

2001	4.31259	593400.	2960800.	01042212
2002	4.59657	593500.	2961100.	02081511
2003	4.48804	595000.	2960600.	03041012
2004	11.39733	594800.	2960500.	04090419
2005	7.75635	593400.	2961300.	05102407

SOURCE GROUP ID: O7595

Annual

2001	0.24533	593400.	2960800.	01123124
2002	0.30704	593500.	2961200.	02123124
2003	0.28910	593600.	2961300.	03123124
2004	0.27807	593500.	2961000.	04123124
2005	0.25666	593500.	2960900.	05123124

HIGH 24-Hour

2001	1.67498	593300.	2960500.	01100924
2002	1.52126	593700.	2961600.	02030224
2003	1.69833	593600.	2961200.	03061624
2004	1.94802	594600.	2961500.	04090524
2005	1.79457	593300.	2961200.	05061024

HIGH 8-Hour

2001	4.24403	593300.	2960500.	01100916
2002	3.96015	593700.	2961600.	02030216
2003	3.80000	593600.	2961200.	03062916
2004	5.72205	594600.	2961500.	04090508
2005	4.25550	593300.	2961400.	05102408

HIGH 3-Hour

2001	4.45101	593600.	2960200.	01050615
2002	4.64841	593400.	2961100.	02040812
2003	4.57531	593600.	2961300.	03040812
2004	8.14770	594700.	2961500.	04090503
2005	6.72214	593300.	2961400.	05102406

HIGH 1-Hour

2001	4.95530	593400.	2960800.	01042212
2002	5.25107	593500.	2961100.	02081511
2003	5.48520	592800.	2961100.	03120323
2004	13.01476	594800.	2960700.	04092520
2005	8.69378	593400.	2961300.	05102407

SOURCE GROUP ID: O7559

Annual

2001	0.22816	593400.	2960800.	01123124
2002	0.28718	593500.	2961200.	02123124
2003	0.27055	593600.	2961300.	03123124
2004	0.25991	593500.	2961000.	04123124
2005	0.23973	593500.	2960900.	05123124

HIGH 24-Hour

2001	1.55722	593300.	2960500.	01100924
2002	1.43171	593700.	2961600.	02030224
2003	1.58398	593600.	2961200.	03061624
2004	1.83710	594700.	2961600.	04090524
2005	1.68789	593300.	2961200.	05061024

HIGH 8-Hour

2001	3.98066	593300.	2960500.	01100916
2002	3.74295	593700.	2961600.	02030216
2003	3.55803	593600.	2961200.	03062916
2004	5.46055	594700.	2961600.	04090508
2005	3.93158	593300.	2961400.	05102408

HIGH 3-Hour

2001	4.21452	593600.	2960200.	01050615
2002	4.39937	593400.	2961100.	02040812
2003	4.30673	593600.	2961300.	03040812
2004	7.87668	594700.	2961500.	04090503
2005	6.23526	593200.	2961400.	05102406

HIGH 1-Hour

2001	4.70147	593400.	2960800.	01042212
2002	4.99369	593500.	2961100.	02081511
2003	4.96706	592800.	2961100.	03120323
2004	12.25075	594800.	2960700.	04092520
2005	8.31655	593400.	2961300.	05102407

SOURCE GROUP ID: O7535

Annual

2001	0.21809	593400.	2960800.	01123124
2002	0.27545	593500.	2961200.	02123124
2003	0.25958	593600.	2961300.	03123124
2004	0.24921	593500.	2961000.	04123124
2005	0.22979	593500.	2960900.	05123124

HIGH 24-Hour

2001	1.49546	593200.	2960500.	01100924
2002	1.38104	593700.	2961600.	02030224
2003	1.51717	593600.	2961200.	03061624
2004	1.78310	594700.	2961600.	04090524
2005	1.62634	593300.	2961200.	05061024

HIGH 8-Hour

2001	3.82784	593300.	2960500.	01100916
2002	3.61981	593700.	2961600.	02030216
2003	3.41412	593600.	2961200.	03062916
2004	5.30184	594700.	2961600.	04090508
2005	3.73417	593300.	2961400.	05102408

HIGH 3-Hour

2001	4.07194	593600.	2960200.	01050615
2002	4.24843	593400.	2961100.	02040812
2003	4.14559	593600.	2961300.	03040812
2004	7.87215	594700.	2961500.	04090503
2005	5.93503	593200.	2961400.	05102406

HIGH 1-Hour

2001	4.54607	593400.	2960800.	01042212
2002	4.83720	593500.	2961100.	02081511
2003	4.68536	595000.	2960600.	03041012
2004	11.80292	594900.	2960700.	04092520
2005	8.06052	593400.	2961300.	05102407

All receptor computations reported with respect to a user-specified origin

GRID 0.00 0.00

DISCRETE 0.00 0.00

```
CO STARTING
  TITLEONE 2001 RBEC- LOAD ANALYSIS, MPS 501G1 PLUS OIL 12/31/08
  TITLETWO GENERIC (10 g/s) EMISSION RATES FOR CC CTS
  MODELOPT DFAULT CONC NOWARN
  AVERTIME PERIOD 24 8 3 1
  POLLUTID GEN
  RUNORNOT RUN
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
  LOCATION OA1095 POINT 594125.983 2960797.999 1.000
  LOCATION OB1095 POINT 594172.071 2960797.963 1.000
  LOCATION OC1095 POINT 594274.233 2960797.946 1.000

  LOCATION OA1059 POINT 594125.983 2960797.999 1.000
  LOCATION OB1059 POINT 594172.071 2960797.963 1.000
  LOCATION OC1059 POINT 594274.233 2960797.946 1.000

  LOCATION OA1035 POINT 594125.983 2960797.999 1.000
  LOCATION OB1035 POINT 594172.071 2960797.963 1.000
  LOCATION OC1035 POINT 594274.233 2960797.946 1.000

  LOCATION OA7595 POINT 594125.983 2960797.999 1.000
  LOCATION OB7595 POINT 594172.071 2960797.963 1.000
  LOCATION OC7595 POINT 594274.233 2960797.946 1.000

  LOCATION OA7559 POINT 594125.983 2960797.999 1.000
  LOCATION OB7559 POINT 594172.071 2960797.963 1.000
  LOCATION OC7559 POINT 594274.233 2960797.946 1.000

  LOCATION OA7535 POINT 594125.983 2960797.999 1.000
  LOCATION OB7535 POINT 594172.071 2960797.963 1.000
  LOCATION OC7535 POINT 594274.233 2960797.946 1.000

** Source Parameters **
** Baseload, 95 F
  SRCPARAM OA1095 3.3333  45.4  452.0  21.2  6.71
  SRCPARAM OB1095 3.3333  45.4  452.0  21.2  6.71
  SRCPARAM OC1095 3.3333  45.4  452.0  21.2  6.71
** Baseload, 59 F
  SRCPARAM OA1059 3.3333  45.4  453.7  23.0  6.71
  SRCPARAM OB1059 3.3333  45.4  453.7  23.0  6.71
  SRCPARAM OC1059 3.3333  45.4  453.7  23.0  6.71
** Baseload, 35 F
  SRCPARAM OA1035 3.3333  45.4  454.8  24.2  6.71
  SRCPARAM OB1035 3.3333  45.4  454.8  24.2  6.71
  SRCPARAM OC1035 3.3333  45.4  454.8  24.2  6.71
** 75% Load, 95 F
  SRCPARAM OA7595 3.3333  45.4  447.0  20.8  6.71
  SRCPARAM OB7595 3.3333  45.4  447.0  20.8  6.71
  SRCPARAM OC7595 3.3333  45.4  447.0  20.8  6.71
** 75% Load, 59 F
  SRCPARAM OA7559 3.3333  45.4  448.7  22.2  6.71
  SRCPARAM OB7559 3.3333  45.4  448.7  22.2  6.71
  SRCPARAM OC7559 3.3333  45.4  448.7  22.2  6.71
** 75% Load, 35 F
  SRCPARAM OA7535 3.3333  45.4  449.8  23.1  6.71
  SRCPARAM OB7535 3.3333  45.4  449.8  23.1  6.71
  SRCPARAM OC7535 3.3333  45.4  449.8  23.1  6.71

** Building Downwash **
SO BUILDHGT OA1035-OA7595     29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OA1035-OA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OA1035-OA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OA1035-OA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OA1035-OA7595     23.47  23.47  23.47  23.47  23.47  23.47
```

SO BUILDHGT	OA1035-OA7595	23.47	23.47	23.47	29.57	29.57	29.57
SO BUILDWID	OA1035-OA7595	18.85	19.41	22.95	25.81	27.87	29.09
SO BUILDWID	OA1035-OA7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	OA1035-OA7595	27.87	25.81	22.95	19.41	15.27	10.67
SO BUILDWID	OA1035-OA7595	15.27	19.41	22.95	25.81	27.87	29.09
SO BUILDWID	OA1035-OA7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	OA1035-OA7595	27.87	25.81	22.95	19.29	18.85	17.83
SO BUILDLEN	OA1035-OA7595	10.39	29.43	29.09	27.87	25.81	22.95
SO BUILDLEN	OA1035-OA7595	19.41	15.27	10.67	15.27	19.41	22.95
SO BUILDLEN	OA1035-OA7595	25.81	27.87	29.09	29.43	28.87	27.43
SO BUILDLEN	OA1035-OA7595	28.87	29.43	29.09	27.87	25.81	22.95
SO BUILDLEN	OA1035-OA7595	19.41	15.27	10.67	15.27	19.41	22.95
SO BUILDLEN	OA1035-OA7595	25.81	27.87	29.09	13.06	10.39	7.41
SO XBADJ	OA1035-OA7595	-87.54	-32.91	-31.26	-28.65	-25.18	-20.94
SO XBADJ	OA1035-OA7595	-16.07	-10.71	-5.02	-3.94	-2.74	-1.46
SO XBADJ	OA1035-OA7595	-0.14	1.19	2.48	3.70	4.80	5.76
SO XBADJ	OA1035-OA7595	4.69	3.48	2.17	0.78	-0.62	-2.01
SO XBADJ	OA1035-OA7595	-3.34	-4.56	-5.65	-11.33	-16.66	-21.49
SO XBADJ	OA1035-OA7595	-25.67	-29.06	-31.57	-100.73	-87.54	-87.32
SO YBADJ	OA1035-OA7595	-14.51	-6.96	-10.01	-12.76	-15.13	-17.03
SO YBADJ	OA1035-OA7595	-18.41	-19.24	-19.48	-19.13	-18.20	-16.71
SO YBADJ	OA1035-OA7595	-14.72	-12.28	-9.46	-6.36	-3.07	0.32
SO YBADJ	OA1035-OA7595	3.69	6.96	10.01	12.76	15.13	17.03
SO YBADJ	OA1035-OA7595	18.41	19.24	19.48	19.13	18.20	16.71
SO YBADJ	OA1035-OA7595	14.72	12.28	9.46	-14.45	14.53	0.01
SO BUILDHGT	OB1035-OB7595	29.57	29.57	29.57	23.47	23.47	23.47
SO BUILDHGT	OB1035-OB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	OB1035-OB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	OB1035-OB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	OB1035-OB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	OB1035-OB7595	23.47	23.47	23.47	23.17	29.57	29.57
SO BUILDWID	OB1035-OB7595	18.85	19.29	19.15	25.81	27.87	29.09
SO BUILDWID	OB1035-OB7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	OB1035-OB7595	27.87	25.81	22.95	19.41	15.27	10.67
SO BUILDWID	OB1035-OB7595	15.27	19.41	22.95	25.81	27.87	29.09
SO BUILDWID	OB1035-OB7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	OB1035-OB7595	27.87	25.81	22.95	27.91	18.85	17.83
SO BUILDLEN	OB1035-OB7595	10.39	13.06	15.33	27.87	25.81	22.95
SO BUILDLEN	OB1035-OB7595	19.41	15.27	10.67	15.27	19.41	22.95
SO BUILDLEN	OB1035-OB7595	25.81	27.87	29.09	29.43	28.87	27.43
SO BUILDLEN	OB1035-OB7595	28.87	29.43	29.09	27.87	25.81	22.95
SO BUILDLEN	OB1035-OB7595	19.41	15.27	10.67	15.27	19.41	22.95
SO BUILDLEN	OB1035-OB7595	25.81	27.87	29.09	47.73	10.39	7.41
SO XBADJ	OB1035-OB7595	-87.51	-100.83	-103.09	-58.25	-60.46	-60.84
SO XBADJ	OB1035-OB7595	-59.36	-56.09	-51.10	-4.13	-2.91	-1.59
SO XBADJ	OB1035-OB7595	-0.23	1.14	2.48	3.74	4.89	5.88
SO XBADJ	OB1035-OB7595	4.85	3.67	2.38	30.38	34.66	37.88
SO XBADJ	OB1035-OB7595	39.96	40.82	40.44	-11.14	-16.50	-21.36
SO XBADJ	OB1035-OB7595	-25.58	-29.01	-31.57	-109.53	-87.41	-87.24
SO YBADJ	OB1035-OB7595	-14.22	14.74	-1.86	22.56	14.53	6.05
SO YBADJ	OB1035-OB7595	-2.62	-11.20	-19.44	-19.29	-18.38	-16.92
SO YBADJ	OB1035-OB7595	-14.95	-12.52	-9.71	-6.61	-3.31	0.10
SO YBADJ	OB1035-OB7595	3.50	6.80	9.89	-22.56	-14.53	-6.05
SO YBADJ	OB1035-OB7595	2.62	11.20	19.44	19.29	18.38	16.92
SO YBADJ	OB1035-OB7595	14.95	12.52	9.71	-23.01	14.79	0.29
SO BUILDHGT	OC1035-OC7595	29.57	23.17	23.17	23.47	23.47	23.47
SO BUILDHGT	OC1035-OC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	OC1035-OC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	OC1035-OC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	OC1035-OC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO BUILDHGT	OC1035-OC7595	23.47	23.47	23.47	23.47	29.57	29.57
SO BUILDWID	OC1035-OC7595	18.85	27.91	34.24	25.81	27.87	29.09
SO BUILDWID	OC1035-OC7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	OC1035-OC7595	27.87	25.81	22.95	19.41	15.27	10.67
SO BUILDWID	OC1035-OC7595	15.27	19.41	22.95	25.81	27.87	29.09
SO BUILDWID	OC1035-OC7595	29.43	28.87	27.43	28.87	29.43	29.09
SO BUILDWID	OC1035-OC7595	27.87	25.81	22.95	19.41	18.85	17.83
SO BUILDLEN	OC1035-OC7595	10.39	47.73	46.38	27.87	25.81	22.95
SO BUILDLEN	OC1035-OC7595	19.41	15.27	10.67	15.27	19.41	22.95
SO BUILDLEN	OC1035-OC7595	25.81	27.87	29.09	29.43	28.87	27.43
SO BUILDLEN	OC1035-OC7595	28.87	29.43	29.09	27.87	25.81	22.95

```
SO BUILDLEN OC1035-OC7595      19.41   15.27   10.67   15.27   19.41   22.95
SO BUILDLEN OC1035-OC7595      25.81   27.87   29.09   29.43   10.39    7.41
SO XBADJ    OC1035-OC7595     -87.49 -109.62 -111.69  -28.71  -25.26  -21.04
SO XBADJ    OC1035-OC7595    -112.31 -111.55 -107.40   -4.08   -2.88   -1.60
SO XBADJ    OC1035-OC7595      -0.27    1.08    2.38    3.62    4.75    5.73
SO XBADJ    OC1035-OC7595       4.68    3.50    2.20    0.84   -0.54   -1.91
SO XBADJ    OC1035-OC7595      -3.22   -4.44   -5.52  -11.19  -16.52  -21.36
SO XBADJ    OC1035-OC7595     -25.54  -28.95  -31.47  -33.05  -87.46  -87.25
SO YBADJ    OC1035-OC7595     -14.43   23.32    8.08  -12.64  -15.01  -16.93
SO YBADJ    OC1035-OC7595      16.51   -1.56  -19.58  -19.12  -18.21  -16.75
SO YBADJ    OC1035-OC7595     -14.78  -12.36   -9.56   -6.48   -3.20    0.18
SO YBADJ    OC1035-OC7595       3.56    6.82    9.88   12.64   15.01   16.93
SO YBADJ    OC1035-OC7595      18.33   19.18   19.44   19.12   18.21   16.75
SO YBADJ    OC1035-OC7595      14.78   12.36    9.56    6.48   14.59    0.08

  SRCGROUP O1095 OA1095 OB1095 OC1095
  SRCGROUP O1059 OA1059 OB1059 OC1059
  SRCGROUP O1035 OA1035 OB1035 OC1035
  SRCGROUP O7595 OA7595 OB7595 OC7595
  SRCGROUP O7559 OA7559 OB7559 OC7559
  SRCGROUP O7535 OA7535 OB7535 OC7535

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
RE STARTING
  INCLUDED RIVFHCS.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
  SURFFILE C:\amodmet\PBIMIA01.SFC
  PROFFILE C:\amodmet\PBIMIA01.PFL
  SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
  UAIRDATA 92803 2001 MIAMI/FIU
  PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE FIRST
OU FINISHED
**
```

AERBOB RELEASE 020304
AERMOD OUTPUT FILE NUMBER 1 :GENOMPCD.O01
AERMOD OUTPUT FILE NUMBER 2 :GENOMPCD.O02
AERMOD OUTPUT FILE NUMBER 3 :GENOMPCD.O03
AERMOD OUTPUT FILE NUMBER 4 :GENOMPCD.O04
AERMOD OUTPUT FILE NUMBER 5 :GENOMPCD.O05
First title for last output file is: 2001 RBEC- LOAD ANALYSIS, MPS 501G1 PLUS OIL CONDO 12/31/08
Second title for last output file is: GENERIC (10 g/s) EMISSION RATES FOR CC CTS

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: O1095					
Annual					
	2001	0.32906	594330.	2960240.	01123124
	2002	0.40697	594330.	2960240.	02123124
	2003	0.42043	594330.	2960240.	03123124
	2004	0.40775	594330.	2960240.	04123124
	2005	0.56260	594330.	2960240.	05123124
HIGH 24-Hour					
	2001	4.33430	594330.	2960240.	01110924
	2002	4.17036	594280.	2960240.	02052124
	2003	4.84773	594330.	2960240.	03112924
	2004	5.80364	594330.	2960240.	04090424
	2005	5.74114	594330.	2960240.	05102824
HIGH 8-Hour					
	2001	10.98050	594330.	2960240.	01100308
	2002	7.87347	594330.	2960240.	02011908
	2003	9.69320	594280.	2960240.	03112916
	2004	12.13996	594280.	2960240.	04090408
	2005	12.75221	594280.	2960240.	05122324
HIGH 3-Hour					
	2001	16.40864	594330.	2960240.	01091706
	2002	14.95035	594330.	2960240.	02010821
	2003	18.11278	594280.	2960240.	03111321
	2004	18.52814	594280.	2960240.	04101621
	2005	19.38563	594280.	2960240.	05122321
HIGH 1-Hour					
	2001	26.34845	594280.	2960240.	01122020
	2002	28.97515	594330.	2960240.	02010820
	2003	26.87221	594305.	2960240.	03091124
	2004	27.83878	594280.	2960240.	04021821
	2005	29.55192	594330.	2960240.	05013103
SOURCE GROUP ID: O1059					
Annual					
	2001	0.29396	594330.	2960240.	01123124
	2002	0.36599	594330.	2960240.	02123124
	2003	0.37892	594330.	2960240.	03123124
	2004	0.36848	594330.	2960240.	04123124
	2005	0.50547	594330.	2960240.	05123124
HIGH 24-Hour					
	2001	3.82082	594330.	2960240.	01110924
	2002	3.85368	594280.	2960240.	02052124
	2003	4.48777	594330.	2960240.	03112924
	2004	5.50555	594330.	2960240.	04090424
	2005	5.13568	594330.	2960240.	05102824
HIGH 8-Hour					
	2001	9.57812	594330.	2960240.	01100308
	2002	6.93793	594330.	2960240.	02011908
	2003	9.18326	594280.	2960240.	03112916
	2004	11.22243	594280.	2960240.	04090408
	2005	11.21339	594280.	2960240.	05122324
HIGH 3-Hour					
	2001	14.24995	594330.	2960240.	01091706
	2002	13.14925	594330.	2960240.	02010821
	2003	15.81389	594280.	2960240.	03111321
	2004	16.43958	594330.	2960240.	04090409
	2005	17.03442	594280.	2960240.	05122321
HIGH 1-Hour					
	2001	23.24610	594280.	2960240.	01122020
	2002	25.47622	594330.	2960240.	02010820

2003	23.57153	594305.	2960240.	03091124
2004	24.52559	594280.	2960240.	04021821
2005	25.97349	594330.	2960240.	05013103

SOURCE GROUP ID: O1035

Annual

2001	0.27362	594330.	2960240.	01123124
2002	0.34204	594330.	2960240.	02123124
2003	0.35470	594330.	2960240.	03123124
2004	0.34560	594330.	2960240.	04123124
2005	0.47247	594330.	2960240.	05123124

HIGH 24-Hour

2001	3.53041	594330.	2960240.	01110924
2002	3.66388	594280.	2960240.	02052124
2003	4.27094	594330.	2960240.	03112924
2004	5.34098	594330.	2960240.	04090424
2005	4.85147	594280.	2960240.	05041524

HIGH 8-Hour

2001	8.78304	594330.	2960240.	01100308
2002	6.41088	594330.	2960240.	02011908
2003	8.86144	594280.	2960240.	03112916
2004	10.73354	594280.	2960240.	04090408
2005	10.34604	594280.	2960240.	05122324

HIGH 3-Hour

2001	13.04632	594330.	2960240.	01091706
2002	12.13492	594330.	2960240.	02010821
2003	14.52722	594280.	2960240.	03111321
2004	15.95928	594330.	2960240.	04090409
2005	15.71088	594280.	2960240.	05122321

HIGH 1-Hour

2001	21.49313	594280.	2960240.	01122020
2002	23.50262	594330.	2960240.	02010820
2003	21.71823	594305.	2960240.	03091124
2004	22.65484	594280.	2960240.	04021821
2005	23.95522	594330.	2960240.	05013103

SOURCE GROUP ID: O7595

Annual

2001	0.34573	594330.	2960240.	01123124
2002	0.42603	594330.	2960240.	02123124
2003	0.43974	594330.	2960240.	03123124
2004	0.42584	594330.	2960240.	04123124
2005	0.58929	594330.	2960240.	05123124

HIGH 24-Hour

2001	4.58866	594330.	2960240.	01110924
2002	4.30542	594280.	2960240.	02052124
2003	4.99327	594330.	2960240.	03112924
2004	5.92610	594330.	2960240.	04090424
2005	6.03129	594330.	2960240.	05102824

HIGH 8-Hour

2001	11.69235	594330.	2960240.	01100308
2002	8.33936	594330.	2960240.	02011908
2003	9.88876	594280.	2960240.	03112916
2004	12.52854	594280.	2960240.	04090408
2005	13.50685	594280.	2960240.	05122324

HIGH 3-Hour

2001	17.52082	594330.	2960240.	01091706
2002	15.81512	594330.	2960240.	02010821
2003	19.29601	594280.	2960240.	03111321
2004	19.62677	594280.	2960240.	04101621
2005	20.54856	594280.	2960240.	05122321

HIGH 1-Hour

2001	27.87562	594280.	2960240.	01122020
2002	30.64408	594330.	2960240.	02010820
2003	28.57920	594305.	2960240.	03091124
2004	29.44338	594280.	2960240.	04021821
2005	31.28383	594330.	2960240.	05013103

SOURCE GROUP ID: O7559

Annual

2001	0.31537	594330.	2960240.	01123124
2002	0.39089	594330.	2960240.	02123124
2003	0.40404	594330.	2960240.	03123124
2004	0.39218	594330.	2960240.	04123124
2005	0.54007	594330.	2960240.	05123124

HIGH 24-Hour

2001	4.13869	594330.	2960240.	01110924
2002	4.03974	594280.	2960240.	02052124
2003	4.69280	594330.	2960240.	03112924
2004	5.67445	594330.	2960240.	04090424
2005	5.50785	594330.	2960240.	05102824

HIGH 8-Hour

2001	10.45376	594330.	2960240.	01100308
2002	7.51851	594330.	2960240.	02011908
2003	9.47590	594280.	2960240.	03112916
2004	11.72456	594280.	2960240.	04090408
2005	12.16177	594280.	2960240.	05122324

HIGH 3-Hour

2001	15.60829	594330.	2960240.	01091706
2002	14.24420	594330.	2960240.	02010821
2003	17.26428	594280.	2960240.	03111321
2004	17.71712	594280.	2960240.	04101621
2005	18.49074	594280.	2960240.	05122321

HIGH 1-Hour

2001	25.16965	594280.	2960240.	01122020
2002	27.60078	594330.	2960240.	02010820
2003	25.66629	594305.	2960240.	03091124
2004	26.55415	594280.	2960240.	04021821
2005	28.17740	594330.	2960240.	05013103

SOURCE GROUP ID: O7535

Annual

2001	0.29799	594330.	2960240.	01123124
2002	0.37059	594330.	2960240.	02123124
2003	0.38348	594330.	2960240.	03123124
2004	0.37275	594330.	2960240.	04123124
2005	0.51180	594330.	2960240.	05123124

HIGH 24-Hour

2001	3.88482	594330.	2960240.	01110924
2002	3.88265	594280.	2960240.	02052124
2003	4.51436	594330.	2960240.	03112924
2004	5.52893	594330.	2960240.	04090424
2005	5.20810	594330.	2960240.	05102824

HIGH 8-Hour

2001	9.76056	594330.	2960240.	01100308
2002	7.05614	594330.	2960240.	02011908
2003	9.22095	594280.	2960240.	03112916
2004	11.28153	594280.	2960240.	04090408
2005	11.40226	594280.	2960240.	05122324

HIGH 3-Hour

2001	14.54004	594330.	2960240.	01091706
2002	13.35698	594330.	2960240.	02010821
2003	16.12569	594280.	2960240.	03111321
2004	16.64029	594280.	2960240.	04101621
2005	17.32911	594280.	2960240.	05122321

HIGH 1-Hour

2001	23.63596	594280.	2960240.	01122020
2002	25.87719	594330.	2960240.	02010820
2003	24.02934	594305.	2960240.	03091124
2004	24.91969	594280.	2960240.	04021821
2005	26.41065	594330.	2960240.	05013103

All receptor computations reported with respect to a user-specified origin

GRID 0.00 0.00

DISCRETE 0.00 0.00

```
CO STARTING
   TITLEONE 2001 RBEC- LOAD ANALYSIS, MPS 501G1 PLUS OIL CONDO 12/31/08
   TITLETWO GENERIC (10 g/s) EMISSION RATES FOR CC CTS
   MODELOPT DFAULT CONC NOWARN
   AVERTIME PERIOD 24 8 3 1
   POLLUTID GEN
   RUNORNOT RUN
   FLAGPOLE
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION OA1095 POINT 594125.983 2960797.999 1.000
   LOCATION OB1095 POINT 594172.071 2960797.963 1.000
   LOCATION OC1095 POINT 594274.233 2960797.946 1.000

   LOCATION OA1059 POINT 594125.983 2960797.999 1.000
   LOCATION OB1059 POINT 594172.071 2960797.963 1.000
   LOCATION OC1059 POINT 594274.233 2960797.946 1.000

   LOCATION OA1035 POINT 594125.983 2960797.999 1.000
   LOCATION OB1035 POINT 594172.071 2960797.963 1.000
   LOCATION OC1035 POINT 594274.233 2960797.946 1.000

   LOCATION OA7595 POINT 594125.983 2960797.999 1.000
   LOCATION OB7595 POINT 594172.071 2960797.963 1.000
   LOCATION OC7595 POINT 594274.233 2960797.946 1.000

   LOCATION OA7559 POINT 594125.983 2960797.999 1.000
   LOCATION OB7559 POINT 594172.071 2960797.963 1.000
   LOCATION OC7559 POINT 594274.233 2960797.946 1.000

   LOCATION OA7535 POINT 594125.983 2960797.999 1.000
   LOCATION OB7535 POINT 594172.071 2960797.963 1.000
   LOCATION OC7535 POINT 594274.233 2960797.946 1.000

** Source Parameters **
** Baseload, 95 F
   SRCPARAM OA1095 3.3333   45.4   452.0   21.2   6.71
   SRCPARAM OB1095 3.3333   45.4   452.0   21.2   6.71
   SRCPARAM OC1095 3.3333   45.4   452.0   21.2   6.71
** Baseload, 59 F
   SRCPARAM OA1059 3.3333   45.4   453.7   23.0   6.71
   SRCPARAM OB1059 3.3333   45.4   453.7   23.0   6.71
   SRCPARAM OC1059 3.3333   45.4   453.7   23.0   6.71
** Baseload, 35 F
   SRCPARAM OA1035 3.3333   45.4   454.8   24.2   6.71
   SRCPARAM OB1035 3.3333   45.4   454.8   24.2   6.71
   SRCPARAM OC1035 3.3333   45.4   454.8   24.2   6.71
** 75% Load, 95 F
   SRCPARAM OA7595 3.3333   45.4   447.0   20.8   6.71
   SRCPARAM OB7595 3.3333   45.4   447.0   20.8   6.71
   SRCPARAM OC7595 3.3333   45.4   447.0   20.8   6.71
** 75% Load, 59 F
   SRCPARAM OA7559 3.3333   45.4   448.7   22.2   6.71
   SRCPARAM OB7559 3.3333   45.4   448.7   22.2   6.71
   SRCPARAM OC7559 3.3333   45.4   448.7   22.2   6.71
** 75% Load, 35 F
   SRCPARAM OA7535 3.3333   45.4   449.8   23.1   6.71
   SRCPARAM OB7535 3.3333   45.4   449.8   23.1   6.71
   SRCPARAM OC7535 3.3333   45.4   449.8   23.1   6.71

** Building Downwash **
SO BUILDHGT OA1035-OA7595        29.57   23.47   23.47   23.47   23.47   23.47
SO BUILDHGT OA1035-OA7595        23.47   23.47   23.47   23.47   23.47   23.47
SO BUILDHGT OA1035-OA7595        23.47   23.47   23.47   23.47   23.47   23.47
SO BUILDHGT OA1035-OA7595        23.47   23.47   23.47   23.47   23.47   23.47
SO BUILDHGT OA1035-OA7595        23.47   23.47   23.47   23.47   23.47   23.47
SO BUILDHGT OA1035-OA7595        23.47   23.47   23.47   29.57   29.57   29.57
SO BUILDWID OA1035-OA7595        18.85   19.41   22.95   25.81   27.87   29.09
SO BUILDWID OA1035-OA7595        29.43   28.87   27.43   28.87   29.43   29.09
SO BUILDWID OA1035-OA7595        27.87   25.81   22.95   19.41   15.27   10.67
SO BUILDWID OA1035-OA7595        15.27   19.41   22.95   25.81   27.87   29.09
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SO BUILDWID OA1035-OA7595       29.43   28.87   27.43   28.87   29.43   29.09
SO BUILDWID OA1035-OA7595       27.87   25.81   22.95   19.29   18.85   17.83
SO BUILDLEN OA1035-OA7595       10.39   29.43   29.09   27.87   25.81   22.95
SO BUILDLEN OA1035-OA7595       19.41   15.27   10.67   15.27   19.41   22.95
SO BUILDLEN OA1035-OA7595       25.81   27.87   29.09   29.43   28.87   27.43
SO BUILDLEN OA1035-OA7595       28.87   29.43   29.09   27.87   25.81   22.95
SO BUILDLEN OA1035-OA7595       19.41   15.27   10.67   15.27   19.41   22.95
SO BUILDLEN OA1035-OA7595       25.81   27.87   29.09   13.06   10.39    7.41
SO XBADJ    OA1035-OA7595      -87.54  -32.91  -31.26  -28.65  -25.18  -20.94
SO XBADJ    OA1035-OA7595      -16.07  -10.71   -5.02   -3.94   -2.74   -1.46
SO XBADJ    OA1035-OA7595       -0.14    1.19    2.48    3.70    4.80    5.76
SO XBADJ    OA1035-OA7595        4.69    3.48    2.17    0.78   -0.62   -2.01
SO XBADJ    OA1035-OA7595       -3.34   -4.56   -5.65  -11.33  -16.66  -21.49
SO XBADJ    OA1035-OA7595      -25.67  -29.06  -31.57 -100.73  -87.54  -87.32
SO YBADJ    OA1035-OA7595      -14.51   -6.96  -10.01  -12.76  -15.13  -17.03
SO YBADJ    OA1035-OA7595      -18.41  -19.24  -19.48  -19.13  -18.20  -16.71
SO YBADJ    OA1035-OA7595      -14.72  -12.28   -9.46   -6.36   -3.07    0.32
SO YBADJ    OA1035-OA7595        3.69    6.96   10.01   12.76   15.13   17.03
SO YBADJ    OA1035-OA7595       18.41   19.24   19.48   19.13   18.20   16.71
SO YBADJ    OA1035-OA7595       14.72   12.28    9.46  -14.45   14.53    0.01

SO BUILDHGT OB1035-OB7595       29.57   29.57   29.57   23.47   23.47   23.47
SO BUILDHGT OB1035-OB7595       23.47   23.47   23.47   23.47   23.47   23.47
SO BUILDHGT OB1035-OB7595       23.47   23.47   23.47   23.47   23.47   23.47
SO BUILDHGT OB1035-OB7595       23.47   23.47   23.47   23.47   23.47   23.47
SO BUILDHGT OB1035-OB7595       23.47   23.47   23.47   23.47   23.47   23.47
SO BUILDHGT OB1035-OB7595       23.47   23.47   23.47   23.17   29.57   29.57
SO BUILDWID OB1035-OB7595       18.85   19.29   19.15   25.81   27.87   29.09
SO BUILDWID OB1035-OB7595       29.43   28.87   27.43   28.87   29.43   29.09
SO BUILDWID OB1035-OB7595       27.87   25.81   22.95   19.41   15.27   10.67
SO BUILDWID OB1035-OB7595       15.27   19.41   22.95   25.81   27.87   29.09
SO BUILDWID OB1035-OB7595       29.43   28.87   27.43   28.87   29.43   29.09
SO BUILDWID OB1035-OB7595       27.87   25.81   22.95   27.91   18.85   17.83
SO BUILDLEN OB1035-OB7595       10.39   13.06   15.33   27.87   25.81   22.95
SO BUILDLEN OB1035-OB7595       19.41   15.27   10.67   15.27   19.41   22.95
SO BUILDLEN OB1035-OB7595       25.81   27.87   29.09   29.43   28.87   27.43
SO BUILDLEN OB1035-OB7595       28.87   29.43   29.09   27.87   25.81   22.95
SO BUILDLEN OB1035-OB7595       19.41   15.27   10.67   15.27   19.41   22.95
SO BUILDLEN OB1035-OB7595       25.81   27.87   29.09   47.73   10.39    7.41
SO XBADJ    OB1035-OB7595      -87.51 -100.83 -103.09  -58.25  -60.46  -60.84
SO XBADJ    OB1035-OB7595      -59.36  -56.09  -51.10   -4.13   -2.91   -1.59
SO XBADJ    OB1035-OB7595       -0.23    1.14    2.48    3.74    4.89    5.88
SO XBADJ    OB1035-OB7595        4.85    3.67    2.38   30.38   34.66   37.88
SO XBADJ    OB1035-OB7595       39.96   40.82   40.44  -11.14  -16.50  -21.36
SO XBADJ    OB1035-OB7595      -25.58  -29.01  -31.57 -109.53  -87.41  -87.24
SO YBADJ    OB1035-OB7595      -14.22   14.74   -1.86   22.56   14.53    6.05
SO YBADJ    OB1035-OB7595       -2.62  -11.20  -19.44  -19.29  -18.38  -16.92
SO YBADJ    OB1035-OB7595      -14.95  -12.52   -9.71   -6.61   -3.31    0.10
SO YBADJ    OB1035-OB7595        3.50    6.80    9.89  -22.56  -14.53   -6.05
SO YBADJ    OB1035-OB7595        2.62   11.20   19.44   19.29   18.38   16.92
SO YBADJ    OB1035-OB7595       14.95   12.52    9.71  -23.01   14.79    0.29

SO BUILDHGT OC1035-OC7595       29.57   23.17   23.17   23.47   23.47   23.47
SO BUILDHGT OC1035-OC7595       23.47   23.47   23.47   23.47   23.47   23.47
SO BUILDHGT OC1035-OC7595       23.47   23.47   23.47   23.47   23.47   23.47
SO BUILDHGT OC1035-OC7595       23.47   23.47   23.47   23.47   23.47   23.47
SO BUILDHGT OC1035-OC7595       23.47   23.47   23.47   23.47   23.47   23.47
SO BUILDHGT OC1035-OC7595       23.47   23.47   23.47   23.47   29.57   29.57
SO BUILDWID OC1035-OC7595       18.85   27.91   34.24   25.81   27.87   29.09
SO BUILDWID OC1035-OC7595       29.43   28.87   27.43   28.87   29.43   29.09
SO BUILDWID OC1035-OC7595       27.87   25.81   22.95   19.41   15.27   10.67
SO BUILDWID OC1035-OC7595       15.27   19.41   22.95   25.81   27.87   29.09
SO BUILDWID OC1035-OC7595       29.43   28.87   27.43   28.87   29.43   29.09
SO BUILDWID OC1035-OC7595       27.87   25.81   22.95   19.41   18.85   17.83
SO BUILDLEN OC1035-OC7595       10.39   47.73   46.38   27.87   25.81   22.95
SO BUILDLEN OC1035-OC7595       19.41   15.27   10.67   15.27   19.41   22.95
SO BUILDLEN OC1035-OC7595       25.81   27.87   29.09   29.43   28.87   27.43
SO BUILDLEN OC1035-OC7595       28.87   29.43   29.09   27.87   25.81   22.95
SO BUILDLEN OC1035-OC7595       19.41   15.27   10.67   15.27   19.41   22.95
SO BUILDLEN OC1035-OC7595       25.81   27.87   29.09   29.43   10.39    7.41
SO XBADJ    OC1035-OC7595      -87.49 -109.62 -111.69  -28.71  -25.26  -21.04
SO XBADJ    OC1035-OC7595     -112.31 -111.55 -107.40   -4.08   -2.88   -1.60
SO XBADJ    OC1035-OC7595       -0.27    1.08    2.38    3.62    4.75    5.73
SO XBADJ    OC1035-OC7595        4.68    3.50    2.20    0.84   -0.54   -1.91
SO XBADJ    OC1035-OC7595       -3.22   -4.44   -5.52  -11.19  -16.52  -21.36
SO XBADJ    OC1035-OC7595      -25.54  -28.95  -31.47  -33.05  -87.46  -87.25
SO YBADJ    OC1035-OC7595      -14.43   23.32    8.08  -12.64  -15.01  -16.93
SO YBADJ    OC1035-OC7595       16.51   -1.56  -19.58  -19.12  -18.21  -16.75
SO YBADJ    OC1035-OC7595      -14.78  -12.36   -9.56   -6.48   -3.20    0.18
```

```
SO YBADJ     OC1035-OC7595          3.56    6.82    9.88   12.64   15.01   16.93
SO YBADJ     OC1035-OC7595         18.33   19.18   19.44   19.12   18.21   16.75
SO YBADJ     OC1035-OC7595         14.78   12.36    9.56    6.48   14.59    0.08

   SRCGROUP O1095 OA1095 OB1095 OC1095
   SRCGROUP O1059 OA1059 OB1059 OC1059
   SRCGROUP O1035 OA1035 OB1035 OC1035
   SRCGROUP O7595 OA7595 OB7595 OC7595
   SRCGROUP O7559 OA7559 OB7559 OC7559
   SRCGROUP O7535 OA7535 OB7535 OC7535

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
RE STARTING
   INCLUDED RIV1COND.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE C:\amodmet\PBIMIA01.SFC
   PROFFILE C:\amodmet\PBIMIA01.PFL
   SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
   UAIRDATA 92803 2001 MIAMI/FIU
   PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE FIRST
OU FINISHED
**
```

AERBOB RELEASE 020304
AERMOD OUTPUT FILE NUMBER 1 :GENOIL.O01
AERMOD OUTPUT FILE NUMBER 2 :GENOIL.O02
AERMOD OUTPUT FILE NUMBER 3 :GENOIL.O03
AERMOD OUTPUT FILE NUMBER 4 :GENOIL.O04
AERMOD OUTPUT FILE NUMBER 5 :GENOIL.O05
First title for last output file is: 2001 RBEC- CT LOAD ANALYSIS, SIEMENS OIL 12/31/08
Second title for last output file is: GENERIC (10 g/s) EMISSION RATES FOR CC CTS

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: O1095					
Annual					
	2001	0.24665	593400.	2960800.	01123124
	2002	0.30844	593500.	2961200.	02123124
	2003	0.29041	593600.	2961300.	03123124
	2004	0.27949	593500.	2961000.	04123124
	2005	0.25800	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	1.69281	593300.	2960500.	01100924
	2002	1.53265	593700.	2961600.	02030224
	2003	1.70708	593600.	2961200.	03061624
	2004	1.96836	594600.	2961500.	04090524
	2005	1.80761	593300.	2961200.	05061024
HIGH 8-Hour					
	2001	4.28577	593300.	2960500.	01100916
	2002	3.98878	593700.	2961600.	02030216
	2003	3.82013	593600.	2961200.	03062916
	2004	5.77967	594600.	2961500.	04090508
	2005	4.30084	593300.	2961400.	05102408
HIGH 3-Hour					
	2001	4.47324	593600.	2960200.	01050615
	2002	4.67208	593400.	2961100.	02040812
	2003	4.60030	593600.	2961300.	03040812
	2004	8.20234	594700.	2961500.	04090503
	2005	6.79428	593300.	2961400.	05102406
HIGH 1-Hour					
	2001	4.97870	593400.	2960800.	01042212
	2002	5.27488	593500.	2961100.	02081511
	2003	5.55243	592800.	2961100.	03120323
	2004	13.15354	594800.	2960700.	04092520
	2005	8.76054	593400.	2961300.	05102407
SOURCE GROUP ID: O1059					
Annual					
	2001	0.22172	593400.	2960800.	01123124
	2002	0.27959	593500.	2961200.	02123124
	2003	0.26346	593600.	2961300.	03123124
	2004	0.25310	593500.	2961000.	04123124
	2005	0.23339	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	1.52109	593200.	2960500.	01100924
	2002	1.40065	593700.	2961600.	02030224
	2003	1.54130	593600.	2961200.	03061624
	2004	1.80820	594700.	2961600.	04090524
	2005	1.65081	593300.	2961200.	05061024
HIGH 8-Hour					
	2001	3.89782	593300.	2960500.	01100916
	2002	3.66768	593700.	2961600.	02030216
	2003	3.46781	593600.	2961200.	03062916
	2004	5.37539	594700.	2961600.	04090508
	2005	3.82346	593300.	2961400.	05102408
HIGH 3-Hour					
	2001	4.12749	593600.	2960200.	01050615
	2002	4.30734	593400.	2961100.	02040812
	2003	4.20789	593600.	2961300.	03040812
	2004	7.77748	594700.	2961500.	04090503
	2005	6.06867	593200.	2961400.	05102406
HIGH 1-Hour					
	2001	4.60922	593400.	2960800.	01042212
	2002	4.89895	593500.	2961100.	02081511

2003	4.78643	592800.	2961100.	03120323
2004	12.01661	594800.	2960700.	04092520
2005	8.19739	593400.	2961300.	05102407

SOURCE GROUP ID: O1035

Annual

2001	0.20846	593400.	2960800.	01123124
2002	0.26408	593500.	2961200.	02123124
2003	0.24896	593600.	2961300.	03123124
2004	0.23899	593500.	2961000.	04123124
2005	0.22028	593500.	2960900.	05123124

HIGH 24-Hour

2001	1.44421	593200.	2960500.	01100924
2002	1.33394	593700.	2961600.	02030224
2003	1.45330	593600.	2961200.	03061624
2004	1.74164	594700.	2961600.	04090524
2005	1.56853	593300.	2961200.	05061024

HIGH 8-Hour

2001	3.69983	593300.	2960500.	01100916
2002	3.50534	593700.	2961600.	02030216
2003	3.27687	593600.	2961200.	03062916
2004	5.18014	594700.	2961600.	04090508
2005	3.55536	593300.	2961400.	05102408

HIGH 3-Hour

2001	3.93615	593600.	2960200.	01050615
2002	4.10467	593400.	2961100.	02040812
2003	3.99236	593600.	2961300.	03040812
2004	7.71003	594700.	2961500.	04090503
2005	5.65973	593200.	2961400.	05102406

HIGH 1-Hour

2001	4.39145	593400.	2960800.	01042212
2002	4.67575	593500.	2961100.	02081511
2003	4.55669	595000.	2960600.	03041012
2004	11.48886	594900.	2960700.	04092520
2005	7.81776	593400.	2961300.	05102407

SOURCE GROUP ID: O7595

Annual

2001	0.30571	593400.	2960800.	01123124
2002	0.37829	593600.	2961100.	02123124
2003	0.35195	593600.	2961300.	03123124
2004	0.34087	593500.	2960900.	04123124
2005	0.31660	593500.	2960900.	05123124

HIGH 24-Hour

2001	2.16598	593300.	2960500.	01100924
2002	1.86778	593700.	2961600.	02030224
2003	2.09280	593600.	2961200.	03061624
2004	2.28699	594600.	2961500.	04090524
2005	2.19384	593300.	2961200.	05061024

HIGH 8-Hour

2001	5.19559	593300.	2960500.	01100916
2002	4.76927	593700.	2961600.	02030216
2003	4.60883	593600.	2961200.	03062916
2004	6.67901	594600.	2961500.	04090508
2005	5.24632	593400.	2961400.	05102408

HIGH 3-Hour

2001	5.37502	594900.	2960600.	01091515
2002	5.50206	593400.	2961100.	02040812
2003	5.51827	593600.	2961300.	03040812
2004	8.73881	594900.	2961000.	04092524
2005	8.23596	593400.	2961300.	05102406

HIGH 1-Hour

2001	6.08299	595000.	2960500.	01060116
2002	6.10484	593500.	2961100.	02081511
2003	7.35656	593100.	2961000.	03120323
2004	15.25920	594800.	2960700.	04092520
2005	9.81945	593400.	2961300.	05102407

SOURCE GROUP ID: O7559

Annual

2001	0.28071	593400.	2960800.	01123124
2002	0.34879	593600.	2961100.	02123124
2003	0.32635	593600.	2961300.	03123124
2004	0.31501	593500.	2961000.	04123124
2005	0.29180	593500.	2960900.	05123124

HIGH 24-Hour

2001	1.95385	593300.	2960500.	01100924
2002	1.71770	593700.	2961600.	02030224
2003	1.93210	593600.	2961200.	03061624
2004	2.14425	594600.	2961500.	04090524
2005	2.02754	593300.	2961200.	05061024

HIGH 8-Hour

2001	4.80864	593300.	2960500.	01100916
2002	4.42686	593700.	2961600.	02030216
2003	4.28307	593600.	2961200.	03062916
2004	6.27612	594600.	2961500.	04090508
2005	4.82023	593300.	2961400.	05102408

HIGH 3-Hour

2001	4.97448	593300.	2960500.	01100912
2002	5.13019	593400.	2961100.	02040812
2003	5.11250	593600.	2961300.	03040812
2004	8.44241	594700.	2961500.	04090503
2005	7.49624	593300.	2961400.	05102406

HIGH 1-Hour

2001	5.58058	595000.	2960500.	01060116
2002	5.74834	593500.	2961100.	02081511
2003	6.53123	592900.	2961100.	03120323
2004	14.44942	594800.	2960700.	04092520
2005	9.41931	593400.	2961300.	05102407

SOURCE GROUP ID: O7535

Annual

2001	0.26736	593400.	2960800.	01123124
2002	0.33298	593600.	2961100.	02123124
2003	0.31240	593600.	2961300.	03123124
2004	0.30117	593500.	2961000.	04123124
2005	0.27853	593500.	2960900.	05123124

HIGH 24-Hour

2001	1.84667	593300.	2960500.	01100924
2002	1.64463	593700.	2961600.	02030224
2003	1.84460	593600.	2961200.	03061624
2004	2.06164	594600.	2961500.	04090524
2005	1.93893	593300.	2961200.	05061024

HIGH 8-Hour

2001	4.60230	593300.	2960500.	01100916
2002	4.25562	593700.	2961600.	02030216
2003	4.10426	593600.	2961200.	03062916
2004	6.04098	594600.	2961500.	04090508
2005	4.68214	593300.	2961400.	05102408

HIGH 3-Hour

2001	4.75575	593300.	2960500.	01100912
2002	4.95206	593400.	2961100.	02040812
2003	4.91372	593600.	2961300.	03040812
2004	8.27577	594700.	2961500.	04090503
2005	7.47548	593400.	2961300.	05102406

HIGH 1-Hour

2001	5.28527	595000.	2960500.	01060116
2002	5.57216	593500.	2961100.	02081511
2003	6.14553	592900.	2961100.	03120323
2004	13.96901	594800.	2960700.	04092520
2005	9.17644	593400.	2961300.	05102407

All receptor computations reported with respect to a user-specified origin

GRID 0.00 0.00

DISCRETE 0.00 0.00

```
CO STARTING
  TITLEONE 2001 RBEC- CT LOAD ANALYSIS, SIEMENS OIL 12/31/08
  TITLETWO GENERIC (10 g/s) EMISSION RATES FOR CC CTS
  MODELOPT DFAULT CONC NOWARN
  AVERTIME PERIOD 24 8 3 1
  POLLUTID GEN
  RUNORNOT RUN
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
  LOCATION OA1095 POINT 594125.983 2960797.999 1.000
  LOCATION OB1095 POINT 594172.071 2960797.963 1.000
  LOCATION OC1095 POINT 594274.233 2960797.946 1.000

  LOCATION OA1059 POINT 594125.983 2960797.999 1.000
  LOCATION OB1059 POINT 594172.071 2960797.963 1.000
  LOCATION OC1059 POINT 594274.233 2960797.946 1.000

  LOCATION OA1035 POINT 594125.983 2960797.999 1.000
  LOCATION OB1035 POINT 594172.071 2960797.963 1.000
  LOCATION OC1035 POINT 594274.233 2960797.946 1.000

  LOCATION OA7595 POINT 594125.983 2960797.999 1.000
  LOCATION OB7595 POINT 594172.071 2960797.963 1.000
  LOCATION OC7595 POINT 594274.233 2960797.946 1.000

  LOCATION OA7559 POINT 594125.983 2960797.999 1.000
  LOCATION OB7559 POINT 594172.071 2960797.963 1.000
  LOCATION OC7559 POINT 594274.233 2960797.946 1.000

  LOCATION OA7535 POINT 594125.983 2960797.999 1.000
  LOCATION OB7535 POINT 594172.071 2960797.963 1.000
  LOCATION OC7535 POINT 594274.233 2960797.946 1.000

** Source Parameters **
** Baseload, 95 F
  SRCPARAM OA1095 3.3333  45.4  452.0  20.31  6.71
  SRCPARAM OB1095 3.3333  45.4  452.0  20.31  6.71
  SRCPARAM OC1095 3.3333  45.4  452.0  20.31  6.71
** Baseload, 59 F
  SRCPARAM OA1059 3.3333  45.4  453.7  22.42  6.71
  SRCPARAM OB1059 3.3333  45.4  453.7  22.42  6.71
  SRCPARAM OC1059 3.3333  45.4  453.7  22.42  6.71
** Baseload, 35 F
  SRCPARAM OA1035 3.3333  45.4  454.8  23.70  6.71
  SRCPARAM OB1035 3.3333  45.4  454.8  23.70  6.71
  SRCPARAM OC1035 3.3333  45.4  454.8  23.70  6.71
** 75% Load, 95 F
  SRCPARAM OA7595 3.3333  45.4  447.0  16.63  6.71
  SRCPARAM OB7595 3.3333  45.4  447.0  16.63  6.71
  SRCPARAM OC7595 3.3333  45.4  447.0  16.63  6.71
** 75% Load, 59 F
  SRCPARAM OA7559 3.3333  45.4  448.7  18.04  6.71
  SRCPARAM OB7559 3.3333  45.4  448.7  18.04  6.71
  SRCPARAM OC7559 3.3333  45.4  448.7  18.04  6.71
** 75% Load, 35 F
  SRCPARAM OA7535 3.3333  45.4  449.8  18.88  6.71
  SRCPARAM OB7535 3.3333  45.4  449.8  18.88  6.71
  SRCPARAM OC7535 3.3333  45.4  449.8  18.88  6.71

** Building Downwash **
SO BUILDHGT OA1035-OA7595     29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OA1035-OA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OA1035-OA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OA1035-OA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OA1035-OA7595     23.47  23.47  23.47  23.47  23.47  23.47
```

```
SO BUILDHGT OA1035-OA7595     23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID OA1035-OA7595     18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID OA1035-OA7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID OA1035-OA7595     27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID OA1035-OA7595     15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID OA1035-OA7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID OA1035-OA7595     27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN OA1035-OA7595     10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN OA1035-OA7595     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN OA1035-OA7595     25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN OA1035-OA7595     28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN OA1035-OA7595     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN OA1035-OA7595     25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    OA1035-OA7595    -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    OA1035-OA7595    -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    OA1035-OA7595     -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    OA1035-OA7595      4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    OA1035-OA7595     -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    OA1035-OA7595    -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    OA1035-OA7595    -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    OA1035-OA7595    -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    OA1035-OA7595    -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    OA1035-OA7595      3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    OA1035-OA7595     18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    OA1035-OA7595     14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT OB1035-OB7595     29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT OB1035-OB7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OB1035-OB7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OB1035-OB7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OB1035-OB7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OB1035-OB7595     23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID OB1035-OB7595     18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID OB1035-OB7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID OB1035-OB7595     27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID OB1035-OB7595     15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID OB1035-OB7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID OB1035-OB7595     27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN OB1035-OB7595     10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN OB1035-OB7595     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN OB1035-OB7595     25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN OB1035-OB7595     28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN OB1035-OB7595     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN OB1035-OB7595     25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    OB1035-OB7595    -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    OB1035-OB7595    -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    OB1035-OB7595     -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    OB1035-OB7595      4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    OB1035-OB7595     39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    OB1035-OB7595    -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    OB1035-OB7595    -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    OB1035-OB7595     -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    OB1035-OB7595    -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    OB1035-OB7595      3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    OB1035-OB7595      2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    OB1035-OB7595     14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT OC1035-OC7595     29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT OC1035-OC7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OC1035-OC7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OC1035-OC7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OC1035-OC7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OC1035-OC7595     23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID OC1035-OC7595     18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID OC1035-OC7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID OC1035-OC7595     27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID OC1035-OC7595     15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID OC1035-OC7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID OC1035-OC7595     27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN OC1035-OC7595     10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN OC1035-OC7595     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN OC1035-OC7595     25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN OC1035-OC7595     28.87  29.43  29.09  27.87  25.81  22.95
```

```
SO BUILDLEN OC1035-OC7595      19.41   15.27   10.67   15.27   19.41   22.95
SO BUILDLEN OC1035-OC7595      25.81   27.87   29.09   29.43   10.39    7.41
SO XBADJ    OC1035-OC7595     -87.49 -109.62 -111.69  -28.71  -25.26  -21.04
SO XBADJ    OC1035-OC7595    -112.31 -111.55 -107.40   -4.08   -2.88   -1.60
SO XBADJ    OC1035-OC7595      -0.27    1.08    2.38    3.62    4.75    5.73
SO XBADJ    OC1035-OC7595       4.68    3.50    2.20    0.84   -0.54   -1.91
SO XBADJ    OC1035-OC7595      -3.22   -4.44   -5.52  -11.19  -16.52  -21.36
SO XBADJ    OC1035-OC7595     -25.54  -28.95  -31.47  -33.05  -87.46  -87.25
SO YBADJ    OC1035-OC7595     -14.43   23.32    8.08  -12.64  -15.01  -16.93
SO YBADJ    OC1035-OC7595      16.51   -1.56  -19.58  -19.12  -18.21  -16.75
SO YBADJ    OC1035-OC7595     -14.78  -12.36   -9.56   -6.48   -3.20    0.18
SO YBADJ    OC1035-OC7595       3.56    6.82    9.88   12.64   15.01   16.93
SO YBADJ    OC1035-OC7595      18.33   19.18   19.44   19.12   18.21   16.75
SO YBADJ    OC1035-OC7595      14.78   12.36    9.56    6.48   14.59    0.08

  SRCGROUP O1095 OA1095 OB1095 OC1095
  SRCGROUP O1059 OA1059 OB1059 OC1059
  SRCGROUP O1035 OA1035 OB1035 OC1035
  SRCGROUP O7595 OA7595 OB7595 OC7595
  SRCGROUP O7559 OA7559 OB7559 OC7559
  SRCGROUP O7535 OA7535 OB7535 OC7535

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
RE STARTING
  INCLUDED RIVFHCS.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
**   SURFFILE C:\amodmet\PBIMIA01.SFC
**   PROFFILE C:\amodmet\PBIMIA01.PFL
  SURFFILE PBIMIA01.SFC
  PROFFILE PBIMIA01.PFL
  SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
  UAIRDATA 92803 2001 MIAMI/FIU
  PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE FIRST
OU FINISHED
**
```

AERBOB RELEASE 020304
AERMOD OUTPUT FILE NUMBER 1 :GENOILCD.O01
AERMOD OUTPUT FILE NUMBER 2 :GENOILCD.O02
AERMOD OUTPUT FILE NUMBER 3 :GENOILCD.O03
AERMOD OUTPUT FILE NUMBER 4 :GENOILCD.O04
AERMOD OUTPUT FILE NUMBER 5 :GENOILCD.O05
First title for last output file is: 2001 RBEC- CT LOAD ANALYSIS, SIEMENS OIL CONDO 12/31/08
Second title for last output file is: GENERIC (10 g/s) EMISSION RATES FOR CC CTS

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: O1095					
Annual					
	2001	0.34755	594330.	2960240.	01123124
	2002	0.42834	594330.	2960240.	02123124
	2003	0.44221	594330.	2960240.	03123124
	2004	0.42831	594330.	2960240.	04123124
	2005	0.59259	594330.	2960240.	05123124
HIGH 24-Hour					
	2001	4.60748	594330.	2960240.	01110924
	2002	4.33258	594280.	2960240.	02052124
	2003	5.03281	594330.	2960240.	03112924
	2004	5.97071	594330.	2960240.	04090424
	2005	6.05822	594330.	2960240.	05102824
HIGH 8-Hour					
	2001	11.73131	594330.	2960240.	01100308
	2002	8.37180	594330.	2960240.	02011908
	2003	9.94386	594280.	2960240.	03112916
	2004	12.69438	594280.	2960240.	04090408
	2005	13.56869	594280.	2960240.	05122324
HIGH 3-Hour					
	2001	17.56446	594330.	2960240.	01091706
	2002	15.90954	594330.	2960240.	02010821
	2003	19.33850	594280.	2960240.	03111321
	2004	19.68215	594280.	2960240.	04101621
	2005	20.63342	594280.	2960240.	05122321
HIGH 1-Hour					
	2001	27.98653	594280.	2960240.	01122020
	2002	30.83085	594330.	2960240.	02010820
	2003	28.62420	594305.	2960240.	03091124
	2004	29.59849	594280.	2960240.	04021821
	2005	31.43045	594330.	2960240.	05013103
SOURCE GROUP ID: O1059					
Annual					
	2001	0.30380	594330.	2960240.	01123124
	2002	0.37755	594330.	2960240.	02123124
	2003	0.39062	594330.	2960240.	03123124
	2004	0.37958	594330.	2960240.	04123124
	2005	0.52152	594330.	2960240.	05123124
HIGH 24-Hour					
	2001	3.96267	594330.	2960240.	01110924
	2002	3.94498	594280.	2960240.	02052124
	2003	4.59232	594330.	2960240.	03112924
	2004	5.59281	594330.	2960240.	04090424
	2005	5.30454	594330.	2960240.	05102824
HIGH 8-Hour					
	2001	9.96260	594330.	2960240.	01100308
	2002	7.19585	594330.	2960240.	02011908
	2003	9.33515	594280.	2960240.	03112916
	2004	11.47749	594280.	2960240.	04090408
	2005	11.63866	594280.	2960240.	05122324
HIGH 3-Hour					
	2001	14.83981	594330.	2960240.	01091706
	2002	13.64846	594330.	2960240.	02010821
	2003	16.44283	594280.	2960240.	03111321
	2004	16.95167	594280.	2960240.	04101621
	2005	17.68277	594280.	2960240.	05122321
HIGH 1-Hour					
	2001	24.10302	594280.	2960240.	01122020
	2002	26.44713	594330.	2960240.	02010820

2003	24.47463	594305.	2960240.	03091124
2004	25.44345	594280.	2960240.	04021821
2005	26.96277	594330.	2960240.	05013103

SOURCE GROUP ID: O1035

Annual

2001	0.28122	594330.	2960240.	01123124
2002	0.35103	594330.	2960240.	02123124
2003	0.36378	594330.	2960240.	03123124
2004	0.35420	594330.	2960240.	04123124
2005	0.48479	594330.	2960240.	05123124

HIGH 24-Hour

2001	3.63724	594330.	2960240.	01110924
2002	3.73621	594280.	2960240.	02052124
2003	4.35413	594330.	2960240.	03112924
2004	5.40211	594330.	2960240.	04090424
2005	4.95767	594280.	2960240.	05041524

HIGH 8-Hour

2001	9.07808	594330.	2960240.	01100308
2002	6.60485	594330.	2960240.	02011908
2003	8.98660	594280.	2960240.	03112916
2004	10.92503	594280.	2960240.	04090408
2005	10.66584	594280.	2960240.	05122324

HIGH 3-Hour

2001	13.48625	594330.	2960240.	01091706
2002	12.51019	594330.	2960240.	02010821
2003	14.99769	594280.	2960240.	03111321
2004	16.12373	594330.	2960240.	04090409
2005	16.19810	594280.	2960240.	05122321

HIGH 1-Hour

2001	22.13895	594280.	2960240.	01122020
2002	24.23334	594330.	2960240.	02010820
2003	22.39548	594305.	2960240.	03091124
2004	23.34621	594280.	2960240.	04021821
2005	24.69971	594330.	2960240.	05013103

SOURCE GROUP ID: O7595

Annual

2001	0.45829	594330.	2960240.	01123124
2002	0.55425	594330.	2960240.	02123124
2003	0.57024	594330.	2960240.	03123124
2004	0.54838	594330.	2960240.	04123124
2005	0.76899	594330.	2960240.	05123124

HIGH 24-Hour

2001	6.26863	594330.	2960240.	01110924
2002	5.21820	594280.	2960240.	02052124
2003	6.08537	594330.	2960240.	03021324
2004	6.69429	594330.	2960240.	04090424
2005	7.95496	594330.	2960240.	05102824

HIGH 8-Hour

2001	16.36080	594330.	2960240.	01100308
2002	11.44387	594330.	2960240.	02011908
2003	11.59781	594305.	2960240.	03122708
2004	16.86885	594280.	2960240.	04101624
2005	18.60813	594280.	2960240.	05122324

HIGH 3-Hour

2001	24.61525	594330.	2960240.	01091706
2002	21.80577	594330.	2960240.	02010821
2003	26.99939	594280.	2960240.	03111321
2004	26.89057	594280.	2960240.	04101621
2005	28.39123	594280.	2960240.	05122321

HIGH 1-Hour

2001	38.09757	594280.	2960240.	01122020
2002	42.13459	594330.	2960240.	02010820
2003	39.70973	594305.	2960240.	03091124
2004	40.40978	594280.	2960240.	04021821
2005	42.99567	594330.	2960240.	05013103

SOURCE GROUP ID: O7559

Annual

2001	0.41113	594330.	2960240.	01123124
2002	0.50051	594330.	2960240.	02123124
2003	0.51556	594330.	2960240.	03123124
2004	0.49740	594330.	2960240.	04123124
2005	0.69404	594330.	2960240.	05123124

HIGH 24-Hour

2001	5.57283	594330.	2960240.	01110924
2002	4.84842	594280.	2960240.	02052124
2003	5.61444	594330.	2960240.	03112924
2004	6.42667	594330.	2960240.	04090424
2005	7.14348	594330.	2960240.	05102824

HIGH 8-Hour

2001	14.43128	594330.	2960240.	01100308
2002	10.13720	594330.	2960240.	02011908
2003	10.68985	594280.	2960240.	03112916
2004	14.88237	594280.	2960240.	04101624
2005	16.41219	594280.	2960240.	05122324

HIGH 3-Hour

2001	21.69840	594330.	2960240.	01091706
2002	19.21901	594330.	2960240.	02010821
2003	23.73273	594280.	2960240.	03111321
2004	23.73307	594280.	2960240.	04101621
2005	24.98915	594280.	2960240.	05122321

HIGH 1-Hour

2001	33.67809	594280.	2960240.	01122020
2002	37.18736	594330.	2960240.	02010820
2003	34.83423	594305.	2960240.	03091124
2004	35.67974	594280.	2960240.	04021821
2005	37.93665	594330.	2960240.	05013103

SOURCE GROUP ID: O7535

Annual

2001	0.38571	594330.	2960240.	01123124
2002	0.47188	594330.	2960240.	02123124
2003	0.48647	594330.	2960240.	03123124
2004	0.47002	594330.	2960240.	04123124
2005	0.65390	594330.	2960240.	05123124

HIGH 24-Hour

2001	5.18655	594330.	2960240.	01110924
2002	4.64774	594280.	2960240.	02052124
2003	5.38688	594330.	2960240.	03112924
2004	6.26129	594330.	2960240.	04090424
2005	6.71430	594330.	2960240.	05102824

HIGH 8-Hour

2001	13.36972	594330.	2960240.	01100308
2002	9.41746	594330.	2960240.	02011908
2003	10.40176	594280.	2960240.	03112916
2004	13.84067	594280.	2960240.	04101624
2005	15.27572	594280.	2960240.	05122324

HIGH 3-Hour

2001	20.09216	594330.	2960240.	01091706
2002	17.89094	594330.	2960240.	02010821
2003	21.99188	594280.	2960240.	03111321
2004	22.10868	594280.	2960240.	04101621
2005	23.24275	594280.	2960240.	05122321

HIGH 1-Hour

2001	31.39972	594280.	2960240.	01122020
2002	34.64006	594330.	2960240.	02010820
2003	32.33950	594305.	2960240.	03091124
2004	33.24362	594280.	2960240.	04021821
2005	35.33056	594330.	2960240.	05013103

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

```
CO STARTING
  TITLEONE 2001 RBEC- CT LOAD ANALYSIS, SIEMENS OIL CONDO 12/31/08
  TITLETWO GENERIC (10 g/s) EMISSION RATES FOR CC CTS
  MODELOPT DFAULT CONC NOWARN
  AVERTIME PERIOD 24 8 3 1
  POLLUTID GEN
  RUNORNOT RUN
  FLAGPOLE
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
  LOCATION OA1095 POINT 594125.983 2960797.999 1.000
  LOCATION OB1095 POINT 594172.071 2960797.963 1.000
  LOCATION OC1095 POINT 594274.233 2960797.946 1.000

  LOCATION OA1059 POINT 594125.983 2960797.999 1.000
  LOCATION OB1059 POINT 594172.071 2960797.963 1.000
  LOCATION OC1059 POINT 594274.233 2960797.946 1.000

  LOCATION OA1035 POINT 594125.983 2960797.999 1.000
  LOCATION OB1035 POINT 594172.071 2960797.963 1.000
  LOCATION OC1035 POINT 594274.233 2960797.946 1.000

  LOCATION OA7595 POINT 594125.983 2960797.999 1.000
  LOCATION OB7595 POINT 594172.071 2960797.963 1.000
  LOCATION OC7595 POINT 594274.233 2960797.946 1.000

  LOCATION OA7559 POINT 594125.983 2960797.999 1.000
  LOCATION OB7559 POINT 594172.071 2960797.963 1.000
  LOCATION OC7559 POINT 594274.233 2960797.946 1.000

  LOCATION OA7535 POINT 594125.983 2960797.999 1.000
  LOCATION OB7535 POINT 594172.071 2960797.963 1.000
  LOCATION OC7535 POINT 594274.233 2960797.946 1.000

** Source Parameters **
** Baseload, 95 F
  SRCPARAM OA1095 3.3333  45.4  452.0  20.31  6.71
  SRCPARAM OB1095 3.3333  45.4  452.0  20.31  6.71
  SRCPARAM OC1095 3.3333  45.4  452.0  20.31  6.71
** Baseload, 59 F
  SRCPARAM OA1059 3.3333  45.4  453.7  22.42  6.71
  SRCPARAM OB1059 3.3333  45.4  453.7  22.42  6.71
  SRCPARAM OC1059 3.3333  45.4  453.7  22.42  6.71
** Baseload, 35 F
  SRCPARAM OA1035 3.3333  45.4  454.8  23.70  6.71
  SRCPARAM OB1035 3.3333  45.4  454.8  23.70  6.71
  SRCPARAM OC1035 3.3333  45.4  454.8  23.70  6.71
** 75% Load, 95 F
  SRCPARAM OA7595 3.3333  45.4  447.0  16.63  6.71
  SRCPARAM OB7595 3.3333  45.4  447.0  16.63  6.71
  SRCPARAM OC7595 3.3333  45.4  447.0  16.63  6.71
** 75% Load, 59 F
  SRCPARAM OA7559 3.3333  45.4  448.7  18.04  6.71
  SRCPARAM OB7559 3.3333  45.4  448.7  18.04  6.71
  SRCPARAM OC7559 3.3333  45.4  448.7  18.04  6.71
** 75% Load, 35 F
  SRCPARAM OA7535 3.3333  45.4  449.8  18.88  6.71
  SRCPARAM OB7535 3.3333  45.4  449.8  18.88  6.71
  SRCPARAM OC7535 3.3333  45.4  449.8  18.88  6.71

** Building Downwash **
SO BUILDHGT OA1035-OA7595     29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OA1035-OA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OA1035-OA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OA1035-OA7595     23.47  23.47  23.47  23.47  23.47  23.47
```

```
SO BUILDHGT OA1035-OA7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OA1035-OA7595     23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID OA1035-OA7595     18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID OA1035-OA7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID OA1035-OA7595     27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID OA1035-OA7595     15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID OA1035-OA7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID OA1035-OA7595     27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN OA1035-OA7595     10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN OA1035-OA7595     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN OA1035-OA7595     25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN OA1035-OA7595     28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN OA1035-OA7595     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN OA1035-OA7595     25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    OA1035-OA7595    -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    OA1035-OA7595    -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    OA1035-OA7595     -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    OA1035-OA7595      4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    OA1035-OA7595     -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    OA1035-OA7595    -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    OA1035-OA7595    -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    OA1035-OA7595    -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    OA1035-OA7595    -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    OA1035-OA7595      3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    OA1035-OA7595     18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    OA1035-OA7595     14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT OB1035-OB7595     29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT OB1035-OB7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OB1035-OB7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OB1035-OB7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OB1035-OB7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OB1035-OB7595     23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID OB1035-OB7595     18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID OB1035-OB7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID OB1035-OB7595     27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID OB1035-OB7595     15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID OB1035-OB7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID OB1035-OB7595     27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN OB1035-OB7595     10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN OB1035-OB7595     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN OB1035-OB7595     25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN OB1035-OB7595     28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN OB1035-OB7595     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN OB1035-OB7595     25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    OB1035-OB7595    -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    OB1035-OB7595    -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    OB1035-OB7595     -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    OB1035-OB7595      4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    OB1035-OB7595     39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    OB1035-OB7595    -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    OB1035-OB7595    -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    OB1035-OB7595     -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    OB1035-OB7595    -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    OB1035-OB7595      3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    OB1035-OB7595      2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    OB1035-OB7595     14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT OC1035-OC7595     29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT OC1035-OC7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OC1035-OC7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OC1035-OC7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OC1035-OC7595     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT OC1035-OC7595     23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID OC1035-OC7595     18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID OC1035-OC7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID OC1035-OC7595     27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID OC1035-OC7595     15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID OC1035-OC7595     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID OC1035-OC7595     27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN OC1035-OC7595     10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN OC1035-OC7595     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN OC1035-OC7595     25.81  27.87  29.09  29.43  28.87  27.43
```

```
SO BUILDLEN OC1035-OC7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN OC1035-OC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN OC1035-OC7595      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    OC1035-OC7595     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    OC1035-OC7595    -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    OC1035-OC7595      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    OC1035-OC7595       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    OC1035-OC7595      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    OC1035-OC7595     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    OC1035-OC7595     -14.43  23.32   8.08 -12.64 -15.01 -16.93
SO YBADJ    OC1035-OC7595      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    OC1035-OC7595     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    OC1035-OC7595       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    OC1035-OC7595      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    OC1035-OC7595      14.78  12.36   9.56   6.48  14.59   0.08

  SRCGROUP O1095 OA1095 OB1095 OC1095
  SRCGROUP O1059 OA1059 OB1059 OC1059
  SRCGROUP O1035 OA1035 OB1035 OC1035
  SRCGROUP O7595 OA7595 OB7595 OC7595
  SRCGROUP O7559 OA7559 OB7559 OC7559
  SRCGROUP O7535 OA7535 OB7535 OC7535

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
RE STARTING
  INCLUDED RIV1COND.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
**   SURFFILE C:\amodmet\PBIMIA01.SFC
**   PROFFILE C:\amodmet\PBIMIA01.PFL
  SURFFILE PBIMIA01.SFC
  PROFFILE PBIMIA01.PFL
  SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
  UAIRDATA 92803 2001 MIAMI/FIU
  PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE FIRST
OU FINISHED
**
```

PREDICTED SO_2 IMPACTS FOR RBEC

1. SUMMARY FILES FOR:
   - CTS/HRSGS AND FUEL HEATER
   - CTS/HRSGS, FUEL HEATER, AND GAS COMPRESSOR STATION
2. EXAMPLE INPUT FILE

AERBOB RELEASE 020304

AERMOD OUTPUT FILE NUMBER 1 :SO2GASC7.O01
AERMOD OUTPUT FILE NUMBER 2 :SO2GASC7.O02
AERMOD OUTPUT FILE NUMBER 3 :SO2GASC7.O03
AERMOD OUTPUT FILE NUMBER 4 :SO2GASC7.O04
AERMOD OUTPUT FILE NUMBER 5 :SO2GASC7.O05
First title for last output file is: 2001 RBEC- SO2 GAS 501G 95F&100%LD/ SH 35F&75%LD FH&CS 12/3
Second title for last output file is: SO2 EMISSION RATES PER CTS NOTE: ALL IDS THE SAME

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID:	MG				
Annual					
	2001	0.32084	593500.	2960900.	01123124
	2002	0.38772	593600.	2961100.	02123124
	2003	0.35687	593700.	2961200.	03123124
	2004	0.34209	593500.	2960900.	04123124
	2005	0.32060	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	2.17387	593300.	2960500.	01100924
	2002	1.72010	593500.	2961200.	02062024
	2003	2.09102	593600.	2961200.	03061624
	2004	1.87674	593700.	2961300.	04082624
	2005	2.01333	593700.	2961300.	05070424
HSH 24-Hour					
	2001	1.67814	593500.	2960500.	01050424
	2002	1.65320	593500.	2961100.	02062924
	2003	1.79534	593700.	2961400.	03071124
	2004	1.72087	593700.	2961300.	04060224
	2005	1.76962	593600.	2961100.	05040524
HIGH 3-Hour					
	2001	5.06564	593600.	2961100.	01072412
	2002	4.93280	593600.	2961200.	02072512
	2003	4.97452	593600.	2960700.	03022412
	2004	6.33135	594900.	2961000.	04092524
	2005	7.18288	593400.	2961300.	05102406
HSH 3-Hour					
	2001	4.55360	593500.	2961200.	01072415
	2002	4.69327	593700.	2961100.	02091412
	2003	4.65579	593800.	2961300.	03071112
	2004	5.22224	594600.	2961400.	04090506
	2005	5.25275	593500.	2961500.	05082524
SOURCE GROUP ID:	SH				
Annual					
	2001	0.26640	593500.	2960800.	01123124
	2002	0.31809	593600.	2961100.	02123124
	2003	0.29220	593700.	2961200.	03123124
	2004	0.27992	593500.	2960900.	04123124
	2005	0.26297	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	1.89946	593300.	2960500.	01100924
	2002	1.41219	593700.	2961500.	02030224
	2003	1.69421	593600.	2961200.	03061624
	2004	1.54835	594300.	2961500.	04090524
	2005	1.68055	593300.	2961000.	05070824
HSH 24-Hour					
	2001	1.47476	593000.	2960500.	01110124
	2002	1.34099	593500.	2961100.	02062024
	2003	1.45402	593700.	2961100.	03062924
	2004	1.43601	594500.	2961600.	04090524
	2005	1.47361	593500.	2961100.	05060924
HIGH 3-Hour					
	2001	4.12201	593600.	2961100.	01072412
	2002	3.95668	593600.	2961100.	02091412
	2003	4.05870	593600.	2960700.	03022412
	2004	4.85835	594900.	2961000.	04092524
	2005	5.32233	593400.	2961300.	05102406
HSH 3-Hour					
	2001	3.64600	594800.	2960600.	01032212
	2002	3.81754	593700.	2961100.	02091412
	2003	3.74494	593800.	2961300.	03071112

	2004	4.12111	594600.	2961400.	04090506
	2005	4.34454	593500.	2961500.	05102403
SOURCE GROUP ID:	MGC7				
Annual					
	2001	0.43457	593700.	2960800.	01123124
	2002	0.45946	593700.	2961000.	02123124
	2003	0.41324	593700.	2961100.	03123124
	2004	0.46089	593700.	2960800.	04123124
	2005	0.42106	593800.	2960800.	05123124
HIGH 24-Hour					
	2001	2.76270	593951.	2960723.	01120524
	2002	2.34295	593800.	2960700.	02030624
	2003	2.27858	593700.	2960800.	03111624
	2004	2.88243	593951.	2960762.	04123124
	2005	2.49143	593700.	2960700.	05011024
HSH 24-Hour					
	2001	2.69744	593951.	2960723.	01100924
	2002	2.29273	593800.	2960700.	02120824
	2003	2.16876	593800.	2960800.	03102624
	2004	2.41696	593951.	2960762.	04032624
	2005	2.30212	593951.	2960762.	05010224
HIGH 3-Hour					
	2001	5.28059	593600.	2961100.	01072412
	2002	5.22381	593500.	2960800.	02120912
	2003	5.41852	593600.	2960700.	03022412
	2004	6.40150	594900.	2961000.	04092524
	2005	7.28591	593400.	2961300.	05102406
HSH 3-Hour					
	2001	4.81481	593500.	2960600.	01120515
	2002	4.89017	593700.	2961100.	02091412
	2003	4.93855	593600.	2960600.	03101615
	2004	5.27668	594600.	2961400.	04090506
	2005	5.34501	593500.	2961500.	05082524
SOURCE GROUP ID:	SHC7				
Annual					
	2001	0.40253	593800.	2960800.	01123124
	2002	0.41234	593800.	2960800.	02123124
	2003	0.35285	593700.	2961100.	03123124
	2004	0.42376	593800.	2960800.	04123124
	2005	0.38586	593800.	2960800.	05123124
HIGH 24-Hour					
	2001	2.74777	593951.	2960723.	01120524
	2002	2.25481	593800.	2960700.	02030624
	2003	2.23150	593900.	2960800.	03102524
	2004	2.88636	593951.	2960762.	04123124
	2005	2.36128	593700.	2960700.	05011024
HSH 24-Hour					
	2001	2.71221	593951.	2960723.	01100924
	2002	2.19854	593800.	2960700.	02120824
	2003	2.05480	593800.	2960800.	03102624
	2004	2.41671	593951.	2960762.	04032624
	2005	2.29850	593951.	2960762.	05010224
HIGH 3-Hour					
	2001	4.41846	594123.	2960837.	01091424
	2002	4.36083	593500.	2960800.	02120912
	2003	4.50270	593600.	2960700.	03022412
	2004	4.92850	594900.	2961000.	04092524
	2005	5.42536	593400.	2961300.	05102406
HSH 3-Hour					
	2001	4.09716	593600.	2960600.	01120512
	2002	4.01443	593700.	2961100.	02091412
	2003	4.02717	593600.	2960600.	03101615
	2004	4.29296	593600.	2960800.	04051512
	2005	4.44208	593500.	2961500.	05082524

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

```
CO STARTING
  TITLEONE 2001 RBEC- SO2 GAS 501G 95F&100%LD/ SH 35F&75%LD FH&CS  12/31/08
  TITLETWO SO2 EMISSION RATES PER CTS  NOTE: ALL IDS THE SAME
  MODELOPT DFAULT CONC NOWARN
  AVERTIME PERIOD 24 3
  POLLUTID GEN
  RUNORNOT RUN
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **

  LOCATION MGA1095 POINT 594125.983 2960797.999 1.000
  LOCATION MGB1095 POINT 594172.071 2960797.963 1.000
  LOCATION MGC1095 POINT 594274.233 2960797.946 1.000

  LOCATION SHA1095 POINT 594125.983 2960797.999 1.000
  LOCATION SHB1095 POINT 594172.071 2960797.963 1.000
  LOCATION SHC1095 POINT 594274.233 2960797.946 1.000

  LOCATION FGH1 POINT 594155.571 2960783.547 1.000

  LOCATION CSE1 POINT 594070.600 2960755.500 1.000
  LOCATION CSE2 POINT 594070.600 2960760.500 1.000
  LOCATION CSE3 POINT 594070.600 2960765.500 1.000
  LOCATION CSE4 POINT 594070.600 2960770.500 1.000
  LOCATION CSE5 POINT 594070.600 2960775.500 1.000
  LOCATION CSE6 POINT 594070.600 2960780.500 1.000
  LOCATION CSE7 POINT 594070.600 2960785.500 1.000

** Source Parameters **
** Baseload, 95 F with duct firing
  SRCPARAM MGA1095 2.09    45.4  357.5  17.30  6.71
  SRCPARAM MGB1095 2.09    45.4  357.5  17.30  6.71
  SRCPARAM MGC1095 2.09    45.4  357.5  17.30  6.71

** 75% load, 35 F
  SRCPARAM SHA1095 1.51    45.4  357.6  15.00  6.71
  SRCPARAM SHB1095 1.51    45.4  357.6  15.00  6.71
  SRCPARAM SHC1095 1.51    45.4  357.6  15.00  6.71

  SRCPARAM FGH1  0.0068 9.144 533.150 32.02 0.305

  SRCPARAM CSE1 0.0072 12.2 729.800 49.50000 0.305
  SRCPARAM CSE2 0.0072 12.2 729.800 49.50000 0.305
  SRCPARAM CSE3 0.0072 12.2 729.800 49.50000 0.305
  SRCPARAM CSE4 0.0072 12.2 729.800 49.50000 0.305
  SRCPARAM CSE5 0.0072 12.2 729.800 49.50000 0.305
  SRCPARAM CSE6 0.0072 12.2 729.800 49.50000 0.305
  SRCPARAM CSE7 0.0072 12.2 729.800 49.50000 0.305

** Building Downwash **
SO BUILDHGT MGA1095      29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA1095      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID MGA1095      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA1095      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA1095      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGA1095      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA1095      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA1095      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN MGA1095      10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGA1095      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGA1095      25.81  27.87  29.09  29.43  28.87  27.43
```

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SO BUILDLEN MGA1095     28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGA1095     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGA1095     25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    MGA1095    -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    MGA1095    -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    MGA1095     -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    MGA1095      4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    MGA1095     -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    MGA1095    -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    MGA1095    -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    MGA1095    -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    MGA1095    -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    MGA1095      3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    MGA1095     18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    MGA1095     14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT MGB1095     29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT MGB1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB1095     23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID MGB1095     18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID MGB1095     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGB1095     27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGB1095     15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGB1095     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGB1095     27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN MGB1095     10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN MGB1095     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGB1095     25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGB1095     28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGB1095     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGB1095     25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    MGB1095    -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    MGB1095    -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    MGB1095     -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    MGB1095      4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    MGB1095     39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    MGB1095    -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    MGB1095    -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    MGB1095     -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    MGB1095    -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    MGB1095      3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    MGB1095      2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    MGB1095     14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT MGC1095     29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT MGC1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC1095     23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID MGC1095     18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID MGC1095     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGC1095     27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGC1095     15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGC1095     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGC1095     27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN MGC1095     10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN MGC1095     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGC1095     25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGC1095     28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGC1095     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGC1095     25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    MGC1095    -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    MGC1095    -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    MGC1095     -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    MGC1095      4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    MGC1095     -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    MGC1095    -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    MGC1095    -14.43  23.32   8.08 -12.64 -15.01 -16.93
SO YBADJ    MGC1095     16.51  -1.56 -19.58 -19.12 -18.21 -16.75
```

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SO YBADJ    MGC1095     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    MGC1095       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    MGC1095      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    MGC1095      14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT SHA1095      29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA1095      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID SHA1095      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA1095      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA1095      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHA1095      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA1095      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA1095      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN SHA1095      10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA1095      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA1095      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHA1095      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA1095      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA1095      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    SHA1095     -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    SHA1095     -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    SHA1095      -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    SHA1095       4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    SHA1095      -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    SHA1095     -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    SHA1095     -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    SHA1095     -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    SHA1095     -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    SHA1095       3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    SHA1095      18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    SHA1095      14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT SHB1095      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT SHB1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB1095      23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID SHB1095      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID SHB1095      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB1095      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHB1095      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHB1095      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB1095      27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN SHB1095      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN SHB1095      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB1095      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHB1095      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHB1095      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB1095      25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    SHB1095     -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    SHB1095     -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    SHB1095      -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    SHB1095       4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    SHB1095      39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    SHB1095     -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    SHB1095     -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    SHB1095      -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    SHB1095     -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    SHB1095       3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    SHB1095       2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    SHB1095      14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT SHC1095      29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT SHC1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC1095      31.39  31.39  31.39  31.39  31.39  31.39
SO BUILDHGT SHC1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC1095      23.47  23.47  23.47  23.47  29.57  29.57
```

```
SO BUILDWID SHC1095      18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID SHC1095      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC1095      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHC1095      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHC1095      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC1095      27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN SHC1095      10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN SHC1095      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC1095      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHC1095      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHC1095      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC1095      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    SHC1095     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    SHC1095    -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    SHC1095      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    SHC1095       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    SHC1095      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    SHC1095     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    SHC1095     -14.43  23.32   8.08 -12.64 -15.01 -16.93
SO YBADJ    SHC1095      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    SHC1095     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    SHC1095       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    SHC1095      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    SHC1095      14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT FGH1         29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT FGH1         23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1         23.47  23.47  23.47  23.47   0.00   0.00
SO BUILDHGT FGH1          0.00  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1         23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1         23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID FGH1         18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID FGH1         29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1         27.87  25.81  22.95  19.41   0.00   0.00
SO BUILDWID FGH1          0.00  19.41  22.95  25.81  27.87  29.09
SO BUILDWID FGH1         29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1         27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN FGH1         10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN FGH1         19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1         25.81  27.87  29.09  29.43   0.00   0.00
SO BUILDLEN FGH1          0.00  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN FGH1         19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1         25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    FGH1        -78.45 -81.64 -82.36 -36.60 -38.56 -39.34
SO XBADJ    FGH1        -38.93 -37.33 -34.60 -35.59 -35.49 -34.31
SO XBADJ    FGH1        -32.09   0.71  -1.76  -4.16   0.00   0.00
SO XBADJ    FGH1          0.00 -15.52   4.44   8.73  12.75  16.39
SO XBADJ    FGH1         19.52  22.06  23.94  20.32  16.08  11.36
SO XBADJ    FGH1          6.29 -28.58 -27.33 -77.03 -76.08 -72.82
SO YBADJ    FGH1         17.14   4.16  -8.95  19.19  14.96  10.28
SO YBADJ    FGH1          5.29   0.13  -5.03 -10.03 -14.74 -18.99
SO YBADJ    FGH1        -22.67   9.38  11.78  13.82   0.00   0.00
SO YBADJ    FGH1          0.00  17.37 -22.84 -19.19 -14.96 -10.28
SO YBADJ    FGH1         -5.29  -0.13   5.03  10.03  14.74  18.99
SO YBADJ    FGH1         22.67  -9.38 -11.78   8.41  -3.96 -16.21

SO BUILDHGT CSE1          6.10   6.10   6.10   6.10  23.47   6.10
SO BUILDHGT CSE1          6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1          6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1          6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE1         23.47  23.47  23.47  10.67  10.67  29.57
SO BUILDHGT CSE1         29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE1         15.09  20.58  25.44  29.54  27.87  34.93
SO BUILDWID CSE1         36.07  36.11  35.05  36.11  36.07  34.93
SO BUILDWID CSE1         32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE1         15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE1         29.43  28.87  27.43  34.14  34.79  15.33
SO BUILDWID CSE1         17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE1         36.11  36.07  34.93  32.73  25.81  25.44
SO BUILDLEN CSE1         20.58  15.09   9.14  15.09  20.58  25.44
SO BUILDLEN CSE1         29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE1         36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE1         19.41  15.27  10.67  18.85  22.89  19.15
```

```
SO BUILDLEN CSE1     18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE1    -3.26  -3.92  -4.47  -4.87  44.56  -5.23
SO XBADJ    CSE1    -5.18  -4.96  -4.60 -10.18 -15.46 -20.26
SO XBADJ    CSE1   -24.45 -27.89 -30.49 -32.16 -32.86 -32.55
SO XBADJ    CSE1   -32.85 -32.14 -30.46 -27.86 -70.37 -71.22
SO XBADJ    CSE1   -69.92 -66.49 -61.03 -71.09 -75.74 -78.08
SO XBADJ    CSE1   -78.05 -75.65  -4.44  -3.90  -3.25  -2.50
SO YBADJ    CSE1     2.64   5.17   7.54   9.68 -18.17  13.03
SO YBADJ    CSE1    14.13  14.80  15.03  14.79  14.11  13.00
SO YBADJ    CSE1    11.49   9.64   7.49   5.11   2.58  -0.03
SO YBADJ    CSE1    -2.64  -5.17  -7.54  -9.68  18.17   7.91
SO YBADJ    CSE1    -2.58 -13.00 -23.02  19.00   8.83   7.92
SO YBADJ    CSE1    -4.10 -15.99  -7.49  -5.11  -2.58   0.03

SO BUILDHGT CSE2     6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE2    23.47  23.47  23.47   6.10   6.10  29.57
SO BUILDHGT CSE2    29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE2    15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE2    36.07  36.11  35.05  36.11  36.07  34.93
SO BUILDWID CSE2    32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE2    15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE2    29.43  28.87  27.43  36.11  36.07  15.33
SO BUILDWID CSE2    17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE2    36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE2    20.58  15.09   9.14  15.09  20.58  25.44
SO BUILDLEN CSE2    29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE2    36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE2    19.41  15.27  10.67  15.09  20.58  19.15
SO BUILDLEN CSE2    18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE2    -8.18  -8.62  -8.80  -8.70  41.35  45.77
SO XBADJ    CSE2    -6.89  -5.83  -4.60  -9.31 -13.75 -17.76
SO XBADJ    CSE2   -21.23 -24.06 -26.16 -27.46 -27.93 -27.55
SO XBADJ    CSE2   -27.92 -27.44 -26.13 -24.03 -67.15 -68.72
SO XBADJ    CSE2   -68.21 -65.62 -61.03  -5.78  -6.84 -80.58
SO XBADJ    CSE2   -81.27 -79.48  -8.77  -8.60  -8.18  -7.50
SO YBADJ    CSE2     1.77   3.46   5.04   6.47 -22.00 -12.24
SO YBADJ    CSE2     9.43   9.88  10.03   9.87   9.41   8.67
SO YBADJ    CSE2     7.66   6.42   4.99   3.40   1.71  -0.03
SO YBADJ    CSE2    -1.77  -3.46  -5.04  -6.47  22.00  12.24
SO YBADJ    CSE2     2.12  -8.07 -18.02  -9.87  -9.41  12.25
SO YBADJ    CSE2    -0.27 -12.78  -4.99  -3.40  -1.71   0.03

SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE3     6.10   6.10   6.10  23.47   6.10   6.10
SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE3    23.47  23.47  23.47  23.47   6.10   6.10
SO BUILDHGT CSE3    29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE3    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE3    36.07  36.11  35.05  28.87  36.07  34.93
SO BUILDWID CSE3    32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE3    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE3    29.43  28.87  27.43  28.87  36.07  34.93
SO BUILDWID CSE3    17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE3    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE3    20.58  15.09   9.14  15.27  20.58  25.44
SO BUILDLEN CSE3    29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE3    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE3    19.41  15.27  10.67  15.27  20.58  25.44
SO BUILDLEN CSE3    18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE3   -13.11 -13.32 -13.13 -12.53 -11.56  43.27
SO XBADJ    CSE3    -8.60  -6.70  -4.60  44.96 -12.04 -15.26
SO XBADJ    CSE3   -18.02 -20.23 -21.83 -22.77 -23.01 -22.55
SO XBADJ    CSE3   -23.00 -22.75 -21.80 -20.20 -17.98 -66.22
SO XBADJ    CSE3   -66.50 -64.75 -61.03 -60.23  -8.55 -10.19
SO XBADJ    CSE3   -84.48 -83.31 -13.10 -13.30 -13.10 -12.50
SO YBADJ    CSE3     0.90   1.75   2.54   3.25   3.87 -16.57
SO YBADJ    CSE3     4.73   4.95   5.03  22.49   4.71   4.34
```

```
SO YBADJ    CSE3      3.83   3.21   2.49   1.69   0.85  -0.03
SO YBADJ    CSE3     -0.90  -1.75  -2.54  -3.25  -3.87  16.57
SO YBADJ    CSE3      6.82  -3.15 -13.02 -22.49  -4.71  -4.34
SO YBADJ    CSE3      3.56  -9.56  -2.49  -1.69  -0.85   0.03

SO BUILDHGT CSE4      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE4     23.47   6.10   6.10  23.47   6.10   6.10
SO BUILDHGT CSE4      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE4      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE4     23.47  23.47  23.47  23.47   6.10   6.10
SO BUILDHGT CSE4     29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE4     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE4     29.43  36.11  35.05  28.87  36.07  34.93
SO BUILDWID CSE4     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE4     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE4     29.43  28.87  27.43  28.87  36.07  34.93
SO BUILDWID CSE4     17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE4     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE4     19.41  15.09   9.14  15.27  20.58  25.44
SO BUILDLEN CSE4     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE4     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE4     19.41  15.27  10.67  15.27  20.58  25.44
SO BUILDLEN CSE4     18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE4    -18.03 -18.02 -17.46 -16.36 -14.77  40.77
SO XBADJ    CSE4     45.38  -7.57  -4.60  45.83 -10.33 -12.76
SO XBADJ    CSE4    -14.81 -16.40 -17.50 -18.07 -18.08 -17.55
SO XBADJ    CSE4    -18.07 -18.05 -17.47 -16.37 -14.76 -63.72
SO XBADJ    CSE4    -64.79 -63.88 -61.03 -61.10 -10.26 -12.69
SO XBADJ    CSE4    -87.70 -87.14 -17.43 -18.00 -18.02 -17.50
SO YBADJ    CSE4      0.03   0.04   0.04   0.04   0.04 -20.90
SO YBADJ    CSE4    -11.51   0.03   0.03  17.57   0.01   0.01
SO YBADJ    CSE4      0.00   0.00  -0.01  -0.02  -0.02  -0.03
SO YBADJ    CSE4     -0.03  -0.04  -0.04  -0.04  -0.04  20.90
SO YBADJ    CSE4     11.51   1.77  -8.02 -17.57  -0.01  -0.01
SO YBADJ    CSE4      7.39  -6.35   0.01   0.02   0.02   0.03

SO BUILDHGT CSE5      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE5     23.47   6.10   6.10  23.47  23.47   6.10
SO BUILDHGT CSE5      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE5      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE5     23.47  23.47  23.47  23.47  23.47   6.10
SO BUILDHGT CSE5     29.57  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE5     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE5     29.43  36.11  35.05  28.87  29.43  34.93
SO BUILDWID CSE5     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE5     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE5     29.43  28.87  27.43  28.87  29.43  34.93
SO BUILDWID CSE5     17.14  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE5     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE5     19.41  15.09   9.14  15.27  19.41  25.44
SO BUILDLEN CSE5     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE5     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE5     19.41  15.27  10.67  15.27  19.41  25.44
SO BUILDLEN CSE5     18.42  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE5    -22.96 -22.72 -21.79 -20.19 -17.99  38.27
SO XBADJ    CSE5     43.67  -8.44  -4.60  46.69  41.60 -10.26
SO XBADJ    CSE5    -11.59 -12.57 -13.17 -13.37 -13.16 -12.55
SO XBADJ    CSE5    -13.15 -13.35 -13.14 -12.54 -11.55 -61.23
SO XBADJ    CSE5    -63.08 -63.01 -61.03 -61.96 -61.01 -15.19
SO XBADJ    CSE5    -90.91 -90.97 -88.28 -22.70 -22.95 -22.50
SO YBADJ    CSE5     -0.84  -1.67  -2.46  -3.18  -3.79 -25.23
SO YBADJ    CSE5    -16.21  -4.89  -4.97  12.65  21.89  -4.32
SO YBADJ    CSE5     -3.83  -3.22  -2.51  -1.73  -0.89  -0.03
SO YBADJ    CSE5      0.84   1.67   2.46   3.18   3.79  25.23
SO YBADJ    CSE5     16.21   6.70  -3.02 -12.65 -21.89   4.32
SO YBADJ    CSE5     11.22  -3.13 -17.40   1.73   0.89   0.03

SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6     23.47  23.47   6.10   6.10  23.47  23.47
SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
```

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SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE6     29.57  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE6     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6     29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE6     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE6     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE6     17.14  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE6     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6     19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE6     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE6     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE6     18.42  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE6    -27.88 -27.41 -26.12 -24.02 -21.20 -17.73
SO XBADJ    CSE6     41.96  46.88  -4.60  -5.84  43.31  37.75
SO XBADJ    CSE6     -8.38  -8.74  -8.84  -8.67  -8.24  -7.55
SO XBADJ    CSE6     -8.23  -8.65  -8.81  -8.71  -8.34  -7.71
SO XBADJ    CSE6    -61.37 -62.14 -61.03 -62.83 -62.72 -60.70
SO XBADJ    CSE6    -94.12 -94.81 -92.61 -27.40 -27.87 -27.50
SO YBADJ    CSE6     -1.70  -3.39  -4.96  -6.39  -7.62  -8.62
SO YBADJ    CSE6    -20.91 -11.62  -9.97  -9.83  17.19  26.14
SO YBADJ    CSE6     -7.66  -6.43  -5.01  -3.44  -1.76  -0.03
SO YBADJ    CSE6      1.70   3.39   4.96   6.39   7.62   8.62
SO YBADJ    CSE6     20.91  11.62   1.98  -7.72 -17.19 -26.14
SO YBADJ    CSE6     15.05   0.08 -14.90   3.44   1.76   0.03


SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7     23.47  23.47   6.10   6.10  23.47  23.47
SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE7      6.10  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE7     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7     29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE7     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE7     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE7     32.73  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE7     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7     19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE7     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE7     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE7     29.54  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE7    -32.81 -32.11 -30.45 -27.85 -24.41 -20.23
SO XBADJ    CSE7     40.25  46.01  -4.60  -4.97  45.02  40.25
SO XBADJ    CSE7     -5.16  -4.91  -4.51  -3.97  -3.31  -2.55
SO XBADJ    CSE7     -3.30  -3.95  -4.48  -4.88  -5.12  -5.21
SO XBADJ    CSE7    -59.66 -61.28 -61.03 -63.70 -64.43 -63.20
SO XBADJ    CSE7    -24.37 -98.64 -96.94 -32.09 -32.80 -32.50
SO YBADJ    CSE7     -2.57  -5.10  -7.46  -9.60 -11.45 -12.95
SO YBADJ    CSE7    -25.61 -16.55 -14.97 -14.75  12.49  21.81
SO YBADJ    CSE7    -11.49  -9.65  -7.51  -5.15  -2.63  -0.03
SO YBADJ    CSE7      2.57   5.10   7.46   9.60  11.45  12.95
SO YBADJ    CSE7     25.61  16.55   6.98  -2.80 -12.49 -21.81
SO YBADJ    CSE7     11.49   3.29 -12.40   5.15   2.63   0.03

  SRCGROUP MG MGA1095 MGB1095 MGC1095 FGH1
  SRCGROUP SH SHA1095 SHB1095 SHC1095 FGH1
  SRCGROUP MGC7 MGA1095 MGB1095 MGC1095 FGH1 CSE1-CSE7
  SRCGROUP SHC7 SHA1095 SHB1095 SHC1095 FGH1 CSE1-CSE7

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
RE STARTING
```

```
  INCLUDED RIVFHCS.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
** SURFFILE C:\amodmet\PBIMIA01.SFC
** PROFFILE C:\amodmet\PBIMIA01.PFL
  SURFFILE PBIMIA01.SFC
  PROFFILE PBIMIA01.PFL
  SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
  UAIRDATA 92803 2001 MIAMI/FIU
  PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE FIRST SECOND
OU FINISHED
**
```

AERBOB RELEASE 020304
AERMOD OUTPUT FILE NUMBER 1 :S2GSC7CD.O01
AERMOD OUTPUT FILE NUMBER 2 :S2GSC7CD.O02
AERMOD OUTPUT FILE NUMBER 3 :S2GSC7CD.O03
AERMOD OUTPUT FILE NUMBER 4 :S2GSC7CD.O04
AERMOD OUTPUT FILE NUMBER 5 :S2GSC7CD.O05
First title for last output file is: 2001 RBEC- SO2 GAS 501G 95F&100%LD/ SH 35F&75%LD FH&CS CONDO 12/31/08
Second title for last output file is: SO2 EMISSION RATES PER CTS NOTE: ALL IDS THE SAME

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: MG					
Annual					
	2001	0.58188	594330.	2960240.	01123124
	2002	0.66639	594330.	2960240.	02123124
	2003	0.67830	594330.	2960240.	03123124
	2004	0.63494	594330.	2960240.	04123124
	2005	0.93103	594330.	2960240.	05123124
HIGH 24-Hour					
	2001	8.83429	594330.	2960240.	01110924
	2002	6.43250	594330.	2960240.	02112524
	2003	8.97647	594330.	2960240.	03090924
	2004	8.72536	594280.	2960240.	04101624
	2005	10.20840	594330.	2960240.	05102824
HSH 24-Hour					
	2001	7.63857	594330.	2960240.	01082624
	2002	5.69429	594330.	2960240.	02110224
	2003	7.64073	594330.	2960240.	03021324
	2004	7.08863	594305.	2960240.	04110824
	2005	9.08622	594280.	2960240.	05102724
HIGH 3-Hour					
	2001	39.81971	594330.	2960240.	01091706
	2002	29.75123	594330.	2960240.	02010821
	2003	44.06467	594280.	2960240.	03111321
	2004	41.25920	594280.	2960240.	04101621
	2005	42.60266	594280.	2960240.	05102721
HSH 3-Hour					
	2001	31.19142	594330.	2960240.	01082606
	2002	27.00038	594280.	2960240.	02112503
	2003	33.43473	594305.	2960240.	03111321
	2004	29.33507	594330.	2960240.	04030824
	2005	41.74999	594280.	2960240.	05122321
SOURCE GROUP ID: SH					
Annual					
	2001	0.49844	594330.	2960240.	01123124
	2002	0.56489	594330.	2960240.	02123124
	2003	0.57471	594330.	2960240.	03123124
	2004	0.53547	594330.	2960240.	04123124
	2005	0.79038	594330.	2960240.	05123124
HIGH 24-Hour					
	2001	7.65657	594330.	2960240.	01110924
	2002	5.56582	594330.	2960240.	02112524
	2003	7.78306	594330.	2960240.	03090924
	2004	7.52767	594280.	2960240.	04101624
	2005	8.67044	594330.	2960240.	05102824
HSH 24-Hour					
	2001	6.62431	594330.	2960240.	01082624
	2002	4.85923	594330.	2960240.	02110224
	2003	6.57233	594330.	2960240.	03021324
	2004	6.05000	594330.	2960240.	04101624
	2005	7.88909	594330.	2960240.	05101124
HIGH 3-Hour					
	2001	34.91132	594330.	2960240.	01091706
	2002	25.88041	594280.	2960240.	02121706
	2003	38.51081	594280.	2960240.	03111321
	2004	35.78012	594280.	2960240.	04101621
	2005	37.07573	594280.	2960240.	05102721
HSH 3-Hour					
	2001	27.26476	594330.	2960240.	01082606
	2002	23.68089	594280.	2960240.	02112503

2003	29.03384	594305.	2960240.	03111321
2004	25.48790	594330.	2960240.	04030824
2005	36.24665	594280.	2960240.	05122321

SOURCE GROUP ID: MGC7

Annual

2001	0.58663	594330.	2960240.	01123124
2002	0.67177	594330.	2960240.	02123124
2003	0.68322	594330.	2960240.	03123124
2004	0.63949	594330.	2960240.	04123124
2005	0.93646	594330.	2960240.	05123124

HIGH 24-Hour

2001	8.87528	594330.	2960240.	01110924
2002	6.43299	594330.	2960240.	02112524
2003	8.98212	594330.	2960240.	03090924
2004	8.73852	594280.	2960240.	04101624
2005	10.22481	594330.	2960240.	05102824

HSH 24-Hour

2001	7.66310	594330.	2960240.	01082624
2002	5.71762	594330.	2960240.	02110224
2003	7.65031	594330.	2960240.	03021324
2004	7.10235	594305.	2960240.	04110824
2005	9.10868	594280.	2960240.	05102724

HIGH 3-Hour

2001	39.81971	594330.	2960240.	01091706
2002	29.75123	594330.	2960240.	02010821
2003	44.06467	594280.	2960240.	03111321
2004	41.25920	594280.	2960240.	04101621
2005	42.60266	594280.	2960240.	05102721

HSH 3-Hour

2001	31.19142	594330.	2960240.	01082606
2002	27.00038	594280.	2960240.	02112503
2003	33.43473	594305.	2960240.	03111321
2004	29.33507	594330.	2960240.	04030824
2005	41.74999	594280.	2960240.	05122321

SOURCE GROUP ID: SHC7

Annual

2001	0.50320	594330.	2960240.	01123124
2002	0.57028	594330.	2960240.	02123124
2003	0.57967	594330.	2960240.	03123124
2004	0.54003	594330.	2960240.	04123124
2005	0.79584	594330.	2960240.	05123124

HIGH 24-Hour

2001	7.69755	594330.	2960240.	01110924
2002	5.56631	594330.	2960240.	02112524
2003	7.78871	594330.	2960240.	03090924
2004	7.54083	594280.	2960240.	04101624
2005	8.68685	594330.	2960240.	05102824

HSH 24-Hour

2001	6.64883	594330.	2960240.	01082624
2002	4.88256	594330.	2960240.	02110224
2003	6.58191	594330.	2960240.	03021324
2004	6.06586	594330.	2960240.	04101624
2005	7.89967	594330.	2960240.	05101124

HIGH 3-Hour

2001	34.91132	594330.	2960240.	01091706
2002	25.88041	594280.	2960240.	02121706
2003	38.51081	594280.	2960240.	03111321
2004	35.78012	594280.	2960240.	04101621
2005	37.07573	594280.	2960240.	05102721

HSH 3-Hour

2001	27.26476	594330.	2960240.	01082606
2002	23.68089	594280.	2960240.	02112503
2003	29.03384	594305.	2960240.	03111321
2004	25.48790	594330.	2960240.	04030824
2005	36.24665	594280.	2960240.	05122321

All receptor computations reported with respect to a user-specified origin

GRID 0.00 0.00

DISCRETE 0.00 0.00

```
CO STARTING
  TITLEONE 2001 RBEC- SO2 GAS 501G 95F&100%LD/ SH 35F&75%LD FH&CS CONDO 12/31/08
  TITLETWO SO2 EMISSION RATES PER CTS  NOTE: ALL IDS THE SAME
  MODELOPT DFAULT CONC NOWARN
  AVERTIME PERIOD 24 3
  POLLUTID GEN
  RUNORNOT RUN
  FLAGPOLE
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **

  LOCATION MGA1095 POINT 594125.983 2960797.999 1.000
  LOCATION MGB1095 POINT 594172.071 2960797.963 1.000
  LOCATION MGC1095 POINT 594274.233 2960797.946 1.000

  LOCATION SHA1095 POINT 594125.983 2960797.999 1.000
  LOCATION SHB1095 POINT 594172.071 2960797.963 1.000
  LOCATION SHC1095 POINT 594274.233 2960797.946 1.000

  LOCATION FGH1 POINT 594155.571 2960783.547 1.000

  LOCATION CSE1 POINT 594070.600 2960755.500 1.000
  LOCATION CSE2 POINT 594070.600 2960760.500 1.000
  LOCATION CSE3 POINT 594070.600 2960765.500 1.000
  LOCATION CSE4 POINT 594070.600 2960770.500 1.000
  LOCATION CSE5 POINT 594070.600 2960775.500 1.000
  LOCATION CSE6 POINT 594070.600 2960780.500 1.000
  LOCATION CSE7 POINT 594070.600 2960785.500 1.000

** Source Parameters **
** Baseload, 95 F with duct firing
  SRCPARAM MGA1095 2.09    45.4  357.5  17.30  6.71
  SRCPARAM MGB1095 2.09    45.4  357.5  17.30  6.71
  SRCPARAM MGC1095 2.09    45.4  357.5  17.30  6.71

** 75% load, 35 F
  SRCPARAM SHA1095 1.51    45.4  357.6  15.00  6.71
  SRCPARAM SHB1095 1.51    45.4  357.6  15.00  6.71
  SRCPARAM SHC1095 1.51    45.4  357.6  15.00  6.71

  SRCPARAM FGH1  0.0068 9.144 533.150 32.02 0.305

  SRCPARAM CSE1 0.0072 12.2 729.800 49.50000 0.305
  SRCPARAM CSE2 0.0072 12.2 729.800 49.50000 0.305
  SRCPARAM CSE3 0.0072 12.2 729.800 49.50000 0.305
  SRCPARAM CSE4 0.0072 12.2 729.800 49.50000 0.305
  SRCPARAM CSE5 0.0072 12.2 729.800 49.50000 0.305
  SRCPARAM CSE6 0.0072 12.2 729.800 49.50000 0.305
  SRCPARAM CSE7 0.0072 12.2 729.800 49.50000 0.305

** Building Downwash **
SO BUILDHGT MGA1095      29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA1095      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA1095      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID MGA1095      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA1095      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA1095      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGA1095      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA1095      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA1095      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN MGA1095      10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGA1095      19.41  15.27  10.67  15.27  19.41  22.95
```

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SO BUILDLEN MGA1095     25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGA1095     28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGA1095     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGA1095     25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    MGA1095    -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    MGA1095    -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    MGA1095     -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    MGA1095      4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    MGA1095     -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    MGA1095    -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    MGA1095    -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    MGA1095    -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    MGA1095    -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    MGA1095      3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    MGA1095     18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    MGA1095     14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT MGB1095     29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT MGB1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB1095     23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID MGB1095     18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID MGB1095     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGB1095     27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGB1095     15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGB1095     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGB1095     27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN MGB1095     10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN MGB1095     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGB1095     25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGB1095     28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGB1095     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGB1095     25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    MGB1095    -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    MGB1095    -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    MGB1095     -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    MGB1095      4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    MGB1095     39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    MGB1095    -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    MGB1095    -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    MGB1095     -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    MGB1095    -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    MGB1095      3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    MGB1095      2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    MGB1095     14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT MGC1095     29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT MGC1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC1095     23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID MGC1095     18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID MGC1095     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGC1095     27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGC1095     15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGC1095     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGC1095     27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN MGC1095     10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN MGC1095     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGC1095     25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGC1095     28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGC1095     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGC1095     25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    MGC1095    -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    MGC1095    -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    MGC1095     -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    MGC1095      4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    MGC1095     -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    MGC1095    -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    MGC1095    -14.43  23.32   8.08 -12.64 -15.01 -16.93
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SO YBADJ    MGC1095     16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    MGC1095    -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    MGC1095      3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    MGC1095     18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    MGC1095     14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT SHA1095     29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA1095     23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID SHA1095     18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA1095     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA1095     27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHA1095     15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA1095     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA1095     27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN SHA1095     10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA1095     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA1095     25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHA1095     28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA1095     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA1095     25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    SHA1095    -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    SHA1095    -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    SHA1095     -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    SHA1095      4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    SHA1095     -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    SHA1095    -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    SHA1095    -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    SHA1095    -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    SHA1095    -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    SHA1095      3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    SHA1095     18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    SHA1095     14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT SHB1095     29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT SHB1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB1095     23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID SHB1095     18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID SHB1095     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB1095     27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHB1095     15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHB1095     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB1095     27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN SHB1095     10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN SHB1095     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB1095     25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHB1095     28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHB1095     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB1095     25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    SHB1095    -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    SHB1095    -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    SHB1095     -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    SHB1095      4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    SHB1095     39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    SHB1095    -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    SHB1095    -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    SHB1095     -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    SHB1095    -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    SHB1095      3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    SHB1095      2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    SHB1095     14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT SHC1095     29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT SHC1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC1095     31.39  31.39  31.39  31.39  31.39  31.39
SO BUILDHGT SHC1095     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC1095     23.47  23.47  23.47  23.47  23.47  23.47
```

```
SO BUILDHGT SHC1095      23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID SHC1095      18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID SHC1095      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC1095      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHC1095      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHC1095      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC1095      27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN SHC1095      10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN SHC1095      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC1095      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHC1095      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHC1095      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC1095      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    SHC1095     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    SHC1095    -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    SHC1095      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    SHC1095       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    SHC1095      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    SHC1095     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    SHC1095     -14.43  23.32   8.08 -12.64 -15.01 -16.93
SO YBADJ    SHC1095      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    SHC1095     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    SHC1095       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    SHC1095      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    SHC1095      14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT FGH1      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT FGH1      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1      23.47  23.47  23.47  23.47   0.00   0.00
SO BUILDHGT FGH1       0.00  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID FGH1      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID FGH1      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1      27.87  25.81  22.95  19.41   0.00   0.00
SO BUILDWID FGH1       0.00  19.41  22.95  25.81  27.87  29.09
SO BUILDWID FGH1      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN FGH1      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN FGH1      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1      25.81  27.87  29.09  29.43   0.00   0.00
SO BUILDLEN FGH1       0.00  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN FGH1      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    FGH1     -78.45 -81.64 -82.36 -36.60 -38.56 -39.34
SO XBADJ    FGH1     -38.93 -37.33 -34.60 -35.59 -35.49 -34.31
SO XBADJ    FGH1     -32.09   0.71  -1.76  -4.16   0.00   0.00
SO XBADJ    FGH1       0.00 -15.52   4.44   8.73  12.75  16.39
SO XBADJ    FGH1      19.52  22.06  23.94  20.32  16.08  11.36
SO XBADJ    FGH1       6.29 -28.58 -27.33 -77.03 -76.08 -72.82
SO YBADJ    FGH1      17.14   4.16  -8.95  19.19  14.96  10.28
SO YBADJ    FGH1       5.29   0.13  -5.03 -10.03 -14.74 -18.99
SO YBADJ    FGH1     -22.67   9.38  11.78  13.82   0.00   0.00
SO YBADJ    FGH1       0.00  17.37 -22.84 -19.19 -14.96 -10.28
SO YBADJ    FGH1      -5.29  -0.13   5.03  10.03  14.74  18.99
SO YBADJ    FGH1      22.67  -9.38 -11.78   8.41  -3.96 -16.21

SO BUILDHGT CSE1       6.10   6.10   6.10   6.10  23.47   6.10
SO BUILDHGT CSE1       6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1       6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1       6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE1      23.47  23.47  23.47  10.67  10.67  29.57
SO BUILDHGT CSE1      29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE1      15.09  20.58  25.44  29.54  27.87  34.93
SO BUILDWID CSE1      36.07  36.11  35.05  36.11  36.07  34.93
SO BUILDWID CSE1      32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE1      15.09  20.58  25:44  29.54  27.87  29.09
SO BUILDWID CSE1      29.43  28.87  27.43  34.14  34.79  15.33
SO BUILDWID CSE1      17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE1      36.11  36.07  34.93  32.73  25.81  25.44
SO BUILDLEN CSE1      20.58  15.09   9.14  15.09  20.58  25.44
SO BUILDLEN CSE1      29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE1      36.11  36.07  34.93  32.73  25.81  22.95
```

```
SO BUILDLEN CSE1     19.41  15.27  10.67  18.85  22.89  19.15
SO BUILDLEN CSE1     18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE1     -3.26  -3.92  -4.47  -4.87  44.56  -5.23
SO XBADJ    CSE1     -5.18  -4.96  -4.60 -10.18 -15.46 -20.26
SO XBADJ    CSE1    -24.45 -27.89 -30.49 -32.16 -32.86 -32.55
SO XBADJ    CSE1    -32.85 -32.14 -30.46 -27.86 -70.37 -71.22
SO XBADJ    CSE1    -69.92 -66.49 -61.03 -71.09 -75.74 -78.08
SO XBADJ    CSE1    -78.05 -75.65  -4.44  -3.90  -3.25  -2.50
SO YBADJ    CSE1      2.64   5.17   7.54   9.68 -18.17  13.03
SO YBADJ    CSE1     14.13  14.80  15.03  14.79  14.11  13.00
SO YBADJ    CSE1     11.49   9.64   7.49   5.11   2.58  -0.03
SO YBADJ    CSE1     -2.64  -5.17  -7.54  -9.68  18.17   7.91
SO YBADJ    CSE1     -2.58 -13.00 -23.02  19.00   8.83   7.92
SO YBADJ    CSE1     -4.10 -15.99  -7.49  -5.11  -2.58   0.03

SO BUILDHGT CSE2      6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE2      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE2      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE2      6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE2     23.47  23.47  23.47   6.10   6.10  29.57
SO BUILDHGT CSE2     29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE2     15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE2     36.07  36.11  35.05  36.11  36.07  34.93
SO BUILDWID CSE2     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE2     15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE2     29.43  28.87  27.43  36.11  36.07  15.33
SO BUILDWID CSE2     17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE2     36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE2     20.58  15.09   9.14  15.09  20.58  25.44
SO BUILDLEN CSE2     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE2     36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE2     19.41  15.27  10.67  15.09  20.58  19.15
SO BUILDLEN CSE2     18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE2     -8.18  -8.62  -8.80  -8.70  41.35  45.77
SO XBADJ    CSE2     -6.89  -5.83  -4.60  -9.31 -13.75 -17.76
SO XBADJ    CSE2    -21.23 -24.06 -26.16 -27.46 -27.93 -27.55
SO XBADJ    CSE2    -27.92 -27.44 -26.13 -24.03 -67.15 -68.72
SO XBADJ    CSE2    -68.21 -65.62 -61.03  -5.78  -6.84 -80.58
SO XBADJ    CSE2    -81.27 -79.48  -8.77  -8.60  -8.18  -7.50
SO YBADJ    CSE2      1.77   3.46   5.04   6.47 -22.00 -12.24
SO YBADJ    CSE2      9.43   9.88  10.03   9.87   9.41   8.67
SO YBADJ    CSE2      7.66   6.42   4.99   3.40   1.71  -0.03
SO YBADJ    CSE2     -1.77  -3.46  -5.04  -6.47  22.00  12.24
SO YBADJ    CSE2      2.12  -8.07 -18.02  -9.87  -9.41  12.25
SO YBADJ    CSE2     -0.27 -12.78  -4.99  -3.40  -1.71   0.03

SO BUILDHGT CSE3      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE3      6.10   6.10   6.10  23.47   6.10   6.10
SO BUILDHGT CSE3      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE3      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE3     23.47  23.47  23.47  23.47   6.10   6.10
SO BUILDHGT CSE3     29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE3     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE3     36.07  36.11  35.05  28.87  36.07  34.93
SO BUILDWID CSE3     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE3     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE3     29.43  28.87  27.43  28.87  36.07  34.93
SO BUILDWID CSE3     17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE3     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE3     20.58  15.09   9.14  15.27  20.58  25.44
SO BUILDLEN CSE3     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE3     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE3     19.41  15.27  10.67  15.27  20.58  25.44
SO BUILDLEN CSE3     18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE3    -13.11 -13.32 -13.13 -12.53 -11.56  43.27
SO XBADJ    CSE3     -8.60  -6.70  -4.60  44.96 -12.04 -15.26
SO XBADJ    CSE3    -18.02 -20.23 -21.83 -22.77 -23.01 -22.55
SO XBADJ    CSE3    -23.00 -22.75 -21.80 -20.20 -17.98 -66.22
SO XBADJ    CSE3    -66.50 -64.75 -61.03 -60.23  -8.55 -10.19
SO XBADJ    CSE3    -84.48 -83.31 -13.10 -13.30 -13.10 -12.50
SO YBADJ    CSE3      0.90   1.75   2.54   3.25   3.87 -16.57
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SO YBADJ   CSE3      4.73   4.95   5.03  22.49   4.71   4.34
SO YBADJ   CSE3      3.83   3.21   2.49   1.69   0.85  -0.03
SO YBADJ   CSE3     -0.90  -1.75  -2.54  -3.25  -3.87  16.57
SO YBADJ   CSE3      6.82  -3.15 -13.02 -22.49  -4.71  -4.34
SO YBADJ   CSE3      3.56  -9.56  -2.49  -1.69  -0.85   0.03

SO BUILDHGT CSE4     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE4    23.47   6.10   6.10  23.47   6.10   6.10
SO BUILDHGT CSE4     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE4     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE4    23.47  23.47  23.47  23.47   6.10   6.10
SO BUILDHGT CSE4    29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE4    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE4    29.43  36.11  35.05  28.87  36.07  34.93
SO BUILDWID CSE4    32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE4    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE4    29.43  28.87  27.43  28.87  36.07  34.93
SO BUILDWID CSE4    17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE4    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE4    19.41  15.09   9.14  15.27  20.58  25.44
SO BUILDLEN CSE4    29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE4    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE4    19.41  15.27  10.67  15.27  20.58  25.44
SO BUILDLEN CSE4    18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ   CSE4   -18.03 -18.02 -17.46 -16.36 -14.77  40.77
SO XBADJ   CSE4    45.38  -7.57  -4.60  45.83 -10.33 -12.76
SO XBADJ   CSE4   -14.81 -16.40 -17.50 -18.07 -18.08 -17.55
SO XBADJ   CSE4   -18.07 -18.05 -17.47 -16.37 -14.76 -63.72
SO XBADJ   CSE4   -64.79 -63.88 -61.03 -61.10 -10.26 -12.69
SO XBADJ   CSE4   -87.70 -87.14 -17.43 -18.00 -18.02 -17.50
SO YBADJ   CSE4     0.03   0.04   0.04   0.04   0.04 -20.90
SO YBADJ   CSE4   -11.51   0.03   0.03  17.57   0.01   0.01
SO YBADJ   CSE4     0.00   0.00  -0.01  -0.02  -0.02  -0.03
SO YBADJ   CSE4    -0.03  -0.04  -0.04  -0.04  -0.04  20.90
SO YBADJ   CSE4    11.51   1.77  -8.02 -17.57  -0.01  -0.01
SO YBADJ   CSE4     7.39  -6.35   0.01   0.02   0.02   0.03

SO BUILDHGT CSE5     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE5    23.47   6.10   6.10  23.47  23.47   6.10
SO BUILDHGT CSE5     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE5     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE5    23.47  23.47  23.47  23.47  23.47   6.10
SO BUILDHGT CSE5    29.57  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE5    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE5    29.43  36.11  35.05  28.87  29.43  34.93
SO BUILDWID CSE5    32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE5    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE5    29.43  28.87  27.43  28.87  29.43  34.93
SO BUILDWID CSE5    17.14  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE5    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE5    19.41  15.09   9.14  15.27  19.41  25.44
SO BUILDLEN CSE5    29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE5    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE5    19.41  15.27  10.67  15.27  19.41  25.44
SO BUILDLEN CSE5    18.42  17.14  15.33  36.07  36.11  35.05
SO XBADJ   CSE5   -22.96 -22.72 -21.79 -20.19 -17.99  38.27
SO XBADJ   CSE5    43.67  -8.44  -4.60  46.69  41.60 -10.26
SO XBADJ   CSE5   -11.59 -12.57 -13.17 -13.37 -13.16 -12.55
SO XBADJ   CSE5   -13.15 -13.35 -13.14 -12.54 -11.55 -61.23
SO XBADJ   CSE5   -63.08 -63.01 -61.03 -61.96 -61.01 -15.19
SO XBADJ   CSE5   -90.91 -90.97 -88.28 -22.70 -22.95 -22.50
SO YBADJ   CSE5    -0.84  -1.67  -2.46  -3.18  -3.79 -25.23
SO YBADJ   CSE5   -16.21  -4.89  -4.97  12.65  21.89  -4.32
SO YBADJ   CSE5    -3.83  -3.22  -2.51  -1.73  -0.89  -0.03
SO YBADJ   CSE5     0.84   1.67   2.46   3.18   3.79  25.23
SO YBADJ   CSE5    16.21   6.70  -3.02 -12.65 -21.89   4.32
SO YBADJ   CSE5    11.22  -3.13 -17.40   1.73   0.89   0.03

SO BUILDHGT CSE6     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6    23.47  23.47   6.10   6.10  23.47  23.47
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SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE6     29.57  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE6     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6     29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE6     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE6     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE6     17.14  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE6     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6     19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE6     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE6     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE6     18.42  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE6    -27.88 -27.41 -26.12 -24.02 -21.20 -17.73
SO XBADJ    CSE6     41.96  46.88  -4.60  -5.84  43.31  37.75
SO XBADJ    CSE6     -8.38  -8.74  -8.84  -8.67  -8.24  -7.55
SO XBADJ    CSE6     -8.23  -8.65  -8.81  -8.71  -8.34  -7.71
SO XBADJ    CSE6    -61.37 -62.14 -61.03 -62.83 -62.72 -60.70
SO XBADJ    CSE6    -94.12 -94.81 -92.61 -27.40 -27.87 -27.50
SO YBADJ    CSE6     -1.70  -3.39  -4.96  -6.39  -7.62  -8.62
SO YBADJ    CSE6    -20.91 -11.62  -9.97  -9.83  17.19  26.14
SO YBADJ    CSE6     -7.66  -6.43  -5.01  -3.44  -1.76  -0.03
SO YBADJ    CSE6      1.70   3.39   4.96   6.39   7.62   8.62
SO YBADJ    CSE6     20.91  11.62   1.98  -7.72 -17.19 -26.14
SO YBADJ    CSE6     15.05   0.08 -14.90   3.44   1.76   0.03


SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7     23.47  23.47   6.10   6.10  23.47  23.47
SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE7      6.10  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE7     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7     29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE7     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE7     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE7     32.73  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE7     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7     19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE7     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE7     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE7     29.54  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE7    -32.81 -32.11 -30.45 -27.85 -24.41 -20.23
SO XBADJ    CSE7     40.25  46.01  -4.60  -4.97  45.02  40.25
SO XBADJ    CSE7     -5.16  -4.91  -4.51  -3.97  -3.31  -2.55
SO XBADJ    CSE7     -3.30  -3.95  -4.48  -4.88  -5.12  -5.21
SO XBADJ    CSE7    -59.66 -61.28 -61.03 -63.70 -64.43 -63.20
SO XBADJ    CSE7    -24.37 -98.64 -96.94 -32.09 -32.80 -32.50
SO YBADJ    CSE7     -2.57  -5.10  -7.46  -9.60 -11.45 -12.95
SO YBADJ    CSE7    -25.61 -16.55 -14.97 -14.75  12.49  21.81
SO YBADJ    CSE7    -11.49  -9.65  -7.51  -5.15  -2.63  -0.03
SO YBADJ    CSE7      2.57   5.10   7.46   9.60  11.45  12.95
SO YBADJ    CSE7     25.61  16.55   6.98  -2.80 -12.49 -21.81
SO YBADJ    CSE7     11.49   3.29 -12.40   5.15   2.63   0.03

  SRCGROUP MG MGA1095 MGB1095 MGC1095 FGH1
  SRCGROUP SH SHA1095 SHB1095 SHC1095 FGH1
  SRCGROUP MGC7 MGA1095 MGB1095 MGC1095 FGH1 CSE1-CSE7
  SRCGROUP SHC7 SHA1095 SHB1095 SHC1095 FGH1 CSE1-CSE7

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
```

```
RE STARTING
  INCLUDED RIV1COND.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
** SURFFILE C:\amodmet\PBIMIA01.SFC
** PROFFILE C:\amodmet\PBIMIA01.PFL
  SURFFILE PBIMIA01.SFC
  PROFFILE PBIMIA01.PFL
  SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
  UAIRDATA 92803 2001 MIAMI/FIU
  PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE FIRST SECOND
OU FINISHED
**
```

PREDICTED PM_{10} IMPACTS FOR RBEC

1. SUMMARY FILES FOR:
   - CTS/HRSGS AND FUEL HEATER
   - CTS/HRSGS, FUEL HEATER, AND GAS COMPRESSOR STATION
2. EXAMPLE INPUT FILE

AERBOB RELEASE 020304

AERMOD OUTPUT FILE NUMBER 1 :PMOILC7.O01
AERMOD OUTPUT FILE NUMBER 2 :PMOILC7.O02
AERMOD OUTPUT FILE NUMBER 3 :PMOILC7.O03
AERMOD OUTPUT FILE NUMBER 4 :PMOILC7.O04
AERMOD OUTPUT FILE NUMBER 5 :PMOILC7.O05
First title for last output file is: 2001 FPL RBEC- PM OIL MPS 35F&75%LD/SH 95F&75%LD FH&CS 12/31/
Second title for last output file is: PM EMISSION RATES PER CTS NOTE: IDS ALL THE SAME

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID:	MG				
Annual					
	2001	0.31434	593400.	2960800.	01123124
	2002	0.39668	593600.	2961100.	02123124
	2003	0.37379	593600.	2961300.	03123124
	2004	0.35871	593500.	2961000.	04123124
	2005	0.33147	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	2.13741	593200.	2960500.	01100924
	2002	1.97762	593700.	2961600.	02030224
	2003	2.17546	593600.	2961200.	03061624
	2004	2.54192	594700.	2961600.	04090524
	2005	2.32300	593300.	2961200.	05061024
HSH 24-Hour					
	2001	1.93320	593400.	2960500.	01100924
	2002	1.93466	593400.	2961200.	02041224
	2003	1.99708	593500.	2961200.	03062924
	2004	1.94261	593300.	2961200.	04091424
	2005	1.94938	593300.	2961200.	05060924
SOURCE GROUP ID:	SH				
Annual					
	2001	0.35044	593500.	2960800.	01123124
	2002	0.43468	593600.	2961100.	02123124
	2003	0.40299	593600.	2961300.	03123124
	2004	0.39086	593500.	2960900.	04123124
	2005	0.36305	593500.	2960900.	05123124
HIGH 24-Hour					
	2001	2.46400	593300.	2960500.	01100924
	2002	2.12770	593700.	2961600.	02030224
	2003	2.38673	593600.	2961200.	03061624
	2004	2.59503	594600.	2961500.	04090524
	2005	2.49327	593300.	2961200.	05061024
HSH 24-Hour					
	2001	2.13516	593400.	2960500.	01050424
	2002	2.02890	593500.	2961200.	02041224
	2003	2.14538	593500.	2961200.	03062924
	2004	2.06210	594500.	2961600.	04092624
	2005	2.08639	593300.	2961200.	05060924
SOURCE GROUP ID:	MGC7				
Annual					
	2001	0.57576	593800.	2960700.	01123124
	2002	0.60226	593800.	2960800.	02123124
	2003	0.50729	593800.	2960800.	03123124
	2004	0.62869	593800.	2960800.	04123124
	2005	0.56622	593800.	2960800.	05123124
HIGH 24-Hour					
	2001	4.40584	593951.	2960723.	01100924
	2002	3.49289	593800.	2960700.	02030624
	2003	3.60368	593900.	2960800.	03102524
	2004	4.71303	593951.	2960762.	04123124
	2005	3.72217	593951.	2960762.	05100224
HSH 24-Hour					
	2001	4.40223	593951.	2960723.	01120524
	2002	3.33818	593800.	2960700.	02120824
	2003	3.24169	593951.	2960762.	03111724
	2004	3.90938	593951.	2960762.	04032624
	2005	3.67748	593951.	2960762.	05010224
SOURCE GROUP ID:	SHC7				
Annual					
	2001	0.60447	593800.	2960800.	01123124

	2002	0.62825	593800.	2960800.	02123124
	2003	0.52685	593800.	2960800.	03123124
	2004	0.65278	593800.	2960800.	04123124
	2005	0.58959	593800.	2960800.	05123124
HIGH 24-Hour					
	2001	4.46284	593951.	2960723.	01100924
	2002	3.59183	593800.	2960700.	02030624
	2003	3.63853	593900.	2960800.	03102524
	2004	4.72636	593951.	2960762.	04123124
	2005	3.73368	593951.	2960762.	05100224
HSH 24-Hour					
	2001	4.41466	593951.	2960723.	01120524
	2002	3.46239	593800.	2960700.	02120824
	2003	3.24963	593951.	2960762.	03111724
	2004	3.92764	593951.	2960762.	04032624
	2005	3.68742	593951.	2960762.	05010224

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

```
CO STARTING
  TITLEONE 2001 FPL RBEC- PM OIL MPS 35F&75%LD/SH 95F&75%LD FH&CS 12/31/08
  TITLETWO PM EMISSION RATES PER CTS  NOTE: IDS ALL THE SAME
  MODELOPT DFAULT CONC NOWARN
  AVERTIME PERIOD 24
  POLLUTID GEN
  RUNORNOT RUN
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **

  LOCATION MGA7595 POINT 594125.983 2960797.999 1.000
  LOCATION MGB7595 POINT 594172.071 2960797.963 1.000
  LOCATION MGC7595 POINT 594274.233 2960797.946 1.000

  LOCATION SHA7595 POINT 594125.983 2960797.999 1.000
  LOCATION SHB7595 POINT 594172.071 2960797.963 1.000
  LOCATION SHC7595 POINT 594274.233 2960797.946 1.000

  LOCATION FGH1 POINT 594155.571 2960783.547 1.000

  LOCATION CSE1 POINT 594070.600 2960755.500 1.000
  LOCATION CSE2 POINT 594070.600 2960760.500 1.000
  LOCATION CSE3 POINT 594070.600 2960765.500 1.000
  LOCATION CSE4 POINT 594070.600 2960770.500 1.000
  LOCATION CSE5 POINT 594070.600 2960775.500 1.000
  LOCATION CSE6 POINT 594070.600 2960780.500 1.000
  LOCATION CSE7 POINT 594070.600 2960785.500 1.000

** Source Parameters **
** 75% load, 35 F
  SRCPARAM MGA7595 4.75    45.4  449.8  23.10  6.71
  SRCPARAM MGB7595 4.75    45.4  449.8  23.10  6.71
  SRCPARAM MGC7595 4.75    45.4  449.8  23.10  6.71
** 75% load, 95 F
  SRCPARAM SHA7595 3.78    45.4  447.0  16.63  6.71
  SRCPARAM SHB7595 3.78    45.4  447.0  16.63  6.71
  SRCPARAM SHC7595 3.78    45.4  447.0  16.63  6.71

  SRCPARAM FGH1  0.0025 9.144 533.150 32.02 0.305

  SRCPARAM CSE1 0.0127 12.2 729.800 49.50000 0.305
  SRCPARAM CSE2 0.0127 12.2 729.800 49.50000 0.305
  SRCPARAM CSE3 0.0127 12.2 729.800 49.50000 0.305
  SRCPARAM CSE4 0.0127 12.2 729.800 49.50000 0.305
  SRCPARAM CSE5 0.0127 12.2 729.800 49.50000 0.305
  SRCPARAM CSE6 0.0127 12.2 729.800 49.50000 0.305
  SRCPARAM CSE7 0.0127 12.2 729.800 49.50000 0.305


** Building Downwash **
SO BUILDHGT MGA7595      29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID MGA7595      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGA7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA7595      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN MGA7595      10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGA7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGA7595      25.81  27.87  29.09  29.43  28.87  27.43
```

SO	BUILDLEN	MGA7595	28.87	29.43	29.09	27.87	25.81	22.95
SO	BUILDLEN	MGA7595	19.41	15.27	10.67	15.27	19.41	22.95
SO	BUILDLEN	MGA7595	25.81	27.87	29.09	13.06	10.39	7.41
SO	XBADJ	MGA7595	-87.54	-32.91	-31.26	-28.65	-25.18	-20.94
SO	XBADJ	MGA7595	-16.07	-10.71	-5.02	-3.94	-2.74	-1.46
SO	XBADJ	MGA7595	-0.14	1.19	2.48	3.70	4.80	5.76
SO	XBADJ	MGA7595	4.69	3.48	2.17	0.78	-0.62	-2.01
SO	XBADJ	MGA7595	-3.34	-4.56	-5.65	-11.33	-16.66	-21.49
SO	XBADJ	MGA7595	-25.67	-29.06	-31.57	-100.73	-87.54	-87.32
SO	YBADJ	MGA7595	-14.51	-6.96	-10.01	-12.76	-15.13	-17.03
SO	YBADJ	MGA7595	-18.41	-19.24	-19.48	-19.13	-18.20	-16.71
SO	YBADJ	MGA7595	-14.72	-12.28	-9.46	-6.36	-3.07	0.32
SO	YBADJ	MGA7595	3.69	6.96	10.01	12.76	15.13	17.03
SO	YBADJ	MGA7595	18.41	19.24	19.48	19.13	18.20	16.71
SO	YBADJ	MGA7595	14.72	12.28	9.46	-14.45	14.53	0.01
SO	BUILDHGT	MGB7595	29.57	29.57	29.57	23.47	23.47	23.47
SO	BUILDHGT	MGB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO	BUILDHGT	MGB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO	BUILDHGT	MGB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO	BUILDHGT	MGB7595	23.47	23.47	23.47	23.47	23.47	23.47
SO	BUILDHGT	MGB7595	23.47	23.47	23.47	23.17	29.57	29.57
SO	BUILDWID	MGB7595	18.85	19.29	19.15	25.81	27.87	29.09
SO	BUILDWID	MGB7595	29.43	28.87	27.43	28.87	29.43	29.09
SO	BUILDWID	MGB7595	27.87	25.81	22.95	19.41	15.27	10.67
SO	BUILDWID	MGB7595	15.27	19.41	22.95	25.81	27.87	29.09
SO	BUILDWID	MGB7595	29.43	28.87	27.43	28.87	29.43	29.09
SO	BUILDWID	MGB7595	27.87	25.81	22.95	27.91	18.85	17.83
SO	BUILDLEN	MGB7595	10.39	13.06	15.33	27.87	25.81	22.95
SO	BUILDLEN	MGB7595	19.41	15.27	10.67	15.27	19.41	22.95
SO	BUILDLEN	MGB7595	25.81	27.87	29.09	29.43	28.87	27.43
SO	BUILDLEN	MGB7595	28.87	29.43	29.09	27.87	25.81	22.95
SO	BUILDLEN	MGB7595	19.41	15.27	10.67	15.27	19.41	22.95
SO	BUILDLEN	MGB7595	25.81	27.87	29.09	47.73	10.39	7.41
SO	XBADJ	MGB7595	-87.51	-100.83	-103.09	-58.25	-60.46	-60.84
SO	XBADJ	MGB7595	-59.36	-56.09	-51.10	-4.13	-2.91	-1.59
SO	XBADJ	MGB7595	-0.23	1.14	2.48	3.74	4.89	5.88
SO	XBADJ	MGB7595	4.85	3.67	2.38	30.38	34.66	37.88
SO	XBADJ	MGB7595	39.96	40.82	40.44	-11.14	-16.50	-21.36
SO	XBADJ	MGB7595	-25.58	-29.01	-31.57	-109.53	-87.41	-87.24
SO	YBADJ	MGB7595	-14.22	14.74	-1.86	22.56	14.53	6.05
SO	YBADJ	MGB7595	-2.62	-11.20	-19.44	-19.29	-18.38	-16.92
SO	YBADJ	MGB7595	-14.95	-12.52	-9.71	-6.61	-3.31	0.10
SO	YBADJ	MGB7595	3.50	6.80	9.89	-22.56	-14.53	-6.05
SO	YBADJ	MGB7595	2.62	11.20	19.44	19.29	18.38	16.92
SO	YBADJ	MGB7595	14.95	12.52	9.71	-23.01	14.79	0.29
SO	BUILDHGT	MGC7595	29.57	23.17	23.17	23.47	23.47	23.47
SO	BUILDHGT	MGC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO	BUILDHGT	MGC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO	BUILDHGT	MGC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO	BUILDHGT	MGC7595	23.47	23.47	23.47	23.47	23.47	23.47
SO	BUILDHGT	MGC7595	23.47	23.47	23.47	23.47	29.57	29.57
SO	BUILDWID	MGC7595	18.85	27.91	34.24	25.81	27.87	29.09
SO	BUILDWID	MGC7595	29.43	28.87	27.43	28.87	29.43	29.09
SO	BUILDWID	MGC7595	27.87	25.81	22.95	19.41	15.27	10.67
SO	BUILDWID	MGC7595	15.27	19.41	22.95	25.81	27.87	29.09
SO	BUILDWID	MGC7595	29.43	28.87	27.43	28.87	29.43	29.09
SO	BUILDWID	MGC7595	27.87	25.81	22.95	19.41	18.85	17.83
SO	BUILDLEN	MGC7595	10.39	47.73	46.38	27.87	25.81	22.95
SO	BUILDLEN	MGC7595	19.41	15.27	10.67	15.27	19.41	22.95
SO	BUILDLEN	MGC7595	25.81	27.87	29.09	29.43	28.87	27.43
SO	BUILDLEN	MGC7595	28.87	29.43	29.09	27.87	25.81	22.95
SO	BUILDLEN	MGC7595	19.41	15.27	10.67	15.27	19.41	22.95
SO	BUILDLEN	MGC7595	25.81	27.87	29.09	29.43	10.39	7.41
SO	XBADJ	MGC7595	-87.49	-109.62	-111.69	-28.71	-25.26	-21.04
SO	XBADJ	MGC7595	-112.31	-111.55	-107.40	-4.08	-2.88	-1.60
SO	XBADJ	MGC7595	-0.27	1.08	2.38	3.62	4.75	5.73
SO	XBADJ	MGC7595	4.68	3.50	2.20	0.84	-0.54	-1.91
SO	XBADJ	MGC7595	-3.22	-4.44	-5.52	-11.19	-16.52	-21.36
SO	XBADJ	MGC7595	-25.54	-28.95	-31.47	-33.05	-87.46	-87.25
SO	YBADJ	MGC7595	-14.43	23.32	8.08	-12.64	-15.01	-16.93
SO	YBADJ	MGC7595	16.51	-1.56	-19.58	-19.12	-18.21	-16.75

```
SO YBADJ    MGC7595     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    MGC7595       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    MGC7595      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    MGC7595      14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT SHA7595      29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID SHA7595      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHA7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA7595      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN SHA7595      10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHA7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA7595      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    SHA7595     -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    SHA7595     -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    SHA7595      -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    SHA7595       4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    SHA7595      -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    SHA7595     -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    SHA7595     -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    SHA7595     -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    SHA7595     -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    SHA7595       3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    SHA7595      18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    SHA7595      14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT SHB7595      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID SHB7595      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID SHB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHB7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB7595      27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN SHB7595      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN SHB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHB7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB7595      25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    SHB7595     -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    SHB7595     -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    SHB7595      -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    SHB7595       4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    SHB7595      39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    SHB7595     -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    SHB7595     -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    SHB7595      -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    SHB7595     -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    SHB7595       3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    SHB7595       2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    SHB7595      14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT SHC7595      29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7595      31.39  31.39  31.39  31.39  31.39  31.39
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  29.57  29.57
```

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SO BUILDWID SHC7595      18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID SHC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHC7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC7595      27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN SHC7595      10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN SHC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHC7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC7595      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    SHC7595     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    SHC7595    -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    SHC7595      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    SHC7595       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    SHC7595      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    SHC7595     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    SHC7595     -14.43  23.32   8.08 -12.64 -15.01 -16.93
SO YBADJ    SHC7595      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    SHC7595     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    SHC7595       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    SHC7595      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    SHC7595      14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT FGH1         29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT FGH1         23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1         23.47  23.47  23.47  23.47   0.00   0.00
SO BUILDHGT FGH1          0.00  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1         23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1         23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID FGH1         18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID FGH1         29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1         27.87  25.81  22.95  19.41   0.00   0.00
SO BUILDWID FGH1          0.00  19.41  22.95  25.81  27.87  29.09
SO BUILDWID FGH1         29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1         27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN FGH1         10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN FGH1         19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1         25.81  27.87  29.09  29.43   0.00   0.00
SO BUILDLEN FGH1          0.00  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN FGH1         19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1         25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    FGH1        -78.45 -81.64 -82.36 -36.60 -38.56 -39.34
SO XBADJ    FGH1        -38.93 -37.33 -34.60 -35.59 -35.49 -34.31
SO XBADJ    FGH1        -32.09   0.71  -1.76  -4.16   0.00   0.00
SO XBADJ    FGH1          0.00 -15.52   4.44   8.73  12.75  16.39
SO XBADJ    FGH1         19.52  22.06  23.94  20.32  16.08  11.36
SO XBADJ    FGH1          6.29 -28.58 -27.33 -77.03 -76.08 -72.82
SO YBADJ    FGH1         17.14   4.16  -8.95  19.19  14.96  10.28
SO YBADJ    FGH1          5.29   0.13  -5.03 -10.03 -14.74 -18.99
SO YBADJ    FGH1        -22.67   9.38  11.78  13.82   0.00   0.00
SO YBADJ    FGH1          0.00  17.37 -22.84 -19.19 -14.96 -10.28
SO YBADJ    FGH1         -5.29  -0.13   5.03  10.03  14.74  18.99
SO YBADJ    FGH1         22.67  -9.38 -11.78   8.41  -3.96 -16.21

SO BUILDHGT CSE1          6.10   6.10   6.10   6.10  23.47   6.10
SO BUILDHGT CSE1          6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1          6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1          6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE1         23.47  23.47  23.47  10.67  10.67  29.57
SO BUILDHGT CSE1         29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE1         15.09  20.58  25.44  29.54  27.87  34.93
SO BUILDWID CSE1         36.07  36.11  35.05  36.11  36.07  34.93
SO BUILDWID CSE1         32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE1         15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE1         29.43  28.87  27.43  34.14  34.79  15.33
SO BUILDWID CSE1         17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE1         36.11  36.07  34.93  32.73  25.81  25.44
SO BUILDLEN CSE1         20.58  15.09   9.14  15.09  20.58  25.44
SO BUILDLEN CSE1         29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE1         36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE1         19.41  15.27  10.67  18.85  22.89  19.15
```

SO BUILDLEN	CSE1	18.42	17.14	34.93	36.07	36.11	35.05
SO XBADJ	CSE1	-3.26	-3.92	-4.47	-4.87	44.56	-5.23
SO XBADJ	CSE1	-5.18	-4.96	-4.60	-10.18	-15.46	-20.26
SO XBADJ	CSE1	-24.45	-27.89	-30.49	-32.16	-32.86	-32.55
SO XBADJ	CSE1	-32.85	-32.14	-30.46	-27.86	-70.37	-71.22
SO XBADJ	CSE1	-69.92	-66.49	-61.03	-71.09	-75.74	-78.08
SO XBADJ	CSE1	-78.05	-75.65	-4.44	-3.90	-3.25	-2.50
SO YBADJ	CSE1	2.64	5.17	7.54	9.68	-18.17	13.03
SO YBADJ	CSE1	14.13	14.80	15.03	14.79	14.11	13.00
SO YBADJ	CSE1	11.49	9.64	7.49	5.11	2.58	-0.03
SO YBADJ	CSE1	-2.64	-5.17	-7.54	-9.68	18.17	7.91
SO YBADJ	CSE1	-2.58	-13.00	-23.02	19.00	8.83	7.92
SO YBADJ	CSE1	-4.10	-15.99	-7.49	-5.11	-2.58	0.03

SO BUILDHGT	CSE2	6.10	6.10	6.10	6.10	23.47	23.47
SO BUILDHGT	CSE2	6.10	6.10	6.10	6.10	6.10	6.10
SO BUILDHGT	CSE2	6.10	6.10	6.10	6.10	6.10	6.10
SO BUILDHGT	CSE2	6.10	6.10	6.10	6.10	23.47	23.47
SO BUILDHGT	CSE2	23.47	23.47	23.47	6.10	6.10	29.57
SO BUILDHGT	CSE2	29.57	29.57	6.10	6.10	6.10	6.10
SO BUILDWID	CSE2	15.09	20.58	25.44	29.54	27.87	29.09
SO BUILDWID	CSE2	36.07	36.11	35.05	36.11	36.07	34.93
SO BUILDWID	CSE2	32.73	29.54	25.44	20.58	15.09	9.14
SO BUILDWID	CSE2	15.09	20.58	25.44	29.54	27.87	29.09
SO BUILDWID	CSE2	29.43	28.87	27.43	36.11	36.07	15.33
SO BUILDWID	CSE2	17.14	18.42	25.44	20.58	15.09	9.14
SO BUILDLEN	CSE2	36.11	36.07	34.93	32.73	25.81	22.95
SO BUILDLEN	CSE2	20.58	15.09	9.14	15.09	20.58	25.44
SO BUILDLEN	CSE2	29.54	32.73	34.93	36.07	36.11	35.05
SO BUILDLEN	CSE2	36.11	36.07	34.93	32.73	25.81	22.95
SO BUILDLEN	CSE2	19.41	15.27	10.67	15.09	20.58	19.15
SO BUILDLEN	CSE2	18.42	17.14	34.93	36.07	36.11	35.05
SO XBADJ	CSE2	-8.18	-8.62	-8.80	-8.70	41.35	45.77
SO XBADJ	CSE2	-6.89	-5.83	-4.60	-9.31	-13.75	-17.76
SO XBADJ	CSE2	-21.23	-24.06	-26.16	-27.46	-27.93	-27.55
SO XBADJ	CSE2	-27.92	-27.44	-26.13	-24.03	-67.15	-68.72
SO XBADJ	CSE2	-68.21	-65.62	-61.03	-5.78	-6.84	-80.58
SO XBADJ	CSE2	-81.27	-79.48	-8.77	-8.60	-8.18	-7.50
SO YBADJ	CSE2	1.77	3.46	5.04	6.47	-22.00	-12.24
SO YBADJ	CSE2	9.43	9.88	10.03	9.87	9.41	8.67
SO YBADJ	CSE2	7.66	6.42	4.99	3.40	1.71	-0.03
SO YBADJ	CSE2	-1.77	-3.46	-5.04	-6.47	22.00	12.24
SO YBADJ	CSE2	2.12	-8.07	-18.02	-9.87	-9.41	12.25
SO YBADJ	CSE2	-0.27	-12.78	-4.99	-3.40	-1.71	0.03

SO BUILDHGT	CSE3	6.10	6.10	6.10	6.10	6.10	23.47
SO BUILDHGT	CSE3	6.10	6.10	6.10	23.47	6.10	6.10
SO BUILDHGT	CSE3	6.10	6.10	6.10	6.10	6.10	6.10
SO BUILDHGT	CSE3	6.10	6.10	6.10	6.10	6.10	23.47
SO BUILDHGT	CSE3	23.47	23.47	23.47	23.47	6.10	6.10
SO BUILDHGT	CSE3	29.57	29.57	6.10	6.10	6.10	6.10
SO BUILDWID	CSE3	15.09	20.58	25.44	29.54	32.73	29.09
SO BUILDWID	CSE3	36.07	36.11	35.05	28.87	36.07	34.93
SO BUILDWID	CSE3	32.73	29.54	25.44	20.58	15.09	9.14
SO BUILDWID	CSE3	15.09	20.58	25.44	29.54	32.73	29.09
SO BUILDWID	CSE3	29.43	28.87	27.43	28.87	36.07	34.93
SO BUILDWID	CSE3	17.14	18.42	25.44	20.58	15.09	9.14
SO BUILDLEN	CSE3	36.11	36.07	34.93	32.73	29.54	22.95
SO BUILDLEN	CSE3	20.58	15.09	9.14	15.27	20.58	25.44
SO BUILDLEN	CSE3	29.54	32.73	34.93	36.07	36.11	35.05
SO BUILDLEN	CSE3	36.11	36.07	34.93	32.73	29.54	22.95
SO BUILDLEN	CSE3	19.41	15.27	10.67	15.27	20.58	25.44
SO BUILDLEN	CSE3	18.42	17.14	34.93	36.07	36.11	35.05
SO XBADJ	CSE3	-13.11	-13.32	-13.13	-12.53	-11.56	43.27
SO XBADJ	CSE3	-8.60	-6.70	-4.60	44.96	-12.04	-15.26
SO XBADJ	CSE3	-18.02	-20.23	-21.83	-22.77	-23.01	-22.55
SO XBADJ	CSE3	-23.00	-22.75	-21.80	-20.20	-17.98	-66.22
SO XBADJ	CSE3	-66.50	-64.75	-61.03	-60.23	-8.55	-10.19
SO XBADJ	CSE3	-84.48	-83.31	-13.10	-13.30	-13.10	-12.50
SO YBADJ	CSE3	0.90	1.75	2.54	3.25	3.87	-16.57
SO YBADJ	CSE3	4.73	4.95	5.03	22.49	4.71	4.34

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SO YBADJ    CSE3      3.83   3.21   2.49   1.69   0.85  -0.03
SO YBADJ    CSE3     -0.90  -1.75  -2.54  -3.25  -3.87  16.57
SO YBADJ    CSE3      6.82  -3.15 -13.02 -22.49  -4.71  -4.34
SO YBADJ    CSE3      3.56  -9.56  -2.49  -1.69  -0.85   0.03


SO BUILDHGT CSE4      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE4     23.47   6.10   6.10  23.47   6.10   6.10
SO BUILDHGT CSE4      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE4      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE4     23.47  23.47  23.47  23.47   6.10   6.10
SO BUILDHGT CSE4     29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE4     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE4     29.43  36.11  35.05  28.87  36.07  34.93
SO BUILDWID CSE4     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE4     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE4     29.43  28.87  27.43  28.87  36.07  34.93
SO BUILDWID CSE4     17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE4     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE4     19.41  15.09   9.14  15.27  20.58  25.44
SO BUILDLEN CSE4     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE4     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE4     19.41  15.27  10.67  15.27  20.58  25.44
SO BUILDLEN CSE4     18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE4    -18.03 -18.02 -17.46 -16.36 -14.77  40.77
SO XBADJ    CSE4     45.38  -7.57  -4.60  45.83 -10.33 -12.76
SO XBADJ    CSE4    -14.81 -16.40 -17.50 -18.07 -18.08 -17.55
SO XBADJ    CSE4    -18.07 -18.05 -17.47 -16.37 -14.76 -63.72
SO XBADJ    CSE4    -64.79 -63.88 -61.03 -61.10 -10.26 -12.69
SO XBADJ    CSE4    -87.70 -87.14 -17.43 -18.00 -18.02 -17.50
SO YBADJ    CSE4      0.03   0.04   0.04   0.04   0.04 -20.90
SO YBADJ    CSE4    -11.51   0.03   0.03  17.57   0.01   0.01
SO YBADJ    CSE4      0.00   0.00  -0.01  -0.02  -0.02  -0.03
SO YBADJ    CSE4     -0.03  -0.04  -0.04  -0.04  -0.04  20.90
SO YBADJ    CSE4     11.51   1.77  -8.02 -17.57  -0.01  -0.01
SO YBADJ    CSE4      7.39  -6.35   0.01   0.02   0.02   0.03


SO BUILDHGT CSE5      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE5     23.47   6.10   6.10  23.47  23.47   6.10
SO BUILDHGT CSE5      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE5      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE5     23.47  23.47  23.47  23.47  23.47   6.10
SO BUILDHGT CSE5     29.57  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE5     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE5     29.43  36.11  35.05  28.87  29.43  34.93
SO BUILDWID CSE5     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE5     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE5     29.43  28.87  27.43  28.87  29.43  34.93
SO BUILDWID CSE5     17.14  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE5     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE5     19.41  15.09   9.14  15.27  19.41  25.44
SO BUILDLEN CSE5     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE5     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE5     19.41  15.27  10.67  15.27  19.41  25.44
SO BUILDLEN CSE5     18.42  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE5    -22.96 -22.72 -21.79 -20.19 -17.99  38.27
SO XBADJ    CSE5     43.67  -8.44  -4.60  46.69  41.60 -10.26
SO XBADJ    CSE5    -11.59 -12.57 -13.17 -13.37 -13.16 -12.55
SO XBADJ    CSE5    -13.15 -13.35 -13.14 -12.54 -11.55 -61.23
SO XBADJ    CSE5    -63.08 -63.01 -61.03 -61.96 -61.01 -15.19
SO XBADJ    CSE5    -90.91 -90.97 -88.28 -22.70 -22.95 -22.50
SO YBADJ    CSE5     -0.84  -1.67  -2.46  -3.18  -3.79 -25.23
SO YBADJ    CSE5    -16.21  -4.89  -4.97  12.65  21.89  -4.32
SO YBADJ    CSE5     -3.83  -3.22  -2.51  -1.73  -0.89  -0.03
SO YBADJ    CSE5      0.84   1.67   2.46   3.18   3.79  25.23
SO YBADJ    CSE5     16.21   6.70  -3.02 -12.65 -21.89   4.32
SO YBADJ    CSE5     11.22  -3.13 -17.40   1.73   0.89   0.03


SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6     23.47  23.47   6.10   6.10  23.47  23.47
SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
```

```
SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE6     29.57  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE6     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6     29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE6     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE6     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE6     17.14  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE6     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6     19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE6     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE6     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE6     18.42  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE6    -27.88 -27.41 -26.12 -24.02 -21.20 -17.73
SO XBADJ    CSE6     41.96  46.88  -4.60  -5.84  43.31  37.75
SO XBADJ    CSE6     -8.38  -8.74  -8.84  -8.67  -8.24  -7.55
SO XBADJ    CSE6     -8.23  -8.65  -8.81  -8.71  -8.34  -7.71
SO XBADJ    CSE6    -61.37 -62.14 -61.03 -62.83 -62.72 -60.70
SO XBADJ    CSE6    -94.12 -94.81 -92.61 -27.40 -27.87 -27.50
SO YBADJ    CSE6     -1.70  -3.39  -4.96  -6.39  -7.62  -8.62
SO YBADJ    CSE6    -20.91 -11.62  -9.97  -9.83  17.19  26.14
SO YBADJ    CSE6     -7.66  -6.43  -5.01  -3.44  -1.76  -0.03
SO YBADJ    CSE6      1.70   3.39   4.96   6.39   7.62   8.62
SO YBADJ    CSE6     20.91  11.62   1.98  -7.72 -17.19 -26.14
SO YBADJ    CSE6     15.05   0.08 -14.90   3.44   1.76   0.03


SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7     23.47  23.47   6.10   6.10  23.47  23.47
SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE7      6.10  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE7     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7     29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE7     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE7     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE7     32.73  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE7     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7     19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE7     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE7     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE7     29.54  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE7    -32.81 -32.11 -30.45 -27.85 -24.41 -20.23
SO XBADJ    CSE7     40.25  46.01  -4.60  -4.97  45.02  40.25
SO XBADJ    CSE7     -5.16  -4.91  -4.51  -3.97  -3.31  -2.55
SO XBADJ    CSE7     -3.30  -3.95  -4.48  -4.88  -5.12  -5.21
SO XBADJ    CSE7    -59.66 -61.28 -61.03 -63.70 -64.43 -63.20
SO XBADJ    CSE7    -24.37 -98.64 -96.94 -32.09 -32.80 -32.50
SO YBADJ    CSE7     -2.57  -5.10  -7.46  -9.60 -11.45 -12.95
SO YBADJ    CSE7    -25.61 -16.55 -14.97 -14.75  12.49  21.81
SO YBADJ    CSE7    -11.49  -9.65  -7.51  -5.15  -2.63  -0.03
SO YBADJ    CSE7      2.57   5.10   7.46   9.60  11.45  12.95
SO YBADJ    CSE7     25.61  16.55   6.98  -2.80 -12.49 -21.81
SO YBADJ    CSE7     11.49   3.29 -12.40   5.15   2.63   0.03


  SRCGROUP MG MGA7595 MGB7595 MGC7595 FGH1
  SRCGROUP SH SHA7595 SHB7595 SHC7595 FGH1
  SRCGROUP MGC7 MGA7595 MGB7595 MGC7595 FGH1 CSE1-CSE7
  SRCGROUP SHC7 SHA7595 SHB7595 SHC7595 FGH1 CSE1-CSE7

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
```

```
RE STARTING
  INCLUDED RIVFHCS.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
** SURFFILE C:\amodmet\PBIMIA01.SFC
** PROFFILE C:\amodmet\PBIMIA01.PFL
  SURFFILE PBIMIA01.SFC
  PROFFILE PBIMIA01.PFL
  SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
  UAIRDATA 92803 2001 MIAMI/FIU
  PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE FIRST SECOND
OU FINISHED
**
```

AERBOB RELEASE 020304

AERMOD OUTPUT FILE NUMBER 1 :PMOLC7CD.001
AERMOD OUTPUT FILE NUMBER 2 :PMOLC7CD.002
AERMOD OUTPUT FILE NUMBER 3 :PMOLC7CD.003
AERMOD OUTPUT FILE NUMBER 4 :PMOLC7CD.004
AERMOD OUTPUT FILE NUMBER 5 :PMOLC7CD.005
First title for last output file is: 2001 FPL RBEC- PM OIL MPS 35F&75%LD/SH 95F&75%LD FH&CS CONDO
Second title for last output file is: PM EMISSION RATES PER CTS NOTE: IDS ALL THE SAME

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID:	MG				
Annual					
	2001	0.42485	594330.	2960240.	01123124
	2002	0.52834	594330.	2960240.	02123124
	2003	0.54669	594330.	2960240.	03123124
	2004	0.53136	594330.	2960240.	04123124
	2005	0.72956	594330.	2960240.	05123124
HIGH 24-Hour					
	2001	5.53756	594330.	2960240.	01110924
	2002	5.53427	594280.	2960240.	02052124
	2003	6.43368	594330.	2960240.	03112924
	2004	7.87892	594330.	2960240.	04090424
	2005	7.42273	594330.	2960240.	05102824
HSH 24-Hour					
	2001	5.09816	594330.	2960240.	01041824
	2002	4.43487	594330.	2960240.	02111324
	2003	5.61512	594330.	2960240.	03021324
	2004	5.75832	594330.	2960240.	04110824
	2005	6.88978	594280.	2960240.	05122324
SOURCE GROUP ID:	SH				
Annual					
	2001	0.51990	594330.	2960240.	01123124
	2002	0.62877	594330.	2960240.	02123124
	2003	0.64687	594330.	2960240.	03123124
	2004	0.62205	594330.	2960240.	04123124
	2005	0.87229	594330.	2960240.	05123124
HIGH 24-Hour					
	2001	7.11033	594330.	2960240.	01110924
	2002	5.91894	594280.	2960240.	02052124
	2003	6.90118	594330.	2960240.	03021324
	2004	7.59152	594330.	2960240.	04090424
	2005	9.02212	594330.	2960240.	05102824
HSH 24-Hour					
	2001	5.54520	594330.	2960240.	01041824
	2002	5.11512	594330.	2960240.	02112524
	2003	6.84932	594330.	2960240.	03112924
	2004	6.97186	594330.	2960240.	04110824
	2005	8.21822	594280.	2960240.	05041524
SOURCE GROUP ID:	MGC7				
Annual					
	2001	0.43329	594330.	2960240.	01123124
	2002	0.53790	594330.	2960240.	02123124
	2003	0.55549	594330.	2960240.	03123124
	2004	0.53947	594330.	2960240.	04123124
	2005	0.73928	594330.	2960240.	05123124
HIGH 24-Hour					
	2001	5.60986	594330.	2960240.	01110924
	2002	5.59406	594280.	2960240.	02052124
	2003	6.45699	594330.	2960240.	03112924
	2004	7.88786	594330.	2960240.	04090424
	2005	7.45167	594330.	2960240.	05102824
HSH 24-Hour					
	2001	5.12173	594305.	2960240.	01041824
	2002	4.49975	594330.	2960240.	02111324
	2003	5.63200	594330.	2960240.	03021324
	2004	5.78207	594330.	2960240.	04110824
	2005	6.92983	594280.	2960240.	05122324
SOURCE GROUP ID:	SHC7				
Annual					
	2001	0.52835	594330.	2960240.	01123124

	2002	0.63833	594330.	2960240.	02123124
	2003	0.65566	594330.	2960240.	03123124
	2004	0.63015	594330.	2960240.	04123124
	2005	0.88198	594330.	2960240.	05123124
HIGH 24-Hour					
	2001	7.18263	594330.	2960240.	01110924
	2002	5.97873	594280.	2960240.	02052124
	2003	6.91806	594330.	2960240.	03021324
	2004	7.60046	594330.	2960240.	04090424
	2005	9.05106	594330.	2960240.	05102824
HSH 24-Hour					
	2001	5.56488	594330.	2960240.	01041824
	2002	5.11599	594330.	2960240.	02112524
	2003	6.87262	594330.	2960240.	03112924
	2004	6.99562	594330.	2960240.	04110824
	2005	8.25062	594280.	2960240.	05041524

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

```
CO STARTING
   TITLEONE 2001 FPL RBEC- PM OIL MPS 35F&75%LD/SH 95F&75%LD FH&CS CONDO 12/31/08
   TITLETWO PM EMISSION RATES PER CTS  NOTE: IDS ALL THE SAME
   MODELOPT DFAULT CONC NOWARN
   AVERTIME PERIOD 24
   POLLUTID GEN
   RUNORNOT RUN
   FLAGPOLE
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **

   LOCATION MGA7595 POINT 594125.983 2960797.999 1.000
   LOCATION MGB7595 POINT 594172.071 2960797.963 1.000
   LOCATION MGC7595 POINT 594274.233 2960797.946 1.000

   LOCATION SHA7595 POINT 594125.983 2960797.999 1.000
   LOCATION SHB7595 POINT 594172.071 2960797.963 1.000
   LOCATION SHC7595 POINT 594274.233 2960797.946 1.000

   LOCATION FGH1 POINT 594155.571 2960783.547 1.000

   LOCATION CSE1 POINT 594070.600 2960755.500 1.000
   LOCATION CSE2 POINT 594070.600 2960760.500 1.000
   LOCATION CSE3 POINT 594070.600 2960765.500 1.000
   LOCATION CSE4 POINT 594070.600 2960770.500 1.000
   LOCATION CSE5 POINT 594070.600 2960775.500 1.000
   LOCATION CSE6 POINT 594070.600 2960780.500 1.000
   LOCATION CSE7 POINT 594070.600 2960785.500 1.000

** Source Parameters **
** 75% load, 35 F
   SRCPARAM MGA7595 4.75    45.4  449.8  23.10  6.71
   SRCPARAM MGB7595 4.75    45.4  449.8  23.10  6.71
   SRCPARAM MGC7595 4.75    45.4  449.8  23.10  6.71
** 75% load, 95 F
   SRCPARAM SHA7595 3.78    45.4  447.0  16.63  6.71
   SRCPARAM SHB7595 3.78    45.4  447.0  16.63  6.71
   SRCPARAM SHC7595 3.78    45.4  447.0  16.63  6.71

   SRCPARAM FGH1  0.0025 9.144 533.150 32.02 0.305

   SRCPARAM CSE1 0.0127 12.2 729.800 49.50000 0.305
   SRCPARAM CSE2 0.0127 12.2 729.800 49.50000 0.305
   SRCPARAM CSE3 0.0127 12.2 729.800 49.50000 0.305
   SRCPARAM CSE4 0.0127 12.2 729.800 49.50000 0.305
   SRCPARAM CSE5 0.0127 12.2 729.800 49.50000 0.305
   SRCPARAM CSE6 0.0127 12.2 729.800 49.50000 0.305
   SRCPARAM CSE7 0.0127 12.2 729.800 49.50000 0.305


** Building Downwash **
SO BUILDHGT MGA7595      29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID MGA7595      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGA7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA7595      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN MGA7595      10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGA7595      19.41  15.27  10.67  15.27  19.41  22.95
```

```
SO BUILDLEN MGA7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGA7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGA7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGA7595      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    MGA7595     -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    MGA7595     -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    MGA7595      -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    MGA7595       4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    MGA7595      -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    MGA7595     -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    MGA7595     -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    MGA7595     -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    MGA7595     -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    MGA7595       3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    MGA7595      18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    MGA7595      14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT MGB7595      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT MGB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7595      23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID MGB7595      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID MGB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGB7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGB7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGB7595      27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN MGB7595      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN MGB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGB7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGB7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGB7595      25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    MGB7595     -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    MGB7595     -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    MGB7595      -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    MGB7595       4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    MGB7595      39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    MGB7595     -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    MGB7595     -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    MGB7595      -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    MGB7595     -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    MGB7595       3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    MGB7595       2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    MGB7595      14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT MGC7595      29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT MGC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7595      23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID MGC7595      18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID MGC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGC7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGC7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGC7595      27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN MGC7595      10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN MGC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGC7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGC7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGC7595      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    MGC7595     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    MGC7595     -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    MGC7595      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    MGC7595       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    MGC7595      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    MGC7595     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    MGC7595     -14.43  23.32   8.08 -12.64 -15.01 -16.93
```

```
SO YBADJ    MGC7595      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    MGC7595     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    MGC7595       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    MGC7595      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    MGC7595      14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT SHA7595      29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID SHA7595      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHA7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA7595      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN SHA7595      10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHA7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA7595      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    SHA7595     -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    SHA7595     -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    SHA7595      -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    SHA7595       4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    SHA7595      -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    SHA7595     -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    SHA7595     -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    SHA7595     -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    SHA7595     -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    SHA7595       3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    SHA7595      18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    SHA7595      14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT SHB7595      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID SHB7595      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID SHB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHB7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB7595      27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN SHB7595      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN SHB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHB7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB7595      25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    SHB7595     -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    SHB7595     -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    SHB7595      -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    SHB7595       4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    SHB7595      39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    SHB7595     -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    SHB7595     -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    SHB7595      -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    SHB7595     -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    SHB7595       3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    SHB7595       2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    SHB7595      14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT SHC7595      29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7595      31.39  31.39  31.39  31.39  31.39  31.39
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  23.47  23.47
```

```
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID SHC7595      18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID SHC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHC7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC7595      27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN SHC7595      10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN SHC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHC7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC7595      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    SHC7595     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    SHC7595     -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    SHC7595      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    SHC7595       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    SHC7595      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    SHC7595     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    SHC7595     -14.43  23.32   8.08 -12.64 -15.01 -16.93
SO YBADJ    SHC7595      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    SHC7595     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    SHC7595       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    SHC7595      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    SHC7595      14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT FGH1      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT FGH1      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1      23.47  23.47  23.47  23.47   0.00   0.00
SO BUILDHGT FGH1       0.00  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID FGH1      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID FGH1      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1      27.87  25.81  22.95  19.41   0.00   0.00
SO BUILDWID FGH1       0.00  19.41  22.95  25.81  27.87  29.09
SO BUILDWID FGH1      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN FGH1      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN FGH1      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1      25.81  27.87  29.09  29.43   0.00   0.00
SO BUILDLEN FGH1       0.00  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN FGH1      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    FGH1     -78.45 -81.64 -82.36 -36.60 -38.56 -39.34
SO XBADJ    FGH1     -38.93 -37.33 -34.60 -35.59 -35.49 -34.31
SO XBADJ    FGH1     -32.09   0.71  -1.76  -4.16   0.00   0.00
SO XBADJ    FGH1       0.00 -15.52   4.44   8.73  12.75  16.39
SO XBADJ    FGH1      19.52  22.06  23.94  20.32  16.08  11.36
SO XBADJ    FGH1       6.29 -28.58 -27.33 -77.03 -76.08 -72.82
SO YBADJ    FGH1      17.14   4.16  -8.95  19.19  14.96  10.28
SO YBADJ    FGH1       5.29   0.13  -5.03 -10.03 -14.74 -18.99
SO YBADJ    FGH1     -22.67   9.38  11.78  13.82   0.00   0.00
SO YBADJ    FGH1       0.00  17.37 -22.84 -19.19 -14.96 -10.28
SO YBADJ    FGH1      -5.29  -0.13   5.03  10.03  14.74  18.99
SO YBADJ    FGH1      22.67  -9.38 -11.78   8.41  -3.96 -16.21

SO BUILDHGT CSE1       6.10   6.10   6.10   6.10  23.47   6.10
SO BUILDHGT CSE1       6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1       6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1       6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE1      23.47  23.47  23.47  10.67  10.67  29.57
SO BUILDHGT CSE1      29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE1      15.09  20.58  25.44  29.54  27.87  34.93
SO BUILDWID CSE1      36.07  36.11  35.05  36.11  36.07  34.93
SO BUILDWID CSE1      32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE1      15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE1      29.43  28.87  27.43  34.14  34.79  15.33
SO BUILDWID CSE1      17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE1      36.11  36.07  34.93  32.73  25.81  25.44
SO BUILDLEN CSE1      20.58  15.09   9.14  15.09  20.58  25.44
SO BUILDLEN CSE1      29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE1      36.11  36.07  34.93  32.73  25.81  22.95
```

```
SO BUILDLEN CSE1     19.41  15.27  10.67  18.85  22.89  19.15
SO BUILDLEN CSE1     18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE1    -3.26  -3.92  -4.47  -4.87  44.56  -5.23
SO XBADJ    CSE1    -5.18  -4.96  -4.60 -10.18 -15.46 -20.26
SO XBADJ    CSE1   -24.45 -27.89 -30.49 -32.16 -32.86 -32.55
SO XBADJ    CSE1   -32.85 -32.14 -30.46 -27.86 -70.37 -71.22
SO XBADJ    CSE1   -69.92 -66.49 -61.03 -71.09 -75.74 -78.08
SO XBADJ    CSE1   -78.05 -75.65  -4.44  -3.90  -3.25  -2.50
SO YBADJ    CSE1     2.64   5.17   7.54   9.68 -18.17  13.03
SO YBADJ    CSE1    14.13  14.80  15.03  14.79  14.11  13.00
SO YBADJ    CSE1    11.49   9.64   7.49   5.11   2.58  -0.03
SO YBADJ    CSE1    -2.64  -5.17  -7.54  -9.68  18.17   7.91
SO YBADJ    CSE1    -2.58 -13.00 -23.02  19.00   8.83   7.92
SO YBADJ    CSE1    -4.10 -15.99  -7.49  -5.11  -2.58   0.03

SO BUILDHGT CSE2     6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE2    23.47  23.47  23.47   6.10   6.10  29.57
SO BUILDHGT CSE2    29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE2    15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE2    36.07  36.11  35.05  36.11  36.07  34.93
SO BUILDWID CSE2    32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE2    15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE2    29.43  28.87  27.43  36.11  36.07  15.33
SO BUILDWID CSE2    17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE2    36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE2    20.58  15.09   9.14  15.09  20.58  25.44
SO BUILDLEN CSE2    29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE2    36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE2    19.41  15.27  10.67  15.09  20.58  19.15
SO BUILDLEN CSE2    18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE2    -8.18  -8.62  -8.80  -8.70  41.35  45.77
SO XBADJ    CSE2    -6.89  -5.83  -4.60  -9.31 -13.75 -17.76
SO XBADJ    CSE2   -21.23 -24.06 -26.16 -27.46 -27.93 -27.55
SO XBADJ    CSE2   -27.92 -27.44 -26.13 -24.03 -67.15 -68.72
SO XBADJ    CSE2   -68.21 -65.62 -61.03  -5.78  -6.84 -80.58
SO XBADJ    CSE2   -81.27 -79.48  -8.77  -8.60  -8.18  -7.50
SO YBADJ    CSE2     1.77   3.46   5.04   6.47 -22.00 -12.24
SO YBADJ    CSE2     9.43   9.88  10.03   9.87   9.41   8.67
SO YBADJ    CSE2     7.66   6.42   4.99   3.40   1.71  -0.03
SO YBADJ    CSE2    -1.77  -3.46  -5.04  -6.47  22.00  12.24
SO YBADJ    CSE2     2.12  -8.07 -18.02  -9.87  -9.41  12.25
SO YBADJ    CSE2    -0.27 -12.78  -4.99  -3.40  -1.71   0.03

SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE3     6.10   6.10   6.10  23.47   6.10   6.10
SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE3    23.47  23.47  23.47  23.47   6.10   6.10
SO BUILDHGT CSE3    29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE3    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE3    36.07  36.11  35.05  28.87  36.07  34.93
SO BUILDWID CSE3    32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE3    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE3    29.43  28.87  27.43  28.87  36.07  34.93
SO BUILDWID CSE3    17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE3    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE3    20.58  15.09   9.14  15.27  20.58  25.44
SO BUILDLEN CSE3    29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE3    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE3    19.41  15.27  10.67  15.27  20.58  25.44
SO BUILDLEN CSE3    18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE3   -13.11 -13.32 -13.13 -12.53 -11.56  43.27
SO XBADJ    CSE3    -8.60  -6.70  -4.60  44.96 -12.04 -15.26
SO XBADJ    CSE3   -18.02 -20.23 -21.83 -22.77 -23.01 -22.55
SO XBADJ    CSE3   -23.00 -22.75 -21.80 -20.20 -17.98 -66.22
SO XBADJ    CSE3   -66.50 -64.75 -61.03 -60.23  -8.55 -10.19
SO XBADJ    CSE3   -84.48 -83.31 -13.10 -13.30 -13.10 -12.50
SO YBADJ    CSE3     0.90   1.75   2.54   3.25   3.87 -16.57
```

```
SO YBADJ    CSE3      4.73   4.95   5.03  22.49   4.71   4.34
SO YBADJ    CSE3      3.83   3.21   2.49   1.69   0.85  -0.03
SO YBADJ    CSE3     -0.90  -1.75  -2.54  -3.25  -3.87  16.57
SO YBADJ    CSE3      6.82  -3.15 -13.02 -22.49  -4.71  -4.34
SO YBADJ    CSE3      3.56  -9.56  -2.49  -1.69  -0.85   0.03

SO BUILDHGT CSE4      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE4     23.47   6.10   6.10  23.47   6.10   6.10
SO BUILDHGT CSE4      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE4      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE4     23.47  23.47  23.47  23.47   6.10   6.10
SO BUILDHGT CSE4     29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE4     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE4     29.43  36.11  35.05  28.87  36.07  34.93
SO BUILDWID CSE4     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE4     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE4     29.43  28.87  27.43  28.87  36.07  34.93
SO BUILDWID CSE4     17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE4     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE4     19.41  15.09   9.14  15.27  20.58  25.44
SO BUILDLEN CSE4     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE4     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE4     19.41  15.27  10.67  15.27  20.58  25.44
SO BUILDLEN CSE4     18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE4    -18.03 -18.02 -17.46 -16.36 -14.77  40.77
SO XBADJ    CSE4     45.38  -7.57  -4.60  45.83 -10.33 -12.76
SO XBADJ    CSE4    -14.81 -16.40 -17.50 -18.07 -18.08 -17.55
SO XBADJ    CSE4    -18.07 -18.05 -17.47 -16.37 -14.76 -63.72
SO XBADJ    CSE4    -64.79 -63.88 -61.03 -61.10 -10.26 -12.69
SO XBADJ    CSE4    -87.70 -87.14 -17.43 -18.00 -18.02 -17.50
SO YBADJ    CSE4      0.03   0.04   0.04   0.04   0.04 -20.90
SO YBADJ    CSE4    -11.51   0.03   0.03  17.57   0.01   0.01
SO YBADJ    CSE4      0.00   0.00  -0.01  -0.02  -0.02  -0.03
SO YBADJ    CSE4     -0.03  -0.04  -0.04  -0.04  -0.04  20.90
SO YBADJ    CSE4     11.51   1.77  -8.02 -17.57  -0.01  -0.01
SO YBADJ    CSE4      7.39  -6.35   0.01   0.02   0.02   0.03

SO BUILDHGT CSE5      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE5     23.47   6.10   6.10  23.47  23.47   6.10
SO BUILDHGT CSE5      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE5      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE5     23.47  23.47  23.47  23.47  23.47   6.10
SO BUILDHGT CSE5     29.57  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE5     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE5     29.43  36.11  35.05  28.87  29.43  34.93
SO BUILDWID CSE5     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE5     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE5     29.43  28.87  27.43  28.87  29.43  34.93
SO BUILDWID CSE5     17.14  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE5     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE5     19.41  15.09   9.14  15.27  19.41  25.44
SO BUILDLEN CSE5     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE5     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE5     19.41  15.27  10.67  15.27  19.41  25.44
SO BUILDLEN CSE5     18.42  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE5    -22.96 -22.72 -21.79 -20.19 -17.99  38.27
SO XBADJ    CSE5     43.67  -8.44  -4.60  46.69  41.60 -10.26
SO XBADJ    CSE5    -11.59 -12.57 -13.17 -13.37 -13.16 -12.55
SO XBADJ    CSE5    -13.15 -13.35 -13.14 -12.54 -11.55 -61.23
SO XBADJ    CSE5    -63.08 -63.01 -61.03 -61.96 -61.01 -15.19
SO XBADJ    CSE5    -90.91 -90.97 -88.28 -22.70 -22.95 -22.50
SO YBADJ    CSE5     -0.84  -1.67  -2.46  -3.18  -3.79 -25.23
SO YBADJ    CSE5    -16.21  -4.89  -4.97  12.65  21.89  -4.32
SO YBADJ    CSE5     -3.83  -3.22  -2.51  -1.73  -0.89  -0.03
SO YBADJ    CSE5      0.84   1.67   2.46   3.18   3.79  25.23
SO YBADJ    CSE5     16.21   6.70  -3.02 -12.65 -21.89   4.32
SO YBADJ    CSE5     11.22  -3.13 -17.40   1.73   0.89   0.03

SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6     23.47  23.47   6.10   6.10  23.47  23.47
```

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SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE6     29.57  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE6     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6     29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE6     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE6     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE6     17.14  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE6     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6     19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE6     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE6     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE6     18.42  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE6    -27.88 -27.41 -26.12 -24.02 -21.20 -17.73
SO XBADJ    CSE6     41.96  46.88  -4.60  -5.84  43.31  37.75
SO XBADJ    CSE6     -8.38  -8.74  -8.84  -8.67  -8.24  -7.55
SO XBADJ    CSE6     -8.23  -8.65  -8.81  -8.71  -8.34  -7.71
SO XBADJ    CSE6    -61.37 -62.14 -61.03 -62.83 -62.72 -60.70
SO XBADJ    CSE6    -94.12 -94.81 -92.61 -27.40 -27.87 -27.50
SO YBADJ    CSE6     -1.70  -3.39  -4.96  -6.39  -7.62  -8.62
SO YBADJ    CSE6    -20.91 -11.62  -9.97  -9.83  17.19  26.14
SO YBADJ    CSE6     -7.66  -6.43  -5.01  -3.44  -1.76  -0.03
SO YBADJ    CSE6      1.70   3.39   4.96   6.39   7.62   8.62
SO YBADJ    CSE6     20.91  11.62   1.98  -7.72 -17.19 -26.14
SO YBADJ    CSE6     15.05   0.08 -14.90   3.44   1.76   0.03


SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7     23.47  23.47   6.10   6.10  23.47  23.47
SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE7      6.10  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE7     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7     29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE7     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE7     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE7     32.73  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE7     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7     19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE7     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE7     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE7     29.54  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE7    -32.81 -32.11 -30.45 -27.85 -24.41 -20.23
SO XBADJ    CSE7     40.25  46.01  -4.60  -4.97  45.02  40.25
SO XBADJ    CSE7     -5.16  -4.91  -4.51  -3.97  -3.31  -2.55
SO XBADJ    CSE7     -3.30  -3.95  -4.48  -4.88  -5.12  -5.21
SO XBADJ    CSE7    -59.66 -61.28 -61.03 -63.70 -64.43 -63.20
SO XBADJ    CSE7    -24.37 -98.64 -96.94 -32.09 -32.80 -32.50
SO YBADJ    CSE7     -2.57  -5.10  -7.46  -9.60 -11.45 -12.95
SO YBADJ    CSE7    -25.61 -16.55 -14.97 -14.75  12.49  21.81
SO YBADJ    CSE7    -11.49  -9.65  -7.51  -5.15  -2.63  -0.03
SO YBADJ    CSE7      2.57   5.10   7.46   9.60  11.45  12.95
SO YBADJ    CSE7     25.61  16.55   6.98  -2.80 -12.49 -21.81
SO YBADJ    CSE7     11.49   3.29 -12.40   5.15   2.63   0.03


  SRCGROUP MG MGA7595 MGB7595 MGC7595 FGH1
  SRCGROUP SH SHA7595 SHB7595 SHC7595 FGH1
  SRCGROUP MGC7 MGA7595 MGB7595 MGC7595 FGH1 CSE1-CSE7
  SRCGROUP SHC7 SHA7595 SHB7595 SHC7595 FGH1 CSE1-CSE7

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
```

```
**
RE STARTING
  INCLUDED RIV1COND.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
** SURFFILE C:\amodmet\PBIMIA01.SFC
** PROFFILE C:\amodmet\PBIMIA01.PFL
  SURFFILE PBIMIA01.SFC
  PROFFILE PBIMIA01.PFL
  SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
  UAIRDATA 92803 2001 MIAMI/FIU
  PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE FIRST SECOND
OU FINISHED
**
```

PREDICTED NO_2 IMPACTS FOR RBEC

1. SUMMARY FILES FOR:
   - CTS/HRSGS AND FUEL HEATER
   - CTS/HRSGS, FUEL HEATER, AND GAS COMPRESSOR STATION
2. EXAMPLE INPUT FILE

AERBOB RELEASE 020304
AERMOD OUTPUT FILE NUMBER 1 :NO2OILC7.O01
AERMOD OUTPUT FILE NUMBER 2 :NO2OILC7.O02
AERMOD OUTPUT FILE NUMBER 3 :NO2OILC7.O03
AERMOD OUTPUT FILE NUMBER 4 :NO2OILC7.O04
AERMOD OUTPUT FILE NUMBER 5 :NO2OILC7.O05
First title for last output file is: 2001 RBEC- NO2 OIL 501G 59F&100%/SH 59F&75% LOAD FH&CS 12/31/08
Second title for last output file is: NO2 EMISSION RATES PER CTS NOTE: ALL IDS ARE SAME

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: MG					
Annual					
	2001	1.95072	594037.	2960840.	01123124
	2002	2.19606	594037.	2960840.	02123124
	2003	1.85576	594123.	2960837.	03123124
	2004	1.81328	594037.	2960840.	04123124
	2005	1.65497	594123.	2960837.	05123124
SOURCE GROUP ID: SH					
Annual					
	2001	1.95072	594037.	2960840.	01123124
	2002	2.19606	594037.	2960840.	02123124
	2003	1.85576	594123.	2960837.	03123124
	2004	1.81328	594037.	2960840.	04123124
	2005	1.65497	594123.	2960837.	05123124
SOURCE GROUP ID: MGC7					
Annual					
	2001	21.46101	593951.	2960762.	01123124
	2002	20.00818	593952.	2960802.	02123124
	2003	16.47338	593952.	2960802.	03123124
	2004	22.84689	593951.	2960762.	04123124
	2005	18.03088	593900.	2960800.	05123124
SOURCE GROUP ID: SHC7					
Annual					
	2001	21.46101	593951.	2960762.	01123124
	2002	20.00818	593952.	2960802.	02123124
	2003	16.47338	593952.	2960802.	03123124
	2004	22.84689	593951.	2960762.	04123124
	2005	18.03088	593900.	2960800.	05123124

All receptor computations reported with respect to a user-specified origin
GRID 0.00 0.00
DISCRETE 0.00 0.00

```
CO STARTING
  TITLEONE 2001 RBEC- NO2 OIL 501G 59F&100%/SH 59F&75% LOAD FH&CS  12/31/08
  TITLETWO NO2 EMISSION RATES PER CTS  NOTE: ALL IDS ARE SAME
  MODELOPT DFAULT CONC NOWARN
  AVERTIME PERIOD
  POLLUTID GEN
  RUNORNOT RUN
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **

  LOCATION MGA7559 POINT 594125.983 2960797.999 1.000
  LOCATION MGB7559 POINT 594172.071 2960797.963 1.000
  LOCATION MGC7559 POINT 594274.233 2960797.946 1.000

  LOCATION SHA7559 POINT 594125.983 2960797.999 1.000
  LOCATION SHB7559 POINT 594172.071 2960797.963 1.000
  LOCATION SHC7559 POINT 594274.233 2960797.946 1.000

  LOCATION FGH1 POINT 594155.571 2960783.547 1.000

  LOCATION CSE1 POINT 594070.600 2960755.500 1.000
  LOCATION CSE2 POINT 594070.600 2960760.500 1.000
  LOCATION CSE3 POINT 594070.600 2960765.500 1.000
  LOCATION CSE4 POINT 594070.600 2960770.500 1.000
  LOCATION CSE5 POINT 594070.600 2960775.500 1.000
  LOCATION CSE6 POINT 594070.600 2960780.500 1.000
  LOCATION CSE7 POINT 594070.600 2960785.500 1.000

** Source Parameters **
** 100% load, 59 F
  SRCPARAM MGA7559 9.14    45.4  453.7  23.03  6.71
  SRCPARAM MGB7559 9.14    45.4  453.7  23.03  6.71
  SRCPARAM MGC7559 9.14    45.4  453.7  23.03  6.71

** 75% load, 59 F
  SRCPARAM SHA7559 8.16    45.4  448.7  18.04  6.71
  SRCPARAM SHB7559 8.16    45.4  448.7  18.04  6.71
  SRCPARAM SHC7559 8.16    45.4  448.7  18.04  6.71

  SRCPARAM FGH1  0.12 9.144 533.150 32.02 0.305

  SRCPARAM CSE1 0.558 12.2 729.800 49.50000 0.305
  SRCPARAM CSE2 0.558 12.2 729.800 49.50000 0.305
  SRCPARAM CSE3 0.558 12.2 729.800 49.50000 0.305
  SRCPARAM CSE4 0.558 12.2 729.800 49.50000 0.305
  SRCPARAM CSE5 0.558 12.2 729.800 49.50000 0.305
  SRCPARAM CSE6 0.558 12.2 729.800 49.50000 0.305
  SRCPARAM CSE7 0.558 12.2 729.800 49.50000 0.305


** Building Downwash **
SO BUILDHGT MGA7559      29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7559      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID MGA7559      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA7559      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGA7559      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA7559      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN MGA7559      10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGA7559      19.41  15.27  10.67  15.27  19.41  22.95
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SO BUILDLEN MGA7559      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGA7559      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGA7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGA7559      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    MGA7559     -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    MGA7559     -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    MGA7559      -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    MGA7559       4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    MGA7559      -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    MGA7559     -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    MGA7559     -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    MGA7559     -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    MGA7559     -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    MGA7559       3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    MGA7559      18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    MGA7559      14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT MGB7559      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT MGB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7559      23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID MGB7559      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID MGB7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGB7559      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGB7559      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGB7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGB7559      27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN MGB7559      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN MGB7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGB7559      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGB7559      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGB7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGB7559      25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    MGB7559     -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    MGB7559     -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    MGB7559      -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    MGB7559       4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    MGB7559      39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    MGB7559     -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    MGB7559     -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    MGB7559      -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    MGB7559     -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    MGB7559       3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    MGB7559       2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    MGB7559      14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT MGC7559      29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT MGC7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7559      23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID MGC7559      18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID MGC7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGC7559      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGC7559      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGC7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGC7559      27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN MGC7559      10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN MGC7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGC7559      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGC7559      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGC7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGC7559      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    MGC7559     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    MGC7559     -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    MGC7559      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    MGC7559       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    MGC7559      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    MGC7559     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    MGC7559     -14.43  23.32   8.08 -12.64 -15.01 -16.93
```

```
SO YBADJ    MGC7559      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    MGC7559     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    MGC7559       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    MGC7559      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    MGC7559      14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT SHA7559      29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7559      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID SHA7559      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA7559      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHA7559      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA7559      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN SHA7559      10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA7559      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHA7559      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA7559      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    SHA7559     -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    SHA7559     -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    SHA7559      -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    SHA7559       4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    SHA7559      -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    SHA7559     -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    SHA7559     -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    SHA7559     -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    SHA7559     -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    SHA7559       3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    SHA7559      18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    SHA7559      14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT SHB7559      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT SHB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7559      23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID SHB7559      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID SHB7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB7559      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHB7559      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHB7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB7559      27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN SHB7559      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN SHB7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB7559      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHB7559      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHB7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB7559      25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    SHB7559     -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    SHB7559     -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    SHB7559      -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    SHB7559       4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    SHB7559      39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    SHB7559     -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    SHB7559     -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    SHB7559      -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    SHB7559     -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    SHB7559       3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    SHB7559       2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    SHB7559      14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT SHC7559      29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT SHC7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7559      23.47  23.47  23.47  23.47  23.47  23.47
```

```
SO BUILDHGT SHC7559      23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID SHC7559      18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID SHC7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC7559      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHC7559      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHC7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC7559      27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN SHC7559      10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN SHC7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC7559      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHC7559      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHC7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC7559      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    SHC7559     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    SHC7559     -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    SHC7559      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    SHC7559       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    SHC7559      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    SHC7559     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    SHC7559     -14.43  23.32   8.08 -12.64 -15.01 -16.93
SO YBADJ    SHC7559      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    SHC7559     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    SHC7559       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    SHC7559      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    SHC7559      14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT FGH1     29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT FGH1     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1     23.47  23.47  23.47  23.47   0.00   0.00
SO BUILDHGT FGH1      0.00  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1     23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID FGH1     18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID FGH1     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1     27.87  25.81  22.95  19.41   0.00   0.00
SO BUILDWID FGH1      0.00  19.41  22.95  25.81  27.87  29.09
SO BUILDWID FGH1     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1     27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN FGH1     10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN FGH1     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1     25.81  27.87  29.09  29.43   0.00   0.00
SO BUILDLEN FGH1      0.00  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN FGH1     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1     25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    FGH1    -78.45 -81.64 -82.36 -36.60 -38.56 -39.34
SO XBADJ    FGH1    -38.93 -37.33 -34.60 -35.59 -35.49 -34.31
SO XBADJ    FGH1    -32.09   0.71  -1.76  -4.16   0.00   0.00
SO XBADJ    FGH1      0.00 -15.52   4.44   8.73  12.75  16.39
SO XBADJ    FGH1     19.52  22.06  23.94  20.32  16.08  11.36
SO XBADJ    FGH1      6.29 -28.58 -27.33 -77.03 -76.08 -72.82
SO YBADJ    FGH1     17.14   4.16  -8.95  19.19  14.96  10.28
SO YBADJ    FGH1      5.29   0.13  -5.03 -10.03 -14.74 -18.99
SO YBADJ    FGH1    -22.67   9.38  11.78  13.82   0.00   0.00
SO YBADJ    FGH1      0.00  17.37 -22.84 -19.19 -14.96 -10.28
SO YBADJ    FGH1     -5.29  -0.13   5.03  10.03  14.74  18.99
SO YBADJ    FGH1     22.67  -9.38 -11.78   8.41  -3.96 -16.21

SO BUILDHGT CSE1      6.10   6.10   6.10   6.10  23.47   6.10
SO BUILDHGT CSE1      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1      6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE1     23.47  23.47  23.47  10.67  10.67  29.57
SO BUILDHGT CSE1     29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE1     15.09  20.58  25.44  29.54  27.87  34.93
SO BUILDWID CSE1     36.07  36.11  35.05  36.11  36.07  34.93
SO BUILDWID CSE1     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE1     15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE1     29.43  28.87  27.43  34.14  34.79  15.33
SO BUILDWID CSE1     17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE1     36.11  36.07  34.93  32.73  25.81  25.44
SO BUILDLEN CSE1     20.58  15.09   9.14  15.09  20.58  25.44
SO BUILDLEN CSE1     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE1     36.11  36.07  34.93  32.73  25.81  22.95
```

```
SO BUILDLEN CSE1     19.41  15.27  10.67  18.85  22.89  19.15
SO BUILDLEN CSE1     18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE1    -3.26  -3.92  -4.47  -4.87  44.56  -5.23
SO XBADJ    CSE1    -5.18  -4.96  -4.60 -10.18 -15.46 -20.26
SO XBADJ    CSE1   -24.45 -27.89 -30.49 -32.16 -32.86 -32.55
SO XBADJ    CSE1   -32.85 -32.14 -30.46 -27.86 -70.37 -71.22
SO XBADJ    CSE1   -69.92 -66.49 -61.03 -71.09 -75.74 -78.08
SO XBADJ    CSE1   -78.05 -75.65  -4.44  -3.90  -3.25  -2.50
SO YBADJ    CSE1     2.64   5.17   7.54   9.68 -18.17  13.03
SO YBADJ    CSE1    14.13  14.80  15.03  14.79  14.11  13.00
SO YBADJ    CSE1    11.49   9.64   7.49   5.11   2.58  -0.03
SO YBADJ    CSE1    -2.64  -5.17  -7.54  -9.68  18.17   7.91
SO YBADJ    CSE1    -2.58 -13.00 -23.02  19.00   8.83   7.92
SO YBADJ    CSE1    -4.10 -15.99  -7.49  -5.11  -2.58   0.03


SO BUILDHGT CSE2     6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE2    23.47  23.47  23.47   6.10   6.10  29.57
SO BUILDHGT CSE2    29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE2    15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE2    36.07  36.11  35.05  36.11  36.07  34.93
SO BUILDWID CSE2    32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE2    15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE2    29.43  28.87  27.43  36.11  36.07  15.33
SO BUILDWID CSE2    17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE2    36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE2    20.58  15.09   9.14  15.09  20.58  25.44
SO BUILDLEN CSE2    29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE2    36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE2    19.41  15.27  10.67  15.09  20.58  19.15
SO BUILDLEN CSE2    18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE2    -8.18  -8.62  -8.80  -8.70  41.35  45.77
SO XBADJ    CSE2    -6.89  -5.83  -4.60  -9.31 -13.75 -17.76
SO XBADJ    CSE2   -21.23 -24.06 -26.16 -27.46 -27.93 -27.55
SO XBADJ    CSE2   -27.92 -27.44 -26.13 -24.03 -67.15 -68.72
SO XBADJ    CSE2   -68.21 -65.62 -61.03  -5.78  -6.84 -80.58
SO XBADJ    CSE2   -81.27 -79.48  -8.77  -8.60  -8.18  -7.50
SO YBADJ    CSE2     1.77   3.46   5.04   6.47 -22.00 -12.24
SO YBADJ    CSE2     9.43   9.88  10.03   9.87   9.41   8.67
SO YBADJ    CSE2     7.66   6.42   4.99   3.40   1.71  -0.03
SO YBADJ    CSE2    -1.77  -3.46  -5.04  -6.47  22.00  12.24
SO YBADJ    CSE2     2.12  -8.07 -18.02  -9.87  -9.41  12.25
SO YBADJ    CSE2    -0.27 -12.78  -4.99  -3.40  -1.71   0.03


SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE3     6.10   6.10   6.10  23.47   6.10   6.10
SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE3    23.47  23.47  23.47  23.47   6.10   6.10
SO BUILDHGT CSE3    29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE3    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE3    36.07  36.11  35.05  28.87  36.07  34.93
SO BUILDWID CSE3    32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE3    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE3    29.43  28.87  27.43  28.87  36.07  34.93
SO BUILDWID CSE3    17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE3    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE3    20.58  15.09   9.14  15.27  20.58  25.44
SO BUILDLEN CSE3    29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE3    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE3    19.41  15.27  10.67  15.27  20.58  25.44
SO BUILDLEN CSE3    18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE3   -13.11 -13.32 -13.13 -12.53 -11.56  43.27
SO XBADJ    CSE3    -8.60  -6.70  -4.60  44.96 -12.04 -15.26
SO XBADJ    CSE3   -18.02 -20.23 -21.83 -22.77 -23.01 -22.55
SO XBADJ    CSE3   -23.00 -22.75 -21.80 -20.20 -17.98 -66.22
SO XBADJ    CSE3   -66.50 -64.75 -61.03 -60.23  -8.55 -10.19
SO XBADJ    CSE3   -84.48 -83.31 -13.10 -13.30 -13.10 -12.50
SO YBADJ    CSE3     0.90   1.75   2.54   3.25   3.87 -16.57
```

```
SO YBADJ    CSE3      4.73  4.95  5.03  22.49   4.71   4.34
SO YBADJ    CSE3      3.83  3.21  2.49   1.69   0.85  -0.03
SO YBADJ    CSE3     -0.90 -1.75 -2.54  -3.25  -3.87  16.57
SO YBADJ    CSE3      6.82 -3.15 -13.02 -22.49  -4.71  -4.34
SO YBADJ    CSE3      3.56 -9.56 -2.49  -1.69  -0.85   0.03

SO BUILDHGT CSE4      6.10  6.10  6.10  6.10  6.10  23.47
SO BUILDHGT CSE4     23.47  6.10  6.10 23.47  6.10   6.10
SO BUILDHGT CSE4      6.10  6.10  6.10  6.10  6.10   6.10
SO BUILDHGT CSE4      6.10  6.10  6.10  6.10  6.10  23.47
SO BUILDHGT CSE4     23.47 23.47 23.47 23.47  6.10   6.10
SO BUILDHGT CSE4     29.57 29.57  6.10  6.10  6.10   6.10
SO BUILDWID CSE4     15.09 20.58 25.44 29.54 32.73  29.09
SO BUILDWID CSE4     29.43 36.11 35.05 28.87 36.07  34.93
SO BUILDWID CSE4     32.73 29.54 25.44 20.58 15.09   9.14
SO BUILDWID CSE4     15.09 20.58 25.44 29.54 32.73  29.09
SO BUILDWID CSE4     29.43 28.87 27.43 28.87 36.07  34.93
SO BUILDWID CSE4     17.14 18.42 25.44 20.58 15.09   9.14
SO BUILDLEN CSE4     36.11 36.07 34.93 32.73 29.54  22.95
SO BUILDLEN CSE4     19.41 15.09  9.14 15.27 20.58  25.44
SO BUILDLEN CSE4     29.54 32.73 34.93 36.07 36.11  35.05
SO BUILDLEN CSE4     36.11 36.07 34.93 32.73 29.54  22.95
SO BUILDLEN CSE4     19.41 15.27 10.67 15.27 20.58  25.44
SO BUILDLEN CSE4     18.42 17.14 34.93 36.07 36.11  35.05
SO XBADJ    CSE4    -18.03 -18.02 -17.46 -16.36 -14.77  40.77
SO XBADJ    CSE4     45.38  -7.57  -4.60 45.83 -10.33 -12.76
SO XBADJ    CSE4    -14.81 -16.40 -17.50 -18.07 -18.08 -17.55
SO XBADJ    CSE4    -18.07 -18.05 -17.47 -16.37 -14.76 -63.72
SO XBADJ    CSE4    -64.79 -63.88 -61.03 -61.10 -10.26 -12.69
SO XBADJ    CSE4    -87.70 -87.14 -17.43 -18.00 -18.02 -17.50
SO YBADJ    CSE4      0.03   0.04   0.04   0.04   0.04 -20.90
SO YBADJ    CSE4    -11.51   0.03   0.03  17.57   0.01   0.01
SO YBADJ    CSE4      0.00   0.00  -0.01  -0.02  -0.02  -0.03
SO YBADJ    CSE4     -0.03  -0.04  -0.04  -0.04  -0.04  20.90
SO YBADJ    CSE4     11.51   1.77  -8.02 -17.57  -0.01  -0.01
SO YBADJ    CSE4      7.39  -6.35   0.01   0.02   0.02   0.03

SO BUILDHGT CSE5      6.10  6.10  6.10  6.10  6.10  23.47
SO BUILDHGT CSE5     23.47  6.10  6.10 23.47 23.47   6.10
SO BUILDHGT CSE5      6.10  6.10  6.10  6.10  6.10   6.10
SO BUILDHGT CSE5      6.10  6.10  6.10  6.10  6.10  23.47
SO BUILDHGT CSE5     23.47 23.47 23.47 23.47 23.47   6.10
SO BUILDHGT CSE5     29.57 29.57 29.57  6.10  6.10   6.10
SO BUILDWID CSE5     15.09 20.58 25.44 29.54 32.73  29.09
SO BUILDWID CSE5     29.43 36.11 35.05 28.87 29.43  34.93
SO BUILDWID CSE5     32.73 29.54 25.44 20.58 15.09   9.14
SO BUILDWID CSE5     15.09 20.58 25.44 29.54 32.73  29.09
SO BUILDWID CSE5     29.43 28.87 27.43 28.87 29.43  34.93
SO BUILDWID CSE5     17.14 18.42 19.15 20.58 15.09   9.14
SO BUILDLEN CSE5     36.11 36.07 34.93 32.73 29.54  22.95
SO BUILDLEN CSE5     19.41 15.09  9.14 15.27 19.41  25.44
SO BUILDLEN CSE5     29.54 32.73 34.93 36.07 36.11  35.05
SO BUILDLEN CSE5     36.11 36.07 34.93 32.73 29.54  22.95
SO BUILDLEN CSE5     19.41 15.27 10.67 15.27 19.41  25.44
SO BUILDLEN CSE5     18.42 17.14 15.33 36.07 36.11  35.05
SO XBADJ    CSE5    -22.96 -22.72 -21.79 -20.19 -17.99  38.27
SO XBADJ    CSE5     43.67  -8.44  -4.60 46.69 41.60 -10.26
SO XBADJ    CSE5    -11.59 -12.57 -13.17 -13.37 -13.16 -12.55
SO XBADJ    CSE5    -13.15 -13.35 -13.14 -12.54 -11.55 -61.23
SO XBADJ    CSE5    -63.08 -63.01 -61.03 -61.96 -61.01 -15.19
SO XBADJ    CSE5    -90.91 -90.97 -88.28 -22.70 -22.95 -22.50
SO YBADJ    CSE5     -0.84  -1.67  -2.46  -3.18  -3.79 -25.23
SO YBADJ    CSE5    -16.21  -4.89  -4.97  12.65  21.89  -4.32
SO YBADJ    CSE5     -3.83  -3.22  -2.51  -1.73  -0.89  -0.03
SO YBADJ    CSE5      0.84   1.67   2.46   3.18   3.79  25.23
SO YBADJ    CSE5     16.21   6.70  -3.02 -12.65 -21.89   4.32
SO YBADJ    CSE5     11.22  -3.13 -17.40   1.73   0.89   0.03

SO BUILDHGT CSE6      6.10  6.10  6.10  6.10  6.10  6.10
SO BUILDHGT CSE6     23.47 23.47  6.10  6.10 23.47 23.47
```

```
SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE6     29.57  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE6     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6     29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE6     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE6     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE6     17.14  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE6     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6     19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE6     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE6     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE6     18.42  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE6    -27.88 -27.41 -26.12 -24.02 -21.20 -17.73
SO XBADJ    CSE6     41.96  46.88  -4.60  -5.84  43.31  37.75
SO XBADJ    CSE6     -8.38  -8.74  -8.84  -8.67  -8.24  -7.55
SO XBADJ    CSE6     -8.23  -8.65  -8.81  -8.71  -8.34  -7.71
SO XBADJ    CSE6    -61.37 -62.14 -61.03 -62.83 -62.72 -60.70
SO XBADJ    CSE6    -94.12 -94.81 -92.61 -27.40 -27.87 -27.50
SO YBADJ    CSE6     -1.70  -3.39  -4.96  -6.39  -7.62  -8.62
SO YBADJ    CSE6    -20.91 -11.62  -9.97  -9.83  17.19  26.14
SO YBADJ    CSE6     -7.66  -6.43  -5.01  -3.44  -1.76  -0.03
SO YBADJ    CSE6      1.70   3.39   4.96   6.39   7.62   8.62
SO YBADJ    CSE6     20.91  11.62   1.98  -7.72 -17.19 -26.14
SO YBADJ    CSE6     15.05   0.08 -14.90   3.44   1.76   0.03


SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7     23.47  23.47   6.10   6.10  23.47  23.47
SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE7      6.10  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE7     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7     29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE7     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE7     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE7     32.73  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE7     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7     19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE7     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE7     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE7     29.54  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE7    -32.81 -32.11 -30.45 -27.85 -24.41 -20.23
SO XBADJ    CSE7     40.25  46.01  -4.60  -4.97  45.02  40.25
SO XBADJ    CSE7     -5.16  -4.91  -4.51  -3.97  -3.31  -2.55
SO XBADJ    CSE7     -3.30  -3.95  -4.48  -4.88  -5.12  -5.21
SO XBADJ    CSE7    -59.66 -61.28 -61.03 -63.70 -64.43 -63.20
SO XBADJ    CSE7    -24.37 -98.64 -96.94 -32.09 -32.80 -32.50
SO YBADJ    CSE7     -2.57  -5.10  -7.46  -9.60 -11.45 -12.95
SO YBADJ    CSE7    -25.61 -16.55 -14.97 -14.75  12.49  21.81
SO YBADJ    CSE7    -11.49  -9.65  -7.51  -5.15  -2.63  -0.03
SO YBADJ    CSE7      2.57   5.10   7.46   9.60  11.45  12.95
SO YBADJ    CSE7     25.61  16.55   6.98  -2.80 -12.49 -21.81
SO YBADJ    CSE7     11.49   3.29 -12.40   5.15   2.63   0.03

  SRCGROUP MG MGA7595 MGB7595 MGC7595 FGH1
  SRCGROUP SH SHA7595 SHB7595 SHC7595 FGH1
  SRCGROUP MGC7 MGA7595 MGB7595 MGC7595 FGH1 CSE1-CSE7
  SRCGROUP SHC7 SHA7595 SHB7595 SHC7595 FGH1 CSE1-CSE7

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
```

```
RE STARTING
  INCLUDED RIVFHCS.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
** SURFFILE C:\amodmet\PBIMIA01.SFC
** PROFFILE C:\amodmet\PBIMIA01.PFL
  SURFFILE PBIMIA01.SFC
  PROFFILE PBIMIA01.PFL
  SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
  UAIRDATA 92803 2001 MIAMI/FIU
  PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE FIRST
OU FINISHED
**
```

AERBOB RELEASE 020304
AERMOD OUTPUT FILE NUMBER 1 :N2OLC7CD.O01
AERMOD OUTPUT FILE NUMBER 2 :N2OLC7CD.O02
AERMOD OUTPUT FILE NUMBER 3 :N2OLC7CD.O03
AERMOD OUTPUT FILE NUMBER 4 :N2OLC7CD.O04
AERMOD OUTPUT FILE NUMBER 5 :N2OLC7CD.O05
First title for last output file is: 2001 RBEC- NO2 OIL 501G 59F&100%/SH 59F&75% LOAD FH&CS CONDO 12/31/08
Second title for last output file is: NO2 EMISSION RATES PER CTS NOTE: ALL IDS ARE SAME

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: MG					
Annual					
	2001	0.81463	594330.	2960240.	01123124
	2002	1.01430	594330.	2960240.	02123124
	2003	1.04832	594330.	2960240.	03123124
	2004	1.01834	594330.	2960240.	04123124
	2005	1.39595	594330.	2960240.	05123124
SOURCE GROUP ID: SH					
Annual					
	2001	1.01640	594330.	2960240.	01123124
	2002	1.23762	594330.	2960240.	02123124
	2003	1.27305	594330.	2960240.	03123124
	2004	1.22711	594330.	2960240.	04123124
	2005	1.71117	594330.	2960240.	05123124
SOURCE GROUP ID: MGC7					
Annual					
	2001	2.85413	594305.	2960240.	01123124
	2002	3.51595	594330.	2960240.	02123124
	2003	3.25092	594330.	2960240.	03123124
	2004	2.67711	594330.	2960240.	04123124
	2005	3.15757	594280.	2960240.	05123124
SOURCE GROUP ID: SHC7					
Annual					
	2001	2.88789	594305.	2960240.	01123124
	2002	3.56450	594330.	2960240.	02123124
	2003	3.29857	594330.	2960240.	03123124
	2004	2.72298	594330.	2960240.	04123124
	2005	3.21465	594280.	2960240.	05123124

All receptor computations reported with respect to a user-specified origin
GRID 0.00 0.00
DISCRETE 0.00 0.00

```
CO STARTING
   TITLEONE 2001 RBEC- NO2 OIL 501G 59F&100%/SH 59F&75% LOAD FH&CS CONDO 12/31/08
   TITLETWO NO2 EMISSION RATES PER CTS  NOTE: ALL IDS ARE SAME
   MODELOPT DFAULT CONC NOWARN
   AVERTIME PERIOD
   POLLUTID GEN
   RUNORNOT RUN
   FLAGPOLE
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **

   LOCATION MGA7559 POINT 594125.983 2960797.999 1.000
   LOCATION MGB7559 POINT 594172.071 2960797.963 1.000
   LOCATION MGC7559 POINT 594274.233 2960797.946 1.000

   LOCATION SHA7559 POINT 594125.983 2960797.999 1.000
   LOCATION SHB7559 POINT 594172.071 2960797.963 1.000
   LOCATION SHC7559 POINT 594274.233 2960797.946 1.000

   LOCATION FGH1 POINT 594155.571 2960783.547 1.000

   LOCATION CSE1 POINT 594070.600 2960755.500 1.000
   LOCATION CSE2 POINT 594070.600 2960760.500 1.000
   LOCATION CSE3 POINT 594070.600 2960765.500 1.000
   LOCATION CSE4 POINT 594070.600 2960770.500 1.000
   LOCATION CSE5 POINT 594070.600 2960775.500 1.000
   LOCATION CSE6 POINT 594070.600 2960780.500 1.000
   LOCATION CSE7 POINT 594070.600 2960785.500 1.000

** Source Parameters **
** 100% load, 59 F
   SRCPARAM MGA7559 9.14    45.4  453.7  23.03  6.71
   SRCPARAM MGB7559 9.14    45.4  453.7  23.03  6.71
   SRCPARAM MGC7559 9.14    45.4  453.7  23.03  6.71

** 75% load, 59 F
   SRCPARAM SHA7559 8.16    45.4  448.7  18.04  6.71
   SRCPARAM SHB7559 8.16    45.4  448.7  18.04  6.71
   SRCPARAM SHC7559 8.16    45.4  448.7  18.04  6.71

   SRCPARAM FGH1  0.12 9.144 533.150 32.02 0.305

   SRCPARAM CSE1 0.558 12.2 729.800 49.50000 0.305
   SRCPARAM CSE2 0.558 12.2 729.800 49.50000 0.305
   SRCPARAM CSE3 0.558 12.2 729.800 49.50000 0.305
   SRCPARAM CSE4 0.558 12.2 729.800 49.50000 0.305
   SRCPARAM CSE5 0.558 12.2 729.800 49.50000 0.305
   SRCPARAM CSE6 0.558 12.2 729.800 49.50000 0.305
   SRCPARAM CSE7 0.558 12.2 729.800 49.50000 0.305


** Building Downwash **
SO BUILDHGT MGA7559      29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7559      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID MGA7559      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA7559      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGA7559      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA7559      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN MGA7559      10.39  29.43  29.09  27.87  25.81  22.95
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SO BUILDLEN MGA7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGA7559      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGA7559      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGA7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGA7559      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    MGA7559     -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    MGA7559     -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    MGA7559      -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    MGA7559       4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    MGA7559      -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    MGA7559     -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    MGA7559     -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    MGA7559     -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    MGA7559     -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    MGA7559       3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    MGA7559      18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    MGA7559      14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT MGB7559      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT MGB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7559      23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID MGB7559      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID MGB7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGB7559      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGB7559      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGB7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGB7559      27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN MGB7559      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN MGB7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGB7559      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGB7559      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGB7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGB7559      25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    MGB7559     -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    MGB7559     -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    MGB7559      -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    MGB7559       4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    MGB7559      39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    MGB7559     -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    MGB7559     -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    MGB7559      -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    MGB7559     -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    MGB7559       3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    MGB7559       2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    MGB7559      14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT MGC7559      29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT MGC7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7559      23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID MGC7559      18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID MGC7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGC7559      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGC7559      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGC7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGC7559      27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN MGC7559      10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN MGC7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGC7559      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGC7559      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGC7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGC7559      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    MGC7559     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    MGC7559     -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    MGC7559      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    MGC7559       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    MGC7559      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    MGC7559     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
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SO YBADJ    MGC7559     -14.43  23.32   8.08 -12.64 -15.01 -16.93
SO YBADJ    MGC7559      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    MGC7559     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    MGC7559       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    MGC7559      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    MGC7559      14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT SHA7559      29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7559      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID SHA7559      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA7559      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHA7559      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA7559      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN SHA7559      10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA7559      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHA7559      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA7559      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    SHA7559     -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    SHA7559     -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    SHA7559      -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    SHA7559       4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    SHA7559      -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    SHA7559     -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    SHA7559     -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    SHA7559     -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    SHA7559     -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    SHA7559       3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    SHA7559      18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    SHA7559      14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT SHB7559      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT SHB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7559      23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID SHB7559      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID SHB7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB7559      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHB7559      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHB7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB7559      27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN SHB7559      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN SHB7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB7559      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHB7559      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHB7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB7559      25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    SHB7559     -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    SHB7559     -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    SHB7559      -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    SHB7559       4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    SHB7559      39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    SHB7559     -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    SHB7559     -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    SHB7559      -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    SHB7559     -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    SHB7559       3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    SHB7559       2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    SHB7559      14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT SHC7559      29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT SHC7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7559      23.47  23.47  23.47  23.47  23.47  23.47
```

```
SO BUILDHGT SHC7559      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7559      23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID SHC7559      18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID SHC7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC7559      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHC7559      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHC7559      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC7559      27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN SHC7559      10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN SHC7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC7559      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHC7559      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHC7559      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC7559      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    SHC7559     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    SHC7559    -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    SHC7559      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    SHC7559       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    SHC7559      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    SHC7559     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    SHC7559     -14.43  23.32   8.08 -12.64 -15.01 -16.93
SO YBADJ    SHC7559      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    SHC7559     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    SHC7559       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    SHC7559      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    SHC7559      14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT FGH1      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT FGH1      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1      23.47  23.47  23.47  23.47   0.00   0.00
SO BUILDHGT FGH1       0.00  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID FGH1      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID FGH1      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1      27.87  25.81  22.95  19.41   0.00   0.00
SO BUILDWID FGH1       0.00  19.41  22.95  25.81  27.87  29.09
SO BUILDWID FGH1      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN FGH1      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN FGH1      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1      25.81  27.87  29.09  29.43   0.00   0.00
SO BUILDLEN FGH1       0.00  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN FGH1      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    FGH1     -78.45 -81.64 -82.36 -36.60 -38.56 -39.34
SO XBADJ    FGH1     -38.93 -37.33 -34.60 -35.59 -35.49 -34.31
SO XBADJ    FGH1     -32.09   0.71  -1.76  -4.16   0.00   0.00
SO XBADJ    FGH1       0.00 -15.52   4.44   8.73  12.75  16.39
SO XBADJ    FGH1      19.52  22.06  23.94  20.32  16.08  11.36
SO XBADJ    FGH1       6.29 -28.58 -27.33 -77.03 -76.08 -72.82
SO YBADJ    FGH1      17.14   4.16  -8.95  19.19  14.96  10.28
SO YBADJ    FGH1       5.29   0.13  -5.03 -10.03 -14.74 -18.99
SO YBADJ    FGH1     -22.67   9.38  11.78  13.82   0.00   0.00
SO YBADJ    FGH1       0.00  17.37 -22.84 -19.19 -14.96 -10.28
SO YBADJ    FGH1      -5.29  -0.13   5.03  10.03  14.74  18.99
SO YBADJ    FGH1      22.67  -9.38 -11.78   8.41  -3.96 -16.21

SO BUILDHGT CSE1       6.10   6.10   6.10   6.10  23.47   6.10
SO BUILDHGT CSE1       6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1       6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1       6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE1      23.47  23.47  23.47  10.67  10.67  29.57
SO BUILDHGT CSE1      29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE1      15.09  20.58  25.44  29.54  27.87  34.93
SO BUILDWID CSE1      36.07  36.11  35.05  36.11  36.07  34.93
SO BUILDWID CSE1      32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE1      15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE1      29.43  28.87  27.43  34.14  34.79  15.33
SO BUILDWID CSE1      17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE1      36.11  36.07  34.93  32.73  25.81  25.44
SO BUILDLEN CSE1      20.58  15.09   9.14  15.09  20.58  25.44
SO BUILDLEN CSE1      29.54  32.73  34.93  36.07  36.11  35.05
```

```
SO BUILDLEN CSE1     36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE1     19.41  15.27  10.67  18.85  22.89  19.15
SO BUILDLEN CSE1     18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE1    -3.26  -3.92  -4.47  -4.87  44.56  -5.23
SO XBADJ    CSE1    -5.18  -4.96  -4.60 -10.18 -15.46 -20.26
SO XBADJ    CSE1   -24.45 -27.89 -30.49 -32.16 -32.86 -32.55
SO XBADJ    CSE1   -32.85 -32.14 -30.46 -27.86 -70.37 -71.22
SO XBADJ    CSE1   -69.92 -66.49 -61.03 -71.09 -75.74 -78.08
SO XBADJ    CSE1   -78.05 -75.65  -4.44  -3.90  -3.25  -2.50
SO YBADJ    CSE1     2.64   5.17   7.54   9.68 -18.17  13.03
SO YBADJ    CSE1    14.13  14.80  15.03  14.79  14.11  13.00
SO YBADJ    CSE1    11.49   9.64   7.49   5.11   2.58  -0.03
SO YBADJ    CSE1    -2.64  -5.17  -7.54  -9.68  18.17   7.91
SO YBADJ    CSE1    -2.58 -13.00 -23.02  19.00   8.83   7.92
SO YBADJ    CSE1    -4.10 -15.99  -7.49  -5.11  -2.58   0.03

SO BUILDHGT CSE2     6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE2    23.47  23.47  23.47   6.10   6.10  29.57
SO BUILDHGT CSE2    29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE2    15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE2    36.07  36.11  35.05  36.11  36.07  34.93
SO BUILDWID CSE2    32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE2    15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE2    29.43  28.87  27.43  36.11  36.07  15.33
SO BUILDWID CSE2    17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE2    36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE2    20.58  15.09   9.14  15.09  20.58  25.44
SO BUILDLEN CSE2    29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE2    36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE2    19.41  15.27  10.67  15.09  20.58  19.15
SO BUILDLEN CSE2    18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE2    -8.18  -8.62  -8.80  -8.70  41.35  45.77
SO XBADJ    CSE2    -6.89  -5.83  -4.60  -9.31 -13.75 -17.76
SO XBADJ    CSE2   -21.23 -24.06 -26.16 -27.46 -27.93 -27.55
SO XBADJ    CSE2   -27.92 -27.44 -26.13 -24.03 -67.15 -68.72
SO XBADJ    CSE2   -68.21 -65.62 -61.03  -5.78  -6.84 -80.58
SO XBADJ    CSE2   -81.27 -79.48  -8.77  -8.60  -8.18  -7.50
SO YBADJ    CSE2     1.77   3.46   5.04   6.47 -22.00 -12.24
SO YBADJ    CSE2     9.43   9.88  10.03   9.87   9.41   8.67
SO YBADJ    CSE2     7.66   6.42   4.99   3.40   1.71  -0.03
SO YBADJ    CSE2    -1.77  -3.46  -5.04  -6.47  22.00  12.24
SO YBADJ    CSE2     2.12  -8.07 -18.02  -9.87  -9.41  12.25
SO YBADJ    CSE2    -0.27 -12.78  -4.99  -3.40  -1.71   0.03

SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE3     6.10   6.10   6.10  23.47   6.10   6.10
SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE3    23.47  23.47  23.47  23.47   6.10   6.10
SO BUILDHGT CSE3    29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE3    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE3    36.07  36.11  35.05  28.87  36.07  34.93
SO BUILDWID CSE3    32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE3    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE3    29.43  28.87  27.43  28.87  36.07  34.93
SO BUILDWID CSE3    17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE3    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE3    20.58  15.09   9.14  15.27  20.58  25.44
SO BUILDLEN CSE3    29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE3    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE3    19.41  15.27  10.67  15.27  20.58  25.44
SO BUILDLEN CSE3    18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE3   -13.11 -13.32 -13.13 -12.53 -11.56  43.27
SO XBADJ    CSE3    -8.60  -6.70  -4.60  44.96 -12.04 -15.26
SO XBADJ    CSE3   -18.02 -20.23 -21.83 -22.77 -23.01 -22.55
SO XBADJ    CSE3   -23.00 -22.75 -21.80 -20.20 -17.98 -66.22
SO XBADJ    CSE3   -66.50 -64.75 -61.03 -60.23  -8.55 -10.19
SO XBADJ    CSE3   -84.48 -83.31 -13.10 -13.30 -13.10 -12.50
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SO YBADJ    CSE3      0.90   1.75   2.54   3.25   3.87 -16.57
SO YBADJ    CSE3      4.73   4.95   5.03  22.49   4.71   4.34
SO YBADJ    CSE3      3.83   3.21   2.49   1.69   0.85  -0.03
SO YBADJ    CSE3     -0.90  -1.75  -2.54  -3.25  -3.87  16.57
SO YBADJ    CSE3      6.82  -3.15 -13.02 -22.49  -4.71  -4.34
SO YBADJ    CSE3      3.56  -9.56  -2.49  -1.69  -0.85   0.03


SO BUILDHGT CSE4      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE4     23.47   6.10   6.10  23.47   6.10   6.10
SO BUILDHGT CSE4      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE4      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE4     23.47  23.47  23.47  23.47   6.10   6.10
SO BUILDHGT CSE4     29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE4     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE4     29.43  36.11  35.05  28.87  36.07  34.93
SO BUILDWID CSE4     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE4     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE4     29.43  28.87  27.43  28.87  36.07  34.93
SO BUILDWID CSE4     17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE4     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE4     19.41  15.09   9.14  15.27  20.58  25.44
SO BUILDLEN CSE4     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE4     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE4     19.41  15.27  10.67  15.27  20.58  25.44
SO BUILDLEN CSE4     18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE4    -18.03 -18.02 -17.46 -16.36 -14.77  40.77
SO XBADJ    CSE4     45.38  -7.57  -4.60  45.83 -10.33 -12.76
SO XBADJ    CSE4    -14.81 -16.40 -17.50 -18.07 -18.08 -17.55
SO XBADJ    CSE4    -18.07 -18.05 -17.47 -16.37 -14.76 -63.72
SO XBADJ    CSE4    -64.79 -63.88 -61.03 -61.10 -10.26 -12.69
SO XBADJ    CSE4    -87.70 -87.14 -17.43 -18.00 -18.02 -17.50
SO YBADJ    CSE4      0.03   0.04   0.04   0.04   0.04 -20.90
SO YBADJ    CSE4    -11.51   0.03   0.03  17.57   0.01   0.01
SO YBADJ    CSE4      0.00   0.00  -0.01  -0.02  -0.02  -0.03
SO YBADJ    CSE4     -0.03  -0.04  -0.04  -0.04  -0.04  20.90
SO YBADJ    CSE4     11.51   1.77  -8.02 -17.57  -0.01  -0.01
SO YBADJ    CSE4      7.39  -6.35   0.01   0.02   0.02   0.03


SO BUILDHGT CSE5      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE5     23.47   6.10   6.10  23.47  23.47   6.10
SO BUILDHGT CSE5      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE5      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE5     23.47  23.47  23.47  23.47  23.47   6.10
SO BUILDHGT CSE5     29.57  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE5     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE5     29.43  36.11  35.05  28.87  29.43  34.93
SO BUILDWID CSE5     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE5     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE5     29.43  28.87  27.43  28.87  29.43  34.93
SO BUILDWID CSE5     17.14  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE5     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE5     19.41  15.09   9.14  15.27  19.41  25.44
SO BUILDLEN CSE5     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE5     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE5     19.41  15.27  10.67  15.27  19.41  25.44
SO BUILDLEN CSE5     18.42  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE5    -22.96 -22.72 -21.79 -20.19 -17.99  38.27
SO XBADJ    CSE5     43.67  -8.44  -4.60  46.69  41.60 -10.26
SO XBADJ    CSE5    -11.59 -12.57 -13.17 -13.37 -13.16 -12.55
SO XBADJ    CSE5    -13.15 -13.35 -13.14 -12.54 -11.55 -61.23
SO XBADJ    CSE5    -63.08 -63.01 -61.03 -61.96 -61.01 -15.19
SO XBADJ    CSE5    -90.91 -90.97 -88.28 -22.70 -22.95 -22.50
SO YBADJ    CSE5     -0.84  -1.67  -2.46  -3.18  -3.79 -25.23
SO YBADJ    CSE5    -16.21  -4.89  -4.97  12.65  21.89  -4.32
SO YBADJ    CSE5     -3.83  -3.22  -2.51  -1.73  -0.89  -0.03
SO YBADJ    CSE5      0.84   1.67   2.46   3.18   3.79  25.23
SO YBADJ    CSE5     16.21   6.70  -3.02 -12.65 -21.89   4.32
SO YBADJ    CSE5     11.22  -3.13 -17.40   1.73   0.89   0.03


SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
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```
SO BUILDHGT CSE6      23.47  23.47   6.10   6.10  23.47  23.47
SO BUILDHGT CSE6       6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6       6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE6      29.57  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE6      15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6      29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE6      32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE6      15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE6      17.14  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE6      36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6      19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE6      29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE6      36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE6      18.42  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE6     -27.88 -27.41 -26.12 -24.02 -21.20 -17.73
SO XBADJ    CSE6      41.96  46.88  -4.60  -5.84  43.31  37.75
SO XBADJ    CSE6      -8.38  -8.74  -8.84  -8.67  -8.24  -7.55
SO XBADJ    CSE6      -8.23  -8.65  -8.81  -8.71  -8.34  -7.71
SO XBADJ    CSE6     -61.37 -62.14 -61.03 -62.83 -62.72 -60.70
SO XBADJ    CSE6     -94.12 -94.81 -92.61 -27.40 -27.87 -27.50
SO YBADJ    CSE6      -1.70  -3.39  -4.96  -6.39  -7.62  -8.62
SO YBADJ    CSE6     -20.91 -11.62  -9.97  -9.83  17.19  26.14
SO YBADJ    CSE6      -7.66  -6.43  -5.01  -3.44  -1.76  -0.03
SO YBADJ    CSE6       1.70   3.39   4.96   6.39   7.62   8.62
SO YBADJ    CSE6      20.91  11.62   1.98  -7.72 -17.19 -26.14
SO YBADJ    CSE6      15.05   0.08 -14.90   3.44   1.76   0.03


SO BUILDHGT CSE7       6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7      23.47  23.47   6.10   6.10  23.47  23.47
SO BUILDHGT CSE7       6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7       6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE7       6.10  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE7      15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7      29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE7      32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE7      15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE7      32.73  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE7      36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7      19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE7      29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE7      36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE7      29.54  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE7     -32.81 -32.11 -30.45 -27.85 -24.41 -20.23
SO XBADJ    CSE7      40.25  46.01  -4.60  -4.97  45.02  40.25
SO XBADJ    CSE7      -5.16  -4.91  -4.51  -3.97  -3.31  -2.55
SO XBADJ    CSE7      -3.30  -3.95  -4.48  -4.88  -5.12  -5.21
SO XBADJ    CSE7     -59.66 -61.28 -61.03 -63.70 -64.43 -63.20
SO XBADJ    CSE7     -24.37 -98.64 -96.94 -32.09 -32.80 -32.50
SO YBADJ    CSE7      -2.57  -5.10  -7.46  -9.60 -11.45 -12.95
SO YBADJ    CSE7     -25.61 -16.55 -14.97 -14.75  12.49  21.81
SO YBADJ    CSE7     -11.49  -9.65  -7.51  -5.15  -2.63  -0.03
SO YBADJ    CSE7       2.57   5.10   7.46   9.60  11.45  12.95
SO YBADJ    CSE7      25.61  16.55   6.98  -2.80 -12.49 -21.81
SO YBADJ    CSE7      11.49   3.29 -12.40   5.15   2.63   0.03

  SRCGROUP MG MGA7559 MGB7559 MGC7559 FGH1
  SRCGROUP SH SHA7559 SHB7559 SHC7559 FGH1
  SRCGROUP MGC7 MGA7559 MGB7559 MGC7559 FGH1 CSE1-CSE7
  SRCGROUP SHC7 SHA7559 SHB7559 SHC7559 FGH1 CSE1-CSE7

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
```

```
**
RE STARTING
  INCLUDED RIV1COND.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
** SURFFILE C:\amodmet\PBIMIA01.SFC
** PROFFILE C:\amodmet\PBIMIA01.PFL
  SURFFILE PBIMIA01.SFC
  PROFFILE PBIMIA01.PFL
  SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
  UAIRDATA 92803 2001 MIAMI/FIU
  PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE FIRST
OU FINISHED
**
```

PREDICTED CO IMPACTS FOR RBEC

1. SUMMARY FILES FOR
   - CTS/HRSGS AND FUEL HEATER
   - CTS/HRSGS, FUEL HEATER, AND GAS COMPRESSOR STATION
2. EXAMPLE INPUT FILE

AERBOB RELEASE 020304

AERMOD OUTPUT FILE NUMBER 1 :COMIXC7.001
AERMOD OUTPUT FILE NUMBER 2 :COMIXC7.002
AERMOD OUTPUT FILE NUMBER 3 :COMIXC7.003
AERMOD OUTPUT FILE NUMBER 4 :COMIXC7.004
AERMOD OUTPUT FILE NUMBER 5 :COMIXC7.005
First title for last output file is: 2001 RBEC- CO 501G OIL/35F/75%LD SH-GAS/35/75 FH&CS 12/31/0
Second title for last output file is: CO EMISSION RATES PER CTS NOTE: ALL IDS SAME

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID:	MG				
HIGH 8-Hour					
	2001	33.30508	593300.	2960500.	01100916
	2002	31.46400	593700.	2961600.	02030216
	2003	29.81291	593600.	2961200.	03062916
	2004	45.85555	594700.	2961600.	04090508
	2005	32.35250	593300.	2961400.	05102408
HSH 8-Hour					
	2001	28.56576	593400.	2960500.	01050416
	2002	26.84847	593700.	2961500.	02032016
	2003	27.36108	593700.	2961400.	03040816
	2004	28.34106	593400.	2961100.	04051116
	2005	28.75385	593500.	2961300.	05092116
HIGH 1-Hour					
	2001	39.85001	593400.	2960800.	01042212
	2002	42.38450	593500.	2961100.	02081511
	2003	41.20982	593500.	2960800.	03083112
	2004	102.16640	594900.	2960700.	04092520
	2005	69.77048	593400.	2961300.	05102407
HSH 1-Hour					
	2001	38.54338	593400.	2960500.	01042914
	2002	41.93054	593500.	2961100.	02051713
	2003	40.32925	593500.	2960800.	03091412
	2004	85.31238	594900.	2960500.	04090420
	2005	66.56413	593400.	2961300.	05102406
SOURCE GROUP ID:	SH				
HIGH 8-Hour					
	2001	17.59336	594290.	2960833.	01021708
	2002	15.36282	594335.	2960832.	02060308
	2003	18.21273	594123.	2960837.	03071116
	2004	17.21189	594123.	2960837.	04110416
	2005	19.55586	594335.	2960832.	05012708
HSH 8-Hour					
	2001	14.86632	594123.	2960837.	01021016
	2002	13.55254	594123.	2960837.	02123108
	2003	16.16705	594123.	2960837.	03060616
	2004	14.65682	594123.	2960837.	04061116
	2005	14.97360	594123.	2960837.	05010716
HIGH 1-Hour					
	2001	32.94715	594201.	2960835.	01071213
	2002	31.48403	594201.	2960835.	02040110
	2003	31.97361	594201.	2960835.	03031813
	2004	34.41792	594201.	2960835.	04040811
	2005	34.26407	594201.	2960835.	05122815
HSH 1-Hour					
	2001	32.88698	594201.	2960835.	01070909
	2002	29.50044	594359.	2960798.	02052824
	2003	31.89261	594201.	2960835.	03092610
	2004	34.19614	594201.	2960835.	04062209
	2005	33.17517	594201.	2960835.	05061915
SOURCE GROUP ID:	MGC7				
HIGH 8-Hour					
	2001	74.54823	593951.	2960723.	01103024
	2002	65.00163	593951.	2960762.	02030608
	2003	63.44714	593951.	2960762.	03111724
	2004	73.35175	593951.	2960762.	04111024
	2005	69.87435	593951.	2960762.	05012824
HSH 8-Hour					
	2001	71.25525	593951.	2960723.	01100924
	2002	59.12577	593951.	2960762.	02120908

	2003	59.40890	593952.	2960802.	03111808
	2004	67.42438	593951.	2960762.	04123124
	2005	69.10902	593951.	2960762.	05010224
HIGH 1-Hour					
	2001	142.40285	593800.	2960700.	01080723
	2002	145.39798	593700.	2960700.	02041905
	2003	142.51851	593800.	2960700.	03100324
	2004	147.76279	593700.	2960700.	04010123
	2005	142.12004	593700.	2960700.	05120321
HSH 1-Hour					
	2001	140.34848	593800.	2960700.	01111902
	2002	124.87840	593700.	2960800.	02091702
	2003	140.21754	593800.	2960700.	03051323
	2004	141.40865	593700.	2960700.	04072222
	2005	137.26949	593700.	2960700.	05072101
SOURCE GROUP ID:	SHC7				
HIGH 8-Hour					
	2001	74.54000	593951.	2960723.	01103024
	2002	64.97389	593951.	2960762.	02030608
	2003	63.40622	593951.	2960762.	03111724
	2004	73.31760	593951.	2960762.	04111024
	2005	69.88779	593951.	2960762.	05012824
HSH 8-Hour					
	2001	71.26528	593951.	2960723.	01100924
	2002	59.12152	593951.	2960762.	02120908
	2003	59.40369	593952.	2960802.	03111808
	2004	67.36273	593951.	2960762.	04123124
	2005	69.10539	593951.	2960762.	05010224
HIGH 1-Hour					
	2001	142.39821	593800.	2960700.	01080723
	2002	145.38808	593700.	2960700.	02041905
	2003	142.50766	593800.	2960700.	03100324
	2004	147.75185	593700.	2960700.	04010123
	2005	142.10858	593700.	2960700.	05120321
HSH 1-Hour					
	2001	140.33714	593800.	2960700.	01111902
	2002	124.86784	593700.	2960800.	02091702
	2003	140.21356	593800.	2960700.	03051323
	2004	141.40408	593700.	2960700.	04072222
	2005	137.26543	593700.	2960700.	05072101

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

AERBOB RELEASE 020304

AERMOD OUTPUT FILE NUMBER 1 :NO2OILC7.001
AERMOD OUTPUT FILE NUMBER 2 :NO2OILC7.002
AERMOD OUTPUT FILE NUMBER 3 :NO2OILC7.003
AERMOD OUTPUT FILE NUMBER 4 :NO2OILC7.004
AERMOD OUTPUT FILE NUMBER 5 :NO2OILC7.005
First title for last output file is: 2001 RBEC- NO2 OIL 501G 59F&100%/SH 59F&75% LOAD FH&CS 12/31
Second title for last output file is: NO2 EMISSION RATES PER CTS NOTE: ALL IDS ARE SAME

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID:	MG				
Annual					
	2001	1.95072	594037.	2960840.	01123124
	2002	2.19606	594037.	2960840.	02123124
	2003	1.85576	594123.	2960837.	03123124
	2004	1.81328	594037.	2960840.	04123124
	2005	1.65497	594123.	2960837.	05123124
SOURCE GROUP ID:	SH				
Annual					
	2001	1.95072	594037.	2960840.	01123124
	2002	2.19606	594037.	2960840.	02123124
	2003	1.85576	594123.	2960837.	03123124
	2004	1.81328	594037.	2960840.	04123124
	2005	1.65497	594123.	2960837.	05123124
SOURCE GROUP ID:	MGC7				
Annual					
	2001	21.46101	593951.	2960762.	01123124
	2002	20.00818	593952.	2960802.	02123124
	2003	16.47338	593952.	2960802.	03123124
	2004	22.84689	593951.	2960762.	04123124
	2005	18.03088	593900.	2960800.	05123124
SOURCE GROUP ID:	SHC7				
Annual					
	2001	21.46101	593951.	2960762.	01123124
	2002	20.00818	593952.	2960802.	02123124
	2003	16.47338	593952.	2960802.	03123124
	2004	22.84689	593951.	2960762.	04123124
	2005	18.03088	593900.	2960800.	05123124

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

```
CO STARTING
  TITLEONE 2001 RBEC- CO 501G OIL/35F/75%LD SH-GAS/35/75 FH&CS  12/31/08
  TITLETWO CO EMISSION RATES PER CTS   NOTE: ALL IDS SAME
  MODELOPT DFAULT CONC NOWARN
  AVERTIME 8 1
  POLLUTID GEN
  RUNORNOT RUN
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **

  LOCATION MGA7595 POINT 594125.983 2960797.999 1.000
  LOCATION MGB7595 POINT 594172.071 2960797.963 1.000
  LOCATION MGC7595 POINT 594274.233 2960797.946 1.000

  LOCATION SHA7595 POINT 594125.983 2960797.999 1.000
  LOCATION SHB7595 POINT 594172.071 2960797.963 1.000
  LOCATION SHC7595 POINT 594274.233 2960797.946 1.000

  LOCATION FGH1 POINT 594155.571 2960783.547 1.000

  LOCATION CSE1 POINT 594070.600 2960755.500 1.000
  LOCATION CSE2 POINT 594070.600 2960760.500 1.000
  LOCATION CSE3 POINT 594070.600 2960765.500 1.000
  LOCATION CSE4 POINT 594070.600 2960770.500 1.000
  LOCATION CSE5 POINT 594070.600 2960775.500 1.000
  LOCATION CSE6 POINT 594070.600 2960780.500 1.000
  LOCATION CSE7 POINT 594070.600 2960785.500 1.000

** Source Parameters **
** 75% load, 35 F  OIL 501G
  SRCPARAM MGA7595 28.77   45.4  449.8  23.10  6.71
  SRCPARAM MGB7595 28.77   45.4  449.8  23.10  6.71
  SRCPARAM MGC7595 28.77   45.4  449.8  23.10  6.71
** 75% load, 35 F  GAS SH
  SRCPARAM SHA7595 6.17    45.4  357.6  15.02  6.71
  SRCPARAM SHB7595 6.17    45.4  357.6  15.02  6.71
  SRCPARAM SHC7595 6.17    45.4  357.6  15.02  6.71

  SRCPARAM FGH1  0.101 9.144 533.150 32.02 0.305

  SRCPARAM CSE1 0.149 12.2 729.800 49.50000 0.305
  SRCPARAM CSE2 0.149 12.2 729.800 49.50000 0.305
  SRCPARAM CSE3 0.149 12.2 729.800 49.50000 0.305
  SRCPARAM CSE4 0.149 12.2 729.800 49.50000 0.305
  SRCPARAM CSE5 0.149 12.2 729.800 49.50000 0.305
  SRCPARAM CSE6 0.149 12.2 729.800 49.50000 0.305
  SRCPARAM CSE7 0.149 12.2 729.800 49.50000 0.305


** Building Downwash **
SO BUILDHGT MGA7595      29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID MGA7595      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGA7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA7595      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN MGA7595      10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGA7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGA7595      25.81  27.87  29.09  29.43  28.87  27.43
```

```
SO BUILDLEN MGA7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGA7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGA7595      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    MGA7595     -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    MGA7595     -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    MGA7595      -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    MGA7595       4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    MGA7595      -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    MGA7595     -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    MGA7595     -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    MGA7595     -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    MGA7595     -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    MGA7595       3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    MGA7595      18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    MGA7595      14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT MGB7595      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT MGB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7595      23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID MGB7595      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID MGB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGB7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGB7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGB7595      27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN MGB7595      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN MGB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGB7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGB7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGB7595      25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    MGB7595     -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    MGB7595     -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    MGB7595      -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    MGB7595       4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    MGB7595      39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    MGB7595     -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    MGB7595     -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    MGB7595      -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    MGB7595     -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    MGB7595       3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    MGB7595       2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    MGB7595      14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT MGC7595      29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT MGC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7595      23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID MGC7595      18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID MGC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGC7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGC7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGC7595      27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN MGC7595      10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN MGC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGC7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGC7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGC7595      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    MGC7595     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    MGC7595     -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    MGC7595      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    MGC7595       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    MGC7595      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    MGC7595     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    MGC7595     -14.43  23.32   8.08 -12.64 -15.01 -16.93
SO YBADJ    MGC7595      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
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SO YBADJ    MGC7595     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    MGC7595       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    MGC7595      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    MGC7595      14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT SHA7595      29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID SHA7595      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHA7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA7595      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN SHA7595      10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHA7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA7595      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    SHA7595     -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    SHA7595     -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    SHA7595      -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    SHA7595       4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    SHA7595      -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    SHA7595     -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    SHA7595     -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    SHA7595     -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    SHA7595     -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    SHA7595       3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    SHA7595      18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    SHA7595      14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT SHB7595      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID SHB7595      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID SHB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHB7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB7595      27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN SHB7595      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN SHB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHB7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB7595      25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    SHB7595     -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    SHB7595     -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    SHB7595      -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    SHB7595       4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    SHB7595      39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    SHB7595     -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    SHB7595     -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    SHB7595      -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    SHB7595     -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    SHB7595       3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    SHB7595       2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    SHB7595      14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT SHC7595      29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  29.57  29.57
```

```
SO BUILDWID SHC7595      18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID SHC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHC7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC7595      27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN SHC7595      10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN SHC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHC7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC7595      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    SHC7595     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    SHC7595     -112.31 -111.55 -107.40 -4.08 -2.88  -1.60
SO XBADJ    SHC7595      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    SHC7595       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    SHC7595      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    SHC7595     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    SHC7595     -14.43  23.32   8.08 -12.64 -15.01 -16.93
SO YBADJ    SHC7595      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    SHC7595     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    SHC7595       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    SHC7595      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    SHC7595      14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT FGH1     29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT FGH1     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1     23.47  23.47  23.47  23.47   0.00   0.00
SO BUILDHGT FGH1      0.00  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1     23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID FGH1     18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID FGH1     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1     27.87  25.81  22.95  19.41   0.00   0.00
SO BUILDWID FGH1      0.00  19.41  22.95  25.81  27.87  29.09
SO BUILDWID FGH1     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1     27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN FGH1     10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN FGH1     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1     25.81  27.87  29.09  29.43   0.00   0.00
SO BUILDLEN FGH1      0.00  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN FGH1     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1     25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    FGH1    -78.45 -81.64 -82.36 -36.60 -38.56 -39.34
SO XBADJ    FGH1    -38.93 -37.33 -34.60 -35.59 -35.49 -34.31
SO XBADJ    FGH1    -32.09   0.71  -1.76  -4.16   0.00   0.00
SO XBADJ    FGH1      0.00 -15.52   4.44   8.73  12.75  16.39
SO XBADJ    FGH1     19.52  22.06  23.94  20.32  16.08  11.36
SO XBADJ    FGH1      6.29 -28.58 -27.33 -77.03 -76.08 -72.82
SO YBADJ    FGH1     17.14   4.16  -8.95  19.19  14.96  10.28
SO YBADJ    FGH1      5.29   0.13  -5.03 -10.03 -14.74 -18.99
SO YBADJ    FGH1    -22.67   9.38  11.78  13.82   0.00   0.00
SO YBADJ    FGH1      0.00  17.37 -22.84 -19.19 -14.96 -10.28
SO YBADJ    FGH1     -5.29  -0.13   5.03  10.03  14.74  18.99
SO YBADJ    FGH1     22.67  -9.38 -11.78   8.41  -3.96 -16.21

SO BUILDHGT CSE1      6.10   6.10   6.10   6.10  23.47   6.10
SO BUILDHGT CSE1      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1      6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE1     23.47  23.47  23.47  10.67  10.67  29.57
SO BUILDHGT CSE1     29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE1     15.09  20.58  25.44  29.54  27.87  34.93
SO BUILDWID CSE1     36.07  36.11  35.05  36.11  36.07  34.93
SO BUILDWID CSE1     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE1     15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE1     29.43  28.87  27.43  34.14  34.79  15.33
SO BUILDWID CSE1     17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE1     36.11  36.07  34.93  32.73  25.81  25.44
SO BUILDLEN CSE1     20.58  15.09   9.14  15.09  20.58  25.44
SO BUILDLEN CSE1     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE1     36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE1     19.41  15.27  10.67  18.85  22.89  19.15
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SO BUILDLEN CSE1     18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE1    -3.26  -3.92  -4.47  -4.87  44.56  -5.23
SO XBADJ    CSE1    -5.18  -4.96  -4.60 -10.18 -15.46 -20.26
SO XBADJ    CSE1   -24.45 -27.89 -30.49 -32.16 -32.86 -32.55
SO XBADJ    CSE1   -32.85 -32.14 -30.46 -27.86 -70.37 -71.22
SO XBADJ    CSE1   -69.92 -66.49 -61.03 -71.09 -75.74 -78.08
SO XBADJ    CSE1   -78.05 -75.65  -4.44  -3.90  -3.25  -2.50
SO YBADJ    CSE1     2.64   5.17   7.54   9.68 -18.17  13.03
SO YBADJ    CSE1    14.13  14.80  15.03  14.79  14.11  13.00
SO YBADJ    CSE1    11.49   9.64   7.49   5.11   2.58  -0.03
SO YBADJ    CSE1    -2.64  -5.17  -7.54  -9.68  18.17   7.91
SO YBADJ    CSE1    -2.58 -13.00 -23.02  19.00   8.83   7.92
SO YBADJ    CSE1    -4.10 -15.99  -7.49  -5.11  -2.58   0.03

SO BUILDHGT CSE2     6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE2    23.47  23.47  23.47   6.10   6.10  29.57
SO BUILDHGT CSE2    29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE2    15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE2    36.07  36.11  35.05  36.11  36.07  34.93
SO BUILDWID CSE2    32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE2    15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE2    29.43  28.87  27.43  36.11  36.07  15.33
SO BUILDWID CSE2    17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE2    36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE2    20.58  15.09   9.14  15.09  20.58  25.44
SO BUILDLEN CSE2    29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE2    36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE2    19.41  15.27  10.67  15.09  20.58  19.15
SO BUILDLEN CSE2    18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE2    -8.18  -8.62  -8.80  -8.70  41.35  45.77
SO XBADJ    CSE2    -6.89  -5.83  -4.60  -9.31 -13.75 -17.76
SO XBADJ    CSE2   -21.23 -24.06 -26.16 -27.46 -27.93 -27.55
SO XBADJ    CSE2   -27.92 -27.44 -26.13 -24.03 -67.15 -68.72
SO XBADJ    CSE2   -68.21 -65.62 -61.03  -5.78  -6.84 -80.58
SO XBADJ    CSE2   -81.27 -79.48  -8.77  -8.60  -8.18  -7.50
SO YBADJ    CSE2     1.77   3.46   5.04   6.47 -22.00 -12.24
SO YBADJ    CSE2     9.43   9.88  10.03   9.87   9.41   8.67
SO YBADJ    CSE2     7.66   6.42   4.99   3.40   1.71  -0.03
SO YBADJ    CSE2    -1.77  -3.46  -5.04  -6.47  22.00  12.24
SO YBADJ    CSE2     2.12  -8.07 -18.02  -9.87  -9.41  12.25
SO YBADJ    CSE2    -0.27 -12.78  -4.99  -3.40  -1.71   0.03

SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE3     6.10   6.10   6.10  23.47   6.10   6.10
SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE3    23.47  23.47  23.47  23.47   6.10   6.10
SO BUILDHGT CSE3    29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE3    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE3    36.07  36.11  35.05  28.87  36.07  34.93
SO BUILDWID CSE3    32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE3    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE3    29.43  28.87  27.43  28.87  36.07  34.93
SO BUILDWID CSE3    17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE3    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE3    20.58  15.09   9.14  15.27  20.58  25.44
SO BUILDLEN CSE3    29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE3    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE3    19.41  15.27  10.67  15.27  20.58  25.44
SO BUILDLEN CSE3    18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE3   -13.11 -13.32 -13.13 -12.53 -11.56  43.27
SO XBADJ    CSE3    -8.60  -6.70  -4.60  44.96 -12.04 -15.26
SO XBADJ    CSE3   -18.02 -20.23 -21.83 -22.77 -23.01 -22.55
SO XBADJ    CSE3   -23.00 -22.75 -21.80 -20.20 -17.98 -66.22
SO XBADJ    CSE3   -66.50 -64.75 -61.03 -60.23  -8.55 -10.19
SO XBADJ    CSE3   -84.48 -83.31 -13.10 -13.30 -13.10 -12.50
SO YBADJ    CSE3     0.90   1.75   2.54   3.25   3.87 -16.57
SO YBADJ    CSE3     4.73   4.95   5.03  22.49   4.71   4.34
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SO YBADJ   CSE3     3.83   3.21   2.49   1.69   0.85  -0.03
SO YBADJ   CSE3    -0.90  -1.75  -2.54  -3.25  -3.87  16.57
SO YBADJ   CSE3     6.82  -3.15 -13.02 -22.49  -4.71  -4.34
SO YBADJ   CSE3     3.56  -9.56  -2.49  -1.69  -0.85   0.03


SO BUILDHGT CSE4    6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE4   23.47   6.10   6.10  23.47   6.10   6.10
SO BUILDHGT CSE4    6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE4    6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE4   23.47  23.47  23.47  23.47   6.10   6.10
SO BUILDHGT CSE4   29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE4   15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE4   29.43  36.11  35.05  28.87  36.07  34.93
SO BUILDWID CSE4   32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE4   15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE4   29.43  28.87  27.43  28.87  36.07  34.93
SO BUILDWID CSE4   17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE4   36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE4   19.41  15.09   9.14  15.27  20.58  25.44
SO BUILDLEN CSE4   29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE4   36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE4   19.41  15.27  10.67  15.27  20.58  25.44
SO BUILDLEN CSE4   18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ   CSE4   -18.03 -18.02 -17.46 -16.36 -14.77  40.77
SO XBADJ   CSE4    45.38  -7.57  -4.60  45.83 -10.33 -12.76
SO XBADJ   CSE4   -14.81 -16.40 -17.50 -18.07 -18.08 -17.55
SO XBADJ   CSE4   -18.07 -18.05 -17.47 -16.37 -14.76 -63.72
SO XBADJ   CSE4   -64.79 -63.88 -61.03 -61.10 -10.26 -12.69
SO XBADJ   CSE4   -87.70 -87.14 -17.43 -18.00 -18.02 -17.50
SO YBADJ   CSE4     0.03   0.04   0.04   0.04   0.04 -20.90
SO YBADJ   CSE4   -11.51   0.03   0.03  17.57   0.01   0.01
SO YBADJ   CSE4     0.00   0.00  -0.01  -0.02  -0.02  -0.03
SO YBADJ   CSE4    -0.03  -0.04  -0.04  -0.04  -0.04  20.90
SO YBADJ   CSE4    11.51   1.77  -8.02 -17.57  -0.01  -0.01
SO YBADJ   CSE4     7.39  -6.35   0.01   0.02   0.02   0.03


SO BUILDHGT CSE5    6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE5   23.47   6.10   6.10  23.47  23.47   6.10
SO BUILDHGT CSE5    6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE5    6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE5   23.47  23.47  23.47  23.47  23.47   6.10
SO BUILDHGT CSE5   29.57  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE5   15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE5   29.43  36.11  35.05  28.87  29.43  34.93
SO BUILDWID CSE5   32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE5   15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE5   29.43  28.87  27.43  28.87  29.43  34.93
SO BUILDWID CSE5   17.14  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE5   36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE5   19.41  15.09   9.14  15.27  19.41  25.44
SO BUILDLEN CSE5   29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE5   36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE5   19.41  15.27  10.67  15.27  19.41  25.44
SO BUILDLEN CSE5   18.42  17.14  15.33  36.07  36.11  35.05
SO XBADJ   CSE5   -22.96 -22.72 -21.79 -20.19 -17.99  38.27
SO XBADJ   CSE5    43.67  -8.44  -4.60  46.69  41.60 -10.26
SO XBADJ   CSE5   -11.59 -12.57 -13.17 -13.37 -13.16 -12.55
SO XBADJ   CSE5   -13.15 -13.35 -13.14 -12.54 -11.55 -61.23
SO XBADJ   CSE5   -63.08 -63.01 -61.03 -61.96 -61.01 -15.19
SO XBADJ   CSE5   -90.91 -90.97 -88.28 -22.70 -22.95 -22.50
SO YBADJ   CSE5    -0.84  -1.67  -2.46  -3.18  -3.79 -25.23
SO YBADJ   CSE5   -16.21  -4.89  -4.97  12.65  21.89  -4.32
SO YBADJ   CSE5    -3.83  -3.22  -2.51  -1.73  -0.89  -0.03
SO YBADJ   CSE5     0.84   1.67   2.46   3.18   3.79  25.23
SO YBADJ   CSE5    16.21   6.70  -3.02 -12.65 -21.89   4.32
SO YBADJ   CSE5    11.22  -3.13 -17.40   1.73   0.89   0.03


SO BUILDHGT CSE6    6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6   23.47  23.47   6.10   6.10  23.47  23.47
SO BUILDHGT CSE6    6.10   6.10   6.10   6.10   6.10   6.10
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SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE6     29.57  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE6     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6     29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE6     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE6     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE6     17.14  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE6     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6     19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE6     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE6     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE6     18.42  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE6    -27.88 -27.41 -26.12 -24.02 -21.20 -17.73
SO XBADJ    CSE6     41.96  46.88  -4.60  -5.84  43.31  37.75
SO XBADJ    CSE6     -8.38  -8.74  -8.84  -8.67  -8.24  -7.55
SO XBADJ    CSE6     -8.23  -8.65  -8.81  -8.71  -8.34  -7.71
SO XBADJ    CSE6    -61.37 -62.14 -61.03 -62.83 -62.72 -60.70
SO XBADJ    CSE6    -94.12 -94.81 -92.61 -27.40 -27.87 -27.50
SO YBADJ    CSE6     -1.70  -3.39  -4.96  -6.39  -7.62  -8.62
SO YBADJ    CSE6    -20.91 -11.62  -9.97  -9.83  17.19  26.14
SO YBADJ    CSE6     -7.66  -6.43  -5.01  -3.44  -1.76  -0.03
SO YBADJ    CSE6      1.70   3.39   4.96   6.39   7.62   8.62
SO YBADJ    CSE6     20.91  11.62   1.98  -7.72 -17.19 -26.14
SO YBADJ    CSE6     15.05   0.08 -14.90   3.44   1.76   0.03


SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7     23.47  23.47   6.10   6.10  23.47  23.47
SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE7      6.10  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE7     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7     29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE7     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE7     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE7     32.73  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE7     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7     19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE7     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE7     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE7     29.54  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE7    -32.81 -32.11 -30.45 -27.85 -24.41 -20.23
SO XBADJ    CSE7     40.25  46.01  -4.60  -4.97  45.02  40.25
SO XBADJ    CSE7     -5.16  -4.91  -4.51  -3.97  -3.31  -2.55
SO XBADJ    CSE7     -3.30  -3.95  -4.48  -4.88  -5.12  -5.21
SO XBADJ    CSE7    -59.66 -61.28 -61.03 -63.70 -64.43 -63.20
SO XBADJ    CSE7    -24.37 -98.64 -96.94 -32.09 -32.80 -32.50
SO YBADJ    CSE7     -2.57  -5.10  -7.46  -9.60 -11.45 -12.95
SO YBADJ    CSE7    -25.61 -16.55 -14.97 -14.75  12.49  21.81
SO YBADJ    CSE7    -11.49  -9.65  -7.51  -5.15  -2.63  -0.03
SO YBADJ    CSE7      2.57   5.10   7.46   9.60  11.45  12.95
SO YBADJ    CSE7     25.61  16.55   6.98  -2.80 -12.49 -21.81
SO YBADJ    CSE7     11.49   3.29 -12.40   5.15   2.63   0.03

  SRCGROUP MG MGA7595 MGB7595 MGC7595 FGH1
  SRCGROUP SH SHA7595 SHB7595 SHC7595 FGH1
  SRCGROUP MGC7 MGA7595 MGB7595 MGC7595 FGH1 CSE1-CSE7
  SRCGROUP SHC7 SHA7595 SHB7595 SHC7595 FGH1 CSE1-CSE7

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
RE STARTING
```

```
  INCLUDED RIVFHCS.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
**   SURFFILE C:\amodmet\PBIMIA01.SFC
**   PROFFILE C:\amodmet\PBIMIA01.PFL
  SURFFILE PBIMIA01.SFC
  PROFFILE PBIMIA01.PFL
  SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
  UAIRDATA 92803 2001 MIAMI/FIU
  PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE FIRST SECOND
OU FINISHED
**
```

AERBOB RELEASE 020304
AERMOD OUTPUT FILE NUMBER 1 :COMXC7CD.O01
AERMOD OUTPUT FILE NUMBER 2 :COMXC7CD.O02
AERMOD OUTPUT FILE NUMBER 3 :COMXC7CD.O03
AERMOD OUTPUT FILE NUMBER 4 :COMXC7CD.O04
AERMOD OUTPUT FILE NUMBER 5 :COMXC7CD.O05
First title for last output file is: 2001 RBEC- CO 501G OIL/95F/75%LD SH-GAS/35/75 FH&CS CONDO 12/31/08
Second title for last output file is: CO EMISSION RATES PER CTS NOTE: ALL IDS SAME

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: MG					
HIGH 8-Hour					
	2001	88.53175	594330.	2960240.	01100308
	2002	63.04885	594330.	2960240.	02011908
	2003	74.84570	594280.	2960240.	03112916
	2004	94.72186	594280.	2960240.	04090408
	2005	102.11508	594280.	2960240.	05122324
HSH 8-Hour					
	2001	54.98667	594330.	2960240.	01010124
	2002	56.23837	594330.	2960240.	02110224
	2003	63.42498	594305.	2960240.	03090924
	2004	92.48181	594280.	2960240.	04101624
	2005	82.68295	594330.	2960240.	05122324
HIGH 1-Hour					
	2001	210.74176	594280.	2960240.	01122020
	2002	231.69304	594330.	2960240.	02010820
	2003	216.10117	594305.	2960240.	03091124
	2004	222.59418	594280.	2960240.	04021821
	2005	236.52953	594330.	2960240.	05013103
HSH 1-Hour					
	2001	190.52971	594330.	2960240.	01110922
	2002	213.16574	594330.	2960240.	02040402
	2003	208.86214	594330.	2960240.	03101601
	2004	208.83766	594280.	2960240.	04101621
	2005	233.94472	594330.	2960240.	05050705
SOURCE GROUP ID: SH					
HIGH 8-Hour					
	2001	90.25674	594330.	2960240.	01100308
	2002	57.79233	594330.	2960240.	02011908
	2003	67.43221	594280.	2960240.	03090924
	2004	91.70209	594280.	2960240.	04101624
	2005	94.92687	594330.	2960240.	05101108
HSH 8-Hour					
	2001	55.84821	594330.	2960240.	01082608
	2002	55.04856	594330.	2960240.	02110224
	2003	60.79847	594305.	2960240.	03122708
	2004	59.60693	594305.	2960240.	04120508
	2005	83.61820	594305.	2960240.	05101108
HIGH 1-Hour					
	2001	208.85710	594330.	2960240.	01082604
	2002	221.10493	594330.	2960240.	02040402
	2003	238.81950	594305.	2960240.	03091124
	2004	216.50963	594280.	2960240.	04101621
	2005	254.79442	594280.	2960240.	05072204
HSH 1-Hour					
	2001	192.39581	594330.	2960240.	01110922
	2002	209.10414	594330.	2960240.	02100803
	2003	231.43140	594280.	2960240.	03111320
	2004	199.72672	594280.	2960240.	04102724
	2005	234.43832	594330.	2960240.	05082306
SOURCE GROUP ID: MGC7					
HIGH 8-Hour					
	2001	88.81414	594330.	2960240.	01100308
	2002	63.04885	594330.	2960240.	02011908
	2003	75.77636	594280.	2960240.	03112916
	2004	94.75791	594280.	2960240.	04090408
	2005	102.11627	594280.	2960240.	05122324
HSH 8-Hour					
	2001	54.98669	594330.	2960240.	01010124

2002	56.24176	594330.	2960240.	02110224
2003	63.42812	594305.	2960240.	03090924
2004	92.49044	594280.	2960240.	04101624
2005	82.68404	594330.	2960240.	05122324

HIGH 1-Hour

2001	210.74176	594280.	2960240.	01122020
2002	231.69304	594330.	2960240.	02010820
2003	216.10117	594305.	2960240.	03091124
2004	222.59418	594280.	2960240.	04021821
2005	236.52953	594330.	2960240.	05013103

HSH 1-Hour

2001	190.52971	594330.	2960240.	01110922
2002	213.16574	594330.	2960240.	02040402
2003	208.86214	594330.	2960240.	03101601
2004	208.83766	594280.	2960240.	04101621
2005	233.94472	594330.	2960240.	05050705

SOURCE GROUP ID: SHC7

HIGH 8-Hour

2001	90.53912	594330.	2960240.	01100308
2002	57.79233	594330.	2960240.	02011908
2003	67.43540	594280.	2960240.	03090924
2004	91.71071	594280.	2960240.	04101624
2005	95.50737	594330.	2960240.	05101108

HSH 8-Hour

2001	56.40727	594330.	2960240.	01082608
2002	55.05194	594330.	2960240.	02110224
2003	60.79847	594305.	2960240.	03122708
2004	59.62011	594305.	2960240.	04120508
2005	84.31770	594305.	2960240.	05101108

HIGH 1-Hour

2001	208.85710	594330.	2960240.	01082604
2002	221.10493	594330.	2960240.	02040402
2003	238.81950	594305.	2960240.	03091124
2004	216.50963	594280.	2960240.	04101621
2005	254.79442	594280.	2960240.	05072204

HSH 1-Hour

2001	192.39581	594330.	2960240.	01110922
2002	209.10414	594330.	2960240.	02100803
2003	231.43140	594280.	2960240.	03111320
2004	199.72672	594280.	2960240.	04102724
2005	234.43832	594330.	2960240.	05082306

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

```
CO STARTING
  TITLEONE 2001 RBEC- CO 501G OIL/95F/75%LD SH-GAS/35/75 FH&CS CONDO 12/31/08
  TITLETWO CO EMISSION RATES PER CTS   NOTE: ALL IDS SAME
  MODELOPT DFAULT CONC NOWARN
  AVERTIME 8 1
  POLLUTID GEN
  RUNORNOT RUN
  FLAGPOLE
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **

  LOCATION MGA7595 POINT 594125.983 2960797.999 1.000
  LOCATION MGB7595 POINT 594172.071 2960797.963 1.000
  LOCATION MGC7595 POINT 594274.233 2960797.946 1.000

  LOCATION SHA7595 POINT 594125.983 2960797.999 1.000
  LOCATION SHB7595 POINT 594172.071 2960797.963 1.000
  LOCATION SHC7595 POINT 594274.233 2960797.946 1.000

  LOCATION FGH1 POINT 594155.571 2960783.547 1.000

  LOCATION CSE1 POINT 594070.600 2960755.500 1.000
  LOCATION CSE2 POINT 594070.600 2960760.500 1.000
  LOCATION CSE3 POINT 594070.600 2960765.500 1.000
  LOCATION CSE4 POINT 594070.600 2960770.500 1.000
  LOCATION CSE5 POINT 594070.600 2960775.500 1.000
  LOCATION CSE6 POINT 594070.600 2960780.500 1.000
  LOCATION CSE7 POINT 594070.600 2960785.500 1.000

** Source Parameters **
** 75% load, 95 F  OIL 501G
  SRCPARAM MGA7595 25.20   45.4  447.0  20.80  6.71
  SRCPARAM MGB7595 25.20   45.4  447.0  20.80  6.71
  SRCPARAM MGC7595 25.20   45.4  447.0  20.80  6.71
** 75% load, 35 F  GAS SH
  SRCPARAM SHA7595 6.17    45.4  357.6  15.02  6.71
  SRCPARAM SHB7595 6.17    45.4  357.6  15.02  6.71
  SRCPARAM SHC7595 6.17    45.4  357.6  15.02  6.71

  SRCPARAM FGH1  0.101 9.144 533.150 32.02 0.305

  SRCPARAM CSE1 0.149 12.2 729.800 49.50000 0.305
  SRCPARAM CSE2 0.149 12.2 729.800 49.50000 0.305
  SRCPARAM CSE3 0.149 12.2 729.800 49.50000 0.305
  SRCPARAM CSE4 0.149 12.2 729.800 49.50000 0.305
  SRCPARAM CSE5 0.149 12.2 729.800 49.50000 0.305
  SRCPARAM CSE6 0.149 12.2 729.800 49.50000 0.305
  SRCPARAM CSE7 0.149 12.2 729.800 49.50000 0.305


** Building Downwash **
SO BUILDHGT MGA7595      29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGA7595      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID MGA7595      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGA7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGA7595      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN MGA7595      10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGA7595      19.41  15.27  10.67  15.27  19.41  22.95
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SO BUILDLEN MGA7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGA7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGA7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGA7595      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    MGA7595     -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    MGA7595     -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    MGA7595      -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    MGA7595       4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    MGA7595      -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    MGA7595     -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    MGA7595     -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    MGA7595     -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    MGA7595     -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    MGA7595       3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    MGA7595      18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    MGA7595      14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT MGB7595      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT MGB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGB7595      23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID MGB7595      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID MGB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGB7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGB7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGB7595      27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN MGB7595      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN MGB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGB7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGB7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGB7595      25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    MGB7595     -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    MGB7595     -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    MGB7595      -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    MGB7595       4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    MGB7595      39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    MGB7595     -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    MGB7595     -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    MGB7595      -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    MGB7595     -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    MGB7595       3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    MGB7595       2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    MGB7595      14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT MGC7595      29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT MGC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT MGC7595      23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID MGC7595      18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID MGC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGC7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID MGC7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID MGC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID MGC7595      27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN MGC7595      10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN MGC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGC7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN MGC7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN MGC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN MGC7595      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    MGC7595     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    MGC7595     -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    MGC7595      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    MGC7595       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    MGC7595      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    MGC7595     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    MGC7595     -14.43  23.32   8.08 -12.64 -15.01 -16.93
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SO YBADJ    MGC7595      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    MGC7595     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    MGC7595       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    MGC7595      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    MGC7595      14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT SHA7595      29.57  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHA7595      23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID SHA7595      18.85  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHA7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHA7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHA7595      27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN SHA7595      10.39  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHA7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHA7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHA7595      25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    SHA7595     -87.54 -32.91 -31.26 -28.65 -25.18 -20.94
SO XBADJ    SHA7595     -16.07 -10.71  -5.02  -3.94  -2.74  -1.46
SO XBADJ    SHA7595      -0.14   1.19   2.48   3.70   4.80   5.76
SO XBADJ    SHA7595       4.69   3.48   2.17   0.78  -0.62  -2.01
SO XBADJ    SHA7595      -3.34  -4.56  -5.65 -11.33 -16.66 -21.49
SO XBADJ    SHA7595     -25.67 -29.06 -31.57 -100.73 -87.54 -87.32
SO YBADJ    SHA7595     -14.51  -6.96 -10.01 -12.76 -15.13 -17.03
SO YBADJ    SHA7595     -18.41 -19.24 -19.48 -19.13 -18.20 -16.71
SO YBADJ    SHA7595     -14.72 -12.28  -9.46  -6.36  -3.07   0.32
SO YBADJ    SHA7595       3.69   6.96  10.01  12.76  15.13  17.03
SO YBADJ    SHA7595      18.41  19.24  19.48  19.13  18.20  16.71
SO YBADJ    SHA7595      14.72  12.28   9.46 -14.45  14.53   0.01

SO BUILDHGT SHB7595      29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHB7595      23.47  23.47  23.47  23.17  29.57  29.57
SO BUILDWID SHB7595      18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID SHB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHB7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHB7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHB7595      27.87  25.81  22.95  27.91  18.85  17.83
SO BUILDLEN SHB7595      10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN SHB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHB7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHB7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHB7595      25.81  27.87  29.09  47.73  10.39   7.41
SO XBADJ    SHB7595     -87.51 -100.83 -103.09 -58.25 -60.46 -60.84
SO XBADJ    SHB7595     -59.36 -56.09 -51.10  -4.13  -2.91  -1.59
SO XBADJ    SHB7595      -0.23   1.14   2.48   3.74   4.89   5.88
SO XBADJ    SHB7595       4.85   3.67   2.38  30.38  34.66  37.88
SO XBADJ    SHB7595      39.96  40.82  40.44 -11.14 -16.50 -21.36
SO XBADJ    SHB7595     -25.58 -29.01 -31.57 -109.53 -87.41 -87.24
SO YBADJ    SHB7595     -14.22  14.74  -1.86  22.56  14.53   6.05
SO YBADJ    SHB7595      -2.62 -11.20 -19.44 -19.29 -18.38 -16.92
SO YBADJ    SHB7595     -14.95 -12.52  -9.71  -6.61  -3.31   0.10
SO YBADJ    SHB7595       3.50   6.80   9.89 -22.56 -14.53  -6.05
SO YBADJ    SHB7595       2.62  11.20  19.44  19.29  18.38  16.92
SO YBADJ    SHB7595      14.95  12.52   9.71 -23.01  14.79   0.29

SO BUILDHGT SHC7595      29.57  23.17  23.17  23.47  23.47  23.47
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  23.47  23.47
```

```
SO BUILDHGT SHC7595      23.47  23.47  23.47  23.47  29.57  29.57
SO BUILDWID SHC7595      18.85  27.91  34.24  25.81  27.87  29.09
SO BUILDWID SHC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC7595      27.87  25.81  22.95  19.41  15.27  10.67
SO BUILDWID SHC7595      15.27  19.41  22.95  25.81  27.87  29.09
SO BUILDWID SHC7595      29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID SHC7595      27.87  25.81  22.95  19.41  18.85  17.83
SO BUILDLEN SHC7595      10.39  47.73  46.38  27.87  25.81  22.95
SO BUILDLEN SHC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC7595      25.81  27.87  29.09  29.43  28.87  27.43
SO BUILDLEN SHC7595      28.87  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN SHC7595      19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN SHC7595      25.81  27.87  29.09  29.43  10.39   7.41
SO XBADJ    SHC7595     -87.49 -109.62 -111.69 -28.71 -25.26 -21.04
SO XBADJ    SHC7595     -112.31 -111.55 -107.40  -4.08  -2.88  -1.60
SO XBADJ    SHC7595      -0.27   1.08   2.38   3.62   4.75   5.73
SO XBADJ    SHC7595       4.68   3.50   2.20   0.84  -0.54  -1.91
SO XBADJ    SHC7595      -3.22  -4.44  -5.52 -11.19 -16.52 -21.36
SO XBADJ    SHC7595     -25.54 -28.95 -31.47 -33.05 -87.46 -87.25
SO YBADJ    SHC7595     -14.43  23.32   8.08 -12.64 -15.01 -16.93
SO YBADJ    SHC7595      16.51  -1.56 -19.58 -19.12 -18.21 -16.75
SO YBADJ    SHC7595     -14.78 -12.36  -9.56  -6.48  -3.20   0.18
SO YBADJ    SHC7595       3.56   6.82   9.88  12.64  15.01  16.93
SO YBADJ    SHC7595      18.33  19.18  19.44  19.12  18.21  16.75
SO YBADJ    SHC7595      14.78  12.36   9.56   6.48  14.59   0.08

SO BUILDHGT FGH1     29.57  29.57  29.57  23.47  23.47  23.47
SO BUILDHGT FGH1     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1     23.47  23.47  23.47  23.47   0.00   0.00
SO BUILDHGT FGH1      0.00  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT FGH1     23.47  23.47  23.47  29.57  29.57  29.57
SO BUILDWID FGH1     18.85  19.29  19.15  25.81  27.87  29.09
SO BUILDWID FGH1     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1     27.87  25.81  22.95  19.41   0.00   0.00
SO BUILDWID FGH1      0.00  19.41  22.95  25.81  27.87  29.09
SO BUILDWID FGH1     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID FGH1     27.87  25.81  22.95  19.29  18.85  17.83
SO BUILDLEN FGH1     10.39  13.06  15.33  27.87  25.81  22.95
SO BUILDLEN FGH1     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1     25.81  27.87  29.09  29.43   0.00   0.00
SO BUILDLEN FGH1      0.00  29.43  29.09  27.87  25.81  22.95
SO BUILDLEN FGH1     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN FGH1     25.81  27.87  29.09  13.06  10.39   7.41
SO XBADJ    FGH1    -78.45 -81.64 -82.36 -36.60 -38.56 -39.34
SO XBADJ    FGH1    -38.93 -37.33 -34.60 -35.59 -35.49 -34.31
SO XBADJ    FGH1    -32.09   0.71  -1.76  -4.16   0.00   0.00
SO XBADJ    FGH1      0.00 -15.52   4.44   8.73  12.75  16.39
SO XBADJ    FGH1     19.52  22.06  23.94  20.32  16.08  11.36
SO XBADJ    FGH1      6.29 -28.58 -27.33 -77.03 -76.08 -72.82
SO YBADJ    FGH1     17.14   4.16  -8.95  19.19  14.96  10.28
SO YBADJ    FGH1      5.29   0.13  -5.03 -10.03 -14.74 -18.99
SO YBADJ    FGH1    -22.67   9.38  11.78  13.82   0.00   0.00
SO YBADJ    FGH1      0.00  17.37 -22.84 -19.19 -14.96 -10.28
SO YBADJ    FGH1     -5.29  -0.13   5.03  10.03  14.74  18.99
SO YBADJ    FGH1     22.67  -9.38 -11.78   8.41  -3.96 -16.21

SO BUILDHGT CSE1      6.10   6.10   6.10   6.10  23.47   6.10
SO BUILDHGT CSE1      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE1      6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE1     23.47  23.47  23.47  10.67  10.67  29.57
SO BUILDHGT CSE1     29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE1     15.09  20.58  25.44  29.54  27.87  34.93
SO BUILDWID CSE1     36.07  36.11  35.05  36.11  36.07  34.93
SO BUILDWID CSE1     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE1     15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE1     29.43  28.87  27.43  34.14  34.79  15.33
SO BUILDWID CSE1     17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE1     36.11  36.07  34.93  32.73  25.81  25.44
SO BUILDLEN CSE1     20.58  15.09   9.14  15.09  20.58  25.44
SO BUILDLEN CSE1     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE1     36.11  36.07  34.93  32.73  25.81  22.95
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SO BUILDLEN CSE1     19.41  15.27  10.67  18.85  22.89  19.15
SO BUILDLEN CSE1     18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE1    -3.26  -3.92  -4.47  -4.87  44.56  -5.23
SO XBADJ    CSE1    -5.18  -4.96  -4.60 -10.18 -15.46 -20.26
SO XBADJ    CSE1   -24.45 -27.89 -30.49 -32.16 -32.86 -32.55
SO XBADJ    CSE1   -32.85 -32.14 -30.46 -27.86 -70.37 -71.22
SO XBADJ    CSE1   -69.92 -66.49 -61.03 -71.09 -75.74 -78.08
SO XBADJ    CSE1   -78.05 -75.65  -4.44  -3.90  -3.25  -2.50
SO YBADJ    CSE1     2.64   5.17   7.54   9.68 -18.17  13.03
SO YBADJ    CSE1    14.13  14.80  15.03  14.79  14.11  13.00
SO YBADJ    CSE1    11.49   9.64   7.49   5.11   2.58  -0.03
SO YBADJ    CSE1    -2.64  -5.17  -7.54  -9.68  18.17   7.91
SO YBADJ    CSE1    -2.58 -13.00 -23.02  19.00   8.83   7.92
SO YBADJ    CSE1    -4.10 -15.99  -7.49  -5.11  -2.58   0.03

SO BUILDHGT CSE2     6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE2     6.10   6.10   6.10   6.10  23.47  23.47
SO BUILDHGT CSE2    23.47  23.47  23.47   6.10   6.10  29.57
SO BUILDHGT CSE2    29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE2    15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE2    36.07  36.11  35.05  36.11  36.07  34.93
SO BUILDWID CSE2    32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE2    15.09  20.58  25.44  29.54  27.87  29.09
SO BUILDWID CSE2    29.43  28.87  27.43  36.11  36.07  15.33
SO BUILDWID CSE2    17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE2    36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE2    20.58  15.09   9.14  15.09  20.58  25.44
SO BUILDLEN CSE2    29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE2    36.11  36.07  34.93  32.73  25.81  22.95
SO BUILDLEN CSE2    19.41  15.27  10.67  15.09  20.58  19.15
SO BUILDLEN CSE2    18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE2    -8.18  -8.62  -8.80  -8.70  41.35  45.77
SO XBADJ    CSE2    -6.89  -5.83  -4.60  -9.31 -13.75 -17.76
SO XBADJ    CSE2   -21.23 -24.06 -26.16 -27.46 -27.93 -27.55
SO XBADJ    CSE2   -27.92 -27.44 -26.13 -24.03 -67.15 -68.72
SO XBADJ    CSE2   -68.21 -65.62 -61.03  -5.78  -6.84 -80.58
SO XBADJ    CSE2   -81.27 -79.48  -8.77  -8.60  -8.18  -7.50
SO YBADJ    CSE2     1.77   3.46   5.04   6.47 -22.00 -12.24
SO YBADJ    CSE2     9.43   9.88  10.03   9.87   9.41   8.67
SO YBADJ    CSE2     7.66   6.42   4.99   3.40   1.71  -0.03
SO YBADJ    CSE2    -1.77  -3.46  -5.04  -6.47  22.00  12.24
SO YBADJ    CSE2     2.12  -8.07 -18.02  -9.87  -9.41  12.25
SO YBADJ    CSE2    -0.27 -12.78  -4.99  -3.40  -1.71   0.03

SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE3     6.10   6.10   6.10  23.47   6.10   6.10
SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE3     6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE3    23.47  23.47  23.47  23.47   6.10   6.10
SO BUILDHGT CSE3    29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE3    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE3    36.07  36.11  35.05  28.87  36.07  34.93
SO BUILDWID CSE3    32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE3    15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE3    29.43  28.87  27.43  28.87  36.07  34.93
SO BUILDWID CSE3    17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE3    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE3    20.58  15.09   9.14  15.27  20.58  25.44
SO BUILDLEN CSE3    29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE3    36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE3    19.41  15.27  10.67  15.27  20.58  25.44
SO BUILDLEN CSE3    18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE3   -13.11 -13.32 -13.13 -12.53 -11.56  43.27
SO XBADJ    CSE3    -8.60  -6.70  -4.60  44.96 -12.04 -15.26
SO XBADJ    CSE3   -18.02 -20.23 -21.83 -22.77 -23.01 -22.55
SO XBADJ    CSE3   -23.00 -22.75 -21.80 -20.20 -17.98 -66.22
SO XBADJ    CSE3   -66.50 -64.75 -61.03 -60.23  -8.55 -10.19
SO XBADJ    CSE3   -84.48 -83.31 -13.10 -13.30 -13.10 -12.50
SO YBADJ    CSE3     0.90   1.75   2.54   3.25   3.87 -16.57
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SO YBADJ    CSE3      4.73   4.95   5.03  22.49   4.71   4.34
SO YBADJ    CSE3      3.83   3.21   2.49   1.69   0.85  -0.03
SO YBADJ    CSE3     -0.90  -1.75  -2.54  -3.25  -3.87  16.57
SO YBADJ    CSE3      6.82  -3.15 -13.02 -22.49  -4.71  -4.34
SO YBADJ    CSE3      3.56  -9.56  -2.49  -1.69  -0.85   0.03

SO BUILDHGT CSE4      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE4     23.47   6.10   6.10  23.47   6.10   6.10
SO BUILDHGT CSE4      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE4      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE4     23.47  23.47  23.47  23.47   6.10   6.10
SO BUILDHGT CSE4     29.57  29.57   6.10   6.10   6.10   6.10
SO BUILDWID CSE4     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE4     29.43  36.11  35.05  28.87  36.07  34.93
SO BUILDWID CSE4     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE4     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE4     29.43  28.87  27.43  28.87  36.07  34.93
SO BUILDWID CSE4     17.14  18.42  25.44  20.58  15.09   9.14
SO BUILDLEN CSE4     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE4     19.41  15.09   9.14  15.27  20.58  25.44
SO BUILDLEN CSE4     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE4     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE4     19.41  15.27  10.67  15.27  20.58  25.44
SO BUILDLEN CSE4     18.42  17.14  34.93  36.07  36.11  35.05
SO XBADJ    CSE4    -18.03 -18.02 -17.46 -16.36 -14.77  40.77
SO XBADJ    CSE4     45.38  -7.57  -4.60  45.83 -10.33 -12.76
SO XBADJ    CSE4    -14.81 -16.40 -17.50 -18.07 -18.08 -17.55
SO XBADJ    CSE4    -18.07 -18.05 -17.47 -16.37 -14.76 -63.72
SO XBADJ    CSE4    -64.79 -63.88 -61.03 -61.10 -10.26 -12.69
SO XBADJ    CSE4    -87.70 -87.14 -17.43 -18.00 -18.02 -17.50
SO YBADJ    CSE4      0.03   0.04   0.04   0.04   0.04 -20.90
SO YBADJ    CSE4    -11.51   0.03   0.03  17.57   0.01   0.01
SO YBADJ    CSE4      0.00   0.00  -0.01  -0.02  -0.02  -0.03
SO YBADJ    CSE4     -0.03  -0.04  -0.04  -0.04  -0.04  20.90
SO YBADJ    CSE4     11.51   1.77  -8.02 -17.57  -0.01  -0.01
SO YBADJ    CSE4      7.39  -6.35   0.01   0.02   0.02   0.03

SO BUILDHGT CSE5      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE5     23.47   6.10   6.10  23.47  23.47   6.10
SO BUILDHGT CSE5      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE5      6.10   6.10   6.10   6.10   6.10  23.47
SO BUILDHGT CSE5     23.47  23.47  23.47  23.47  23.47   6.10
SO BUILDHGT CSE5     29.57  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE5     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE5     29.43  36.11  35.05  28.87  29.43  34.93
SO BUILDWID CSE5     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE5     15.09  20.58  25.44  29.54  32.73  29.09
SO BUILDWID CSE5     29.43  28.87  27.43  28.87  29.43  34.93
SO BUILDWID CSE5     17.14  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE5     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE5     19.41  15.09   9.14  15.27  19.41  25.44
SO BUILDLEN CSE5     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE5     36.11  36.07  34.93  32.73  29.54  22.95
SO BUILDLEN CSE5     19.41  15.27  10.67  15.27  19.41  25.44
SO BUILDLEN CSE5     18.42  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE5    -22.96 -22.72 -21.79 -20.19 -17.99  38.27
SO XBADJ    CSE5     43.67  -8.44  -4.60  46.69  41.60 -10.26
SO XBADJ    CSE5    -11.59 -12.57 -13.17 -13.37 -13.16 -12.55
SO XBADJ    CSE5    -13.15 -13.35 -13.14 -12.54 -11.55 -61.23
SO XBADJ    CSE5    -63.08 -63.01 -61.03 -61.96 -61.01 -15.19
SO XBADJ    CSE5    -90.91 -90.97 -88.28 -22.70 -22.95 -22.50
SO YBADJ    CSE5     -0.84  -1.67  -2.46  -3.18  -3.79 -25.23
SO YBADJ    CSE5    -16.21  -4.89  -4.97  12.65  21.89  -4.32
SO YBADJ    CSE5     -3.83  -3.22  -2.51  -1.73  -0.89  -0.03
SO YBADJ    CSE5      0.84   1.67   2.46   3.18   3.79  25.23
SO YBADJ    CSE5     16.21   6.70  -3.02 -12.65 -21.89   4.32
SO YBADJ    CSE5     11.22  -3.13 -17.40   1.73   0.89   0.03

SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6     23.47  23.47   6.10   6.10  23.47  23.47
```

```
SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE6     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE6     29.57  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE6     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6     29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE6     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE6     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE6     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE6     17.14  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE6     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6     19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE6     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE6     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE6     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE6     18.42  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE6    -27.88 -27.41 -26.12 -24.02 -21.20 -17.73
SO XBADJ    CSE6     41.96  46.88  -4.60  -5.84  43.31  37.75
SO XBADJ    CSE6     -8.38  -8.74  -8.84  -8.67  -8.24  -7.55
SO XBADJ    CSE6     -8.23  -8.65  -8.81  -8.71  -8.34  -7.71
SO XBADJ    CSE6    -61.37 -62.14 -61.03 -62.83 -62.72 -60.70
SO XBADJ    CSE6    -94.12 -94.81 -92.61 -27.40 -27.87 -27.50
SO YBADJ    CSE6     -1.70  -3.39  -4.96  -6.39  -7.62  -8.62
SO YBADJ    CSE6    -20.91 -11.62  -9.97  -9.83  17.19  26.14
SO YBADJ    CSE6     -7.66  -6.43  -5.01  -3.44  -1.76  -0.03
SO YBADJ    CSE6      1.70   3.39   4.96   6.39   7.62   8.62
SO YBADJ    CSE6     20.91  11.62   1.98  -7.72 -17.19 -26.14
SO YBADJ    CSE6     15.05   0.08 -14.90   3.44   1.76   0.03


SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7     23.47  23.47   6.10   6.10  23.47  23.47
SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7      6.10   6.10   6.10   6.10   6.10   6.10
SO BUILDHGT CSE7     23.47  23.47  23.47  23.47  23.47  23.47
SO BUILDHGT CSE7      6.10  29.57  29.57   6.10   6.10   6.10
SO BUILDWID CSE7     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7     29.43  28.87  35.05  36.11  29.43  29.09
SO BUILDWID CSE7     32.73  29.54  25.44  20.58  15.09   9.14
SO BUILDWID CSE7     15.09  20.58  25.44  29.54  32.73  34.93
SO BUILDWID CSE7     29.43  28.87  27.43  28.87  29.43  29.09
SO BUILDWID CSE7     32.73  18.42  19.15  20.58  15.09   9.14
SO BUILDLEN CSE7     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7     19.41  15.27   9.14  15.09  19.41  22.95
SO BUILDLEN CSE7     29.54  32.73  34.93  36.07  36.11  35.05
SO BUILDLEN CSE7     36.11  36.07  34.93  32.73  29.54  25.44
SO BUILDLEN CSE7     19.41  15.27  10.67  15.27  19.41  22.95
SO BUILDLEN CSE7     29.54  17.14  15.33  36.07  36.11  35.05
SO XBADJ    CSE7    -32.81 -32.11 -30.45 -27.85 -24.41 -20.23
SO XBADJ    CSE7     40.25  46.01  -4.60  -4.97  45.02  40.25
SO XBADJ    CSE7     -5.16  -4.91  -4.51  -3.97  -3.31  -2.55
SO XBADJ    CSE7     -3.30  -3.95  -4.48  -4.88  -5.12  -5.21
SO XBADJ    CSE7    -59.66 -61.28 -61.03 -63.70 -64.43 -63.20
SO XBADJ    CSE7    -24.37 -98.64 -96.94 -32.09 -32.80 -32.50
SO YBADJ    CSE7     -2.57  -5.10  -7.46  -9.60 -11.45 -12.95
SO YBADJ    CSE7    -25.61 -16.55 -14.97 -14.75  12.49  21.81
SO YBADJ    CSE7    -11.49  -9.65  -7.51  -5.15  -2.63  -0.03
SO YBADJ    CSE7      2.57   5.10   7.46   9.60  11.45  12.95
SO YBADJ    CSE7     25.61  16.55   6.98  -2.80 -12.49 -21.81
SO YBADJ    CSE7     11.49   3.29 -12.40   5.15   2.63   0.03

  SRCGROUP MG MGA7595 MGB7595 MGC7595 FGH1
  SRCGROUP SH SHA7595 SHB7595 SHC7595 FGH1
  SRCGROUP MGC7 MGA7595 MGB7595 MGC7595 FGH1 CSE1-CSE7
  SRCGROUP SHC7 SHA7595 SHB7595 SHC7595 FGH1 CSE1-CSE7

SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
```

```
RE STARTING
  INCLUDED RIV1COND.ROU
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
**   SURFFILE C:\amodmet\PBIMIA01.SFC
**   PROFFILE C:\amodmet\PBIMIA01.PFL
  SURFFILE PBIMIA01.SFC
  PROFFILE PBIMIA01.PFL
  SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
  UAIRDATA 92803 2001 MIAMI/FIU
  PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE FIRST SECOND
OU FINISHED
**
```

PREDICTED IMPACTS FOR THE EXISTING UNITS 3 AND 4 MODELED WITH 10 G/S EMISSION RATE

AERBOB RELEASE 020304
AERMOD OUTPUT FILE NUMBER 1 :GENOIL3.O01
AERMOD OUTPUT FILE NUMBER 2 :GENOIL3.O02
AERMOD OUTPUT FILE NUMBER 3 :GENOIL3.O03
AERMOD OUTPUT FILE NUMBER 4 :GENOIL3.O04
AERMOD OUTPUT FILE NUMBER 5 :GENOIL3.O05
First title for last output file is: 2001 FPL RIVIERA REPOWERING EXISTING, stack tests, GENERIC 9/03/2008
Second title for last output file is: PALM BEACH/MIAMI METEOROLOGICAL DATA, 2001 - 2005

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: ALL					
Annual					
	2001	0.19463	593100.	2960900.	01123124
	2002	0.24349	593300.	2961300.	02123124
	2003	0.22958	593400.	2961500.	03123124
	2004	0.21689	593200.	2961100.	04123124
	2005	0.20330	593200.	2960900.	05123124
HIGH 24-Hour					
	2001	1.07923	593600.	2961700.	01060424
	2002	1.16441	593300.	2961300.	02062024
	2003	1.37159	593300.	2961400.	03061624
	2004	1.31696	593500.	2961600.	04082624
	2005	1.41964	593500.	2961600.	05070424
HSH 24-Hour					
	2001	1.01559	593100.	2960400.	01050424
	2002	1.08249	593100.	2961300.	02081524
	2003	1.24266	593600.	2961600.	03071124
	2004	1.16510	593500.	2961600.	04060224
	2005	1.13413	593300.	2961000.	05092824
HIGH 8-Hour					
	2001	2.76997	593000.	2960400.	01100916
	2002	2.77294	593600.	2961800.	02030216
	2003	2.90702	593600.	2961600.	03071116
	2004	2.80401	593100.	2960800.	04100816
	2005	2.84541	593300.	2961000.	05051416
HSH 8-Hour					
	2001	2.40209	593000.	2960400.	01120516
	2002	2.54058	593300.	2961500.	02032616
	2003	2.59144	593500.	2961600.	03071116
	2004	2.52652	593600.	2961700.	04091516
	2005	2.58523	593200.	2960800.	05111316
HIGH 3-Hour					
	2001	3.10741	593300.	2961200.	01051515
	2002	3.27850	593400.	2960400.	02073115
	2003	3.25182	593400.	2961500.	03040812
	2004	3.33163	593300.	2961200.	04051112
	2005	3.26864	593600.	2961600.	05070412
HSH 3-Hour					
	2001	3.07357	593300.	2961200.	01051815
	2002	3.12455	593300.	2961400.	02042215
	2003	3.17171	593600.	2961600.	03071112
	2004	3.16390	593200.	2960800.	04052012
	2005	3.13502	593100.	2961000.	05081815
HIGH 1-Hour					
	2001	3.49889	594700.	2958450.	01092809
	2002	5.75756	595800.	2958700.	02121609
	2003	3.46623	593400.	2961400.	03062913
	2004	3.48972	593500.	2960100.	04090212
	2005	4.21768	593100.	2958800.	05062108
HSH 1-Hour					
	2001	3.32944	593500.	2961500.	01081613
	2002	3.49482	593600.	2961700.	02050212
	2003	3.42894	593300.	2961200.	03050813
	2004	3.44711	593200.	2961000.	04091212
	2005	3.43455	595200.	2960700.	05052414

All receptor computations reported with respect to a user-specified origin
GRID 0.00 0.00
DISCRETE 0.00 0.00

AERBOB RELEASE 020304
AERMOD OUTPUT FILE NUMBER 1 :GENOIL3C.O01
AERMOD OUTPUT FILE NUMBER 2 :GENOIL3C.O02
AERMOD OUTPUT FILE NUMBER 3 :GENOIL3C.O03
AERMOD OUTPUT FILE NUMBER 4 :GENOIL3C.O04
AERMOD OUTPUT FILE NUMBER 5 :GENOIL3C.O05
First title for last output file is: 2001 FPL RIVIERA EXISTING, stack tests, GENERIC CONDO 10/02/2008
Second title for last output file is: PALM BEACH/MIAMI METEOROLOGICAL DATA, 2001 - 2005

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: ALL					
Annual					
	2001	0.10141	594280.	2960240.	01123124
	2002	0.15232	594280.	2960240.	02123124
	2003	0.15685	594280.	2960240.	03123124
	2004	0.13620	594330.	2960240.	04123124
	2005	0.17849	594280.	2960240.	05123124
HIGH 24-Hour					
	2001	1.73817	594330.	2960240.	01041824
	2002	2.32055	594280.	2960240.	02052124
	2003	2.57472	594280.	2960240.	03112924
	2004	2.20418	594330.	2960240.	04090424
	2005	2.41399	594280.	2960240.	05041524
HSH 24-Hour					
	2001	1.63121	594305.	2960240.	01102724
	2002	2.15563	594330.	2960240.	02111324
	2003	2.08139	594280.	2960240.	03101924
	2004	1.98231	594330.	2960240.	04122724
	2005	2.35782	594280.	2960240.	05011824
HIGH 8-Hour					
	2001	4.59437	594280.	2960240.	01102716
	2002	5.46262	594330.	2960240.	02052116
	2003	6.70871	594280.	2960240.	03112916
	2004	5.58653	594330.	2960240.	04021816
	2005	5.92863	594280.	2960240.	05011816
HSH 8-Hour					
	2001	4.20991	594330.	2960240.	01041816
	2002	4.81997	594280.	2960240.	02110716
	2003	4.44254	594280.	2960240.	03100216
	2004	5.42635	594330.	2960240.	04122716
	2005	5.15192	594305.	2960240.	05011816
HIGH 3-Hour					
	2001	7.31994	594330.	2960240.	01041812
	2002	7.09735	594280.	2960240.	02040518
	2003	8.85949	594280.	2960240.	03112915
	2004	9.01184	594330.	2960240.	04090409
	2005	8.46373	594330.	2960240.	05011715
HSH 3-Hour					
	2001	5.96899	594330.	2960240.	01102712
	2002	6.24308	594280.	2960240.	02112615
	2003	6.62987	594280.	2960240.	03112015
	2004	8.82049	594330.	2960240.	04021815
	2005	7.44072	594280.	2960240.	05040312
HIGH 1-Hour					
	2001	10.07296	594280.	2960240.	01102713
	2002	9.27051	594280.	2960240.	02110211
	2003	11.21571	594280.	2960240.	03112912
	2004	14.72329	594280.	2960240.	04090408
	2005	11.20737	594280.	2960240.	05012312
HSH 1-Hour					
	2001	9.85078	594280.	2960240.	01102712
	2002	9.15075	594330.	2960240.	02052116
	2003	10.59082	594280.	2960240.	03112915
	2004	11.01266	594330.	2960240.	04121514
	2005	10.34539	594280.	2960240.	05041617

All receptor computations reported with respect to a user-specified origin
GRID 0.00 0.00
DISCRETE 0.00 0.00

```
CO STARTING
   TITLEONE 2001 FPL RIVIERA REPOWERING EXISTING, stack tests, GENERIC 9/03/2008
   TITLETWO PALM BEACH/MIAMI METEOROLOGICAL DATA, 2001 - 2005
   MODELOPT DFAULT CONC NOWARN
   AVERTIME PERIOD 24 8 3 1
   POLLUTID GENERIC
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION UN3 POINT 594240.000 2960800.000 3.35
   LOCATION UN4 POINT 594186.350 2960800.000 3.35
** Source Parameters **
**   SRCPARAM UN3 5.0 90.83 401.48 26.85 4.88
**   SRCPARAM UN4 5.0 90.83 401.48 26.85 4.88

   SRCPARAM UN3 5.0 90.83 417.2  28.1  4.88
   SRCPARAM UN4 5.0 90.83 417.2  28.1  4.88

SO BUILDHGT UN3        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDHGT UN3        41.76   41.76    0.00    0.00   41.76   41.76
SO BUILDHGT UN3        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDHGT UN3        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDHGT UN3        41.76    0.00    0.00    0.00   41.76   41.76
SO BUILDHGT UN3        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDWID UN3        25.12   26.02   26.12   25.42   23.96   21.77
SO BUILDWID UN3        18.91   15.48    0.00    0.00   18.91   21.77
SO BUILDWID UN3        23.96   25.42   26.12   26.02   25.12   23.47
SO BUILDWID UN3        25.12   26.02   26.12   25.42   23.96   21.77
SO BUILDWID UN3        18.91    0.00    0.00    0.00   18.91   21.77
SO BUILDWID UN3        23.96   25.42   26.12   26.02   25.12   23.47
SO BUILDLEN UN3        15.48   18.91   21.77   23.96   25.42   26.12
SO BUILDLEN UN3        26.02   25.12    0.00    0.00   26.02   26.12
SO BUILDLEN UN3        25.42   23.96   21.77   18.91   15.48   11.58
SO BUILDLEN UN3        15.48   18.91   21.77   23.96   25.42   26.12
SO BUILDLEN UN3        26.02    0.00    0.00    0.00   26.02   26.12
SO BUILDLEN UN3        25.42   23.96   21.77   18.91   15.48   11.58
SO XBADJ    UN3       -26.95  -27.78  -27.76  -26.90  -66.29  -69.20
SO XBADJ    UN3       -70.02  -68.70    0.00    0.00   -6.30   -3.27
SO XBADJ    UN3        -0.14    2.99    6.03    8.89   11.48   13.72
SO XBADJ    UN3        11.47    8.87    6.00    2.94   40.86   43.08
SO XBADJ    UN3        -6.37    0.00    0.00    0.00  -19.71  -22.84
SO XBADJ    UN3       -25.28  -26.95  -27.80  -27.80  -26.96  -25.30
SO YBADJ    UN3        -3.42   -6.71   -9.78  -12.57   19.49    9.89
SO YBADJ    UN3        -0.01   -9.91    0.00    0.00  -18.32  -16.88
SO YBADJ    UN3       -14.92  -12.51   -9.72   -6.64   -3.35    0.04
SO YBADJ    UN3         3.42    6.71    9.78   12.57  -19.49   -9.89
SO YBADJ    UN3        18.34    0.00    0.00    0.00   18.32   16.88
SO YBADJ    UN3        14.92   12.51    9.72    6.64    3.35   -0.04


SO BUILDHGT UN4        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDHGT UN4        41.76    0.00    0.00    0.00   41.76   41.76
SO BUILDHGT UN4        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDHGT UN4        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDHGT UN4        41.76    0.00    0.00   41.76   41.76   41.76
SO BUILDHGT UN4        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDWID UN4        25.12   26.02   26.12   25.42   23.96   21.77
SO BUILDWID UN4        18.91    0.00    0.00    0.00   18.91   21.77
SO BUILDWID UN4        23.96   25.42   26.12   26.02   25.12   23.47
SO BUILDWID UN4        25.12   26.02   26.12   25.42   23.96   21.77
SO BUILDWID UN4        18.91    0.00    0.00   15.48   18.91   21.77
SO BUILDWID UN4        23.96   25.42   26.12   26.02   25.12   23.47
SO BUILDLEN UN4        15.48   18.91   21.77   23.96   25.42   26.12
SO BUILDLEN UN4        26.02    0.00    0.00    0.00   26.02   26.12
SO BUILDLEN UN4        25.42   23.96   21.77   18.91   15.48   11.58
```

```
SO BUILDLEN UN4        15.48   18.91   21.77   23.96   25.42   26.12
SO BUILDLEN UN4        26.02    0.00    0.00   25.12   26.02   26.12
SO BUILDLEN UN4        25.42   23.96   21.77   18.91   15.48   11.58
SO XBADJ    UN4       -26.94  -27.76  -27.74  -26.87  -25.19  -22.74
SO XBADJ    UN4       -19.60    0.00    0.00    0.00   -6.26   -3.23
SO XBADJ    UN4        -0.11    3.02    6.06    8.91   11.49   13.72
SO XBADJ    UN4        11.46    8.85    5.97    2.91   -0.24   -3.38
SO XBADJ    UN4        -6.42    0.00    0.00  -68.82  -19.76  -22.89
SO XBADJ    UN4       -25.32  -26.98  -27.82  -27.82  -26.97  -25.30
SO YBADJ    UN4        -3.47   -6.75   -9.83  -12.61  -15.00  -16.94
SO YBADJ    UN4       -18.36    0.00    0.00    0.00  -18.30  -16.85
SO YBADJ    UN4       -14.89  -12.48   -9.68   -6.59   -3.30    0.09
SO YBADJ    UN4         3.47    6.75    9.83   12.61   15.00   16.94
SO YBADJ    UN4        18.36    0.00    0.00    9.89   18.30   16.85
SO YBADJ    UN4        14.89   12.48    9.68    6.59    3.30   -0.09

   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
   INCLUDED RIVEXist.rou
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE C:\amodmet\PBIMIA01.SFC
   PROFFILE C:\amodmet\PBIMIA01.PFL
   SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
   UAIRDATA 92803 2001 MIAMI/FIU
   PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE FIRST SECOND
OU FINISHED
```

```
CO STARTING
   TITLEONE 2001 FPL RIVIERA EXISTING, stack tests, GENERIC CONDO 10/02/2008
   TITLETWO PALM BEACH/MIAMI METEOROLOGICAL DATA, 2001 - 2005
   MODELOPT DFAULT CONC NOWARN
   AVERTIME PERIOD 24 8 3 1
   POLLUTID GENERIC
   RUNORNOT RUN
   FLAGPOLE
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION UN3 POINT 594240.000 2960800.000 3.35
   LOCATION UN4 POINT 594186.350 2960800.000 3.35
** Source Parameters **
**   SRCPARAM UN3 5.0 90.83 401.48 26.85 4.88
**   SRCPARAM UN4 5.0 90.83 401.48 26.85 4.88

   SRCPARAM UN3 5.0 90.83 417.2  28.1  4.88
   SRCPARAM UN4 5.0 90.83 417.2  28.1  4.88

SO BUILDHGT UN3        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDHGT UN3        41.76   41.76    0.00    0.00   41.76   41.76
SO BUILDHGT UN3        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDHGT UN3        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDHGT UN3        41.76    0.00    0.00    0.00   41.76   41.76
SO BUILDHGT UN3        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDWID UN3        25.12   26.02   26.12   25.42   23.96   21.77
SO BUILDWID UN3        18.91   15.48    0.00    0.00   18.91   21.77
SO BUILDWID UN3        23.96   25.42   26.12   26.02   25.12   23.47
SO BUILDWID UN3        25.12   26.02   26.12   25.42   23.96   21.77
SO BUILDWID UN3        18.91    0.00    0.00    0.00   18.91   21.77
SO BUILDWID UN3        23.96   25.42   26.12   26.02   25.12   23.47
SO BUILDLEN UN3        15.48   18.91   21.77   23.96   25.42   26.12
SO BUILDLEN UN3        26.02   25.12    0.00    0.00   26.02   26.12
SO BUILDLEN UN3        25.42   23.96   21.77   18.91   15.48   11.58
SO BUILDLEN UN3        15.48   18.91   21.77   23.96   25.42   26.12
SO BUILDLEN UN3        26.02    0.00    0.00    0.00   26.02   26.12
SO BUILDLEN UN3        25.42   23.96   21.77   18.91   15.48   11.58
SO XBADJ    UN3       -26.95  -27.78  -27.76  -26.90  -66.29  -69.20
SO XBADJ    UN3       -70.02  -68.70    0.00    0.00   -6.30   -3.27
SO XBADJ    UN3        -0.14    2.99    6.03    8.89   11.48   13.72
SO XBADJ    UN3        11.47    8.87    6.00    2.94   40.86   43.08
SO XBADJ    UN3        -6.37    0.00    0.00    0.00  -19.71  -22.84
SO XBADJ    UN3       -25.28  -26.95  -27.80  -27.80  -26.96  -25.30
SO YBADJ    UN3        -3.42   -6.71   -9.78  -12.57   19.49    9.89
SO YBADJ    UN3        -0.01   -9.91    0.00    0.00  -18.32  -16.88
SO YBADJ    UN3       -14.92  -12.51   -9.72   -6.64   -3.35    0.04
SO YBADJ    UN3         3.42    6.71    9.78   12.57  -19.49   -9.89
SO YBADJ    UN3        18.34    0.00    0.00    0.00   18.32   16.88
SO YBADJ    UN3        14.92   12.51    9.72    6.64    3.35   -0.04


SO BUILDHGT UN4        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDHGT UN4        41.76    0.00    0.00    0.00   41.76   41.76
SO BUILDHGT UN4        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDHGT UN4        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDHGT UN4        41.76    0.00    0.00   41.76   41.76   41.76
SO BUILDHGT UN4        41.76   41.76   41.76   41.76   41.76   41.76
SO BUILDWID UN4        25.12   26.02   26.12   25.42   23.96   21.77
SO BUILDWID UN4        18.91    0.00    0.00    0.00   18.91   21.77
SO BUILDWID UN4        23.96   25.42   26.12   26.02   25.12   23.47
SO BUILDWID UN4        25.12   26.02   26.12   25.42   23.96   21.77
SO BUILDWID UN4        18.91    0.00    0.00   15.48   18.91   21.77
SO BUILDWID UN4        23.96   25.42   26.12   26.02   25.12   23.47
SO BUILDLEN UN4        15.48   18.91   21.77   23.96   25.42   26.12
SO BUILDLEN UN4        26.02    0.00    0.00    0.00   26.02   26.12
```

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SO BUILDLEN UN4        25.42   23.96   21.77   18.91   15.48   11.58
SO BUILDLEN UN4        15.48   18.91   21.77   23.96   25.42   26.12
SO BUILDLEN UN4        26.02    0.00    0.00   25.12   26.02   26.12
SO BUILDLEN UN4        25.42   23.96   21.77   18.91   15.48   11.58
SO XBADJ    UN4       -26.94  -27.76  -27.74  -26.87  -25.19  -22.74
SO XBADJ    UN4       -19.60    0.00    0.00    0.00   -6.26   -3.23
SO XBADJ    UN4        -0.11    3.02    6.06    8.91   11.49   13.72
SO XBADJ    UN4        11.46    8.85    5.97    2.91   -0.24   -3.38
SO XBADJ    UN4        -6.42    0.00    0.00  -68.82  -19.76  -22.89
SO XBADJ    UN4       -25.32  -26.98  -27.82  -27.82  -26.97  -25.30
SO YBADJ    UN4        -3.47   -6.75   -9.83  -12.61  -15.00  -16.94
SO YBADJ    UN4       -18.36    0.00    0.00    0.00  -18.30  -16.85
SO YBADJ    UN4       -14.89  -12.48   -9.68   -6.59   -3.30    0.09
SO YBADJ    UN4         3.47    6.75    9.83   12.61   15.00   16.94
SO YBADJ    UN4        18.36    0.00    0.00    9.89   18.30   16.85
SO YBADJ    UN4        14.89   12.48    9.68    6.59    3.30   -0.09

   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
   INCLUDED RIV1COND.rou
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE C:\amodmet\PBIMIA01.SFC
   PROFFILE C:\amodmet\PBIMIA01.PFL
   SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
   UAIRDATA 92803 2001 MIAMI/FIU
   PROFBASE 19 FEET
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE FIRST SECOND
OU FINISHED
```

PREDICTED IMPACTS FOR THE AUXILIARY BOILER MODELED WITH 10 G/S EMISSION RATE

1. SUMMARY FILE
2. EXAMPLE INPUT FILE

AERBOB RELEASE 020304
AERMOD OUTPUT FILE NUMBER 1 :GNAUXBLR.O01
AERMOD OUTPUT FILE NUMBER 2 :GNAUXBLR.O02
AERMOD OUTPUT FILE NUMBER 3 :GNAUXBLR.O03
AERMOD OUTPUT FILE NUMBER 4 :GNAUXBLR.O04
AERMOD OUTPUT FILE NUMBER 5 :GNAUXBLR.O05
First title for last output file is: 2001 FPL RBEC AUX BOILER 12/31/08
Second title for last output file is: GENERIC (10 g/s) EMISSION RATE

AVERAGING TIME	YEAR	CONC (ug/m3)	X (m)	Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: ALL					
Annual					
	2001	30.06243	593995.	2960841.	01123124
	2002	33.25114	594037.	2960840.	02123124
	2003	26.23538	594037.	2960840.	03123124
	2004	31.51813	594037.	2960840.	04123124
	2005	27.00746	593952.	2960802.	05123124
HIGH 24-Hour					
	2001	224.63690	594325.	2960573.	01122624
	2002	220.11000	594037.	2960840.	02013024
	2003	211.95465	593951.	2960762.	03111624
	2004	247.11748	594080.	2960838.	04091424
	2005	231.06708	594037.	2960840.	05060924
HIGH 8-Hour					
	2001	316.37122	593952.	2960802.	01101208
	2002	350.50696	594325.	2960573.	02112708
	2003	332.66202	594325.	2960573.	03010608
	2004	291.80511	594037.	2960840.	04091408
	2005	356.38397	594325.	2960573.	05120308
HIGH 3-Hour					
	2001	454.41177	593800.	2960900.	01083006
	2002	434.90198	593800.	2960900.	02102621
	2003	448.47083	594325.	2960573.	03101903
	2004	409.48892	594300.	2960500.	04110721
	2005	408.67203	594325.	2960573.	05102906
HIGH 1-Hour					
	2001	566.27161	593800.	2960800.	01081820
	2002	550.58459	593800.	2960900.	02070803
	2003	575.60150	593800.	2960800.	03090205
	2004	559.52777	593800.	2960900.	04062801
	2005	586.39111	593800.	2960900.	05080122

All receptor computations reported with respect to a user-specified origin
GRID 0.00 0.00
DISCRETE 0.00 0.00

```
CO STARTING
   TITLEONE 2001 FPL RBEC AUX BOILER  12/31/08
   TITLETWO GENERIC (10 g/s) EMISSION RATE
   MODELOPT DFAULT CONC NOWARN
   AVERTIME PERIOD 24 8 3 1
   POLLUTID GEN
   RUNORNOT RUN
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION AUXBLR POINT 594222.920 2960769.070 1.000

** Source Parameters **
   SRCPARAM AUXBLR 10.0 18.3 419.87 25.1 0.838

** Building Downwash **
SO BUILDHGT AUXBLR     23.17   23.17   29.57   23.17   29.57   23.47
SO BUILDHGT AUXBLR     23.47   23.47   23.47   23.47   23.47   23.47
SO BUILDHGT AUXBLR     23.47   23.17   23.17   23.17   23.17   23.17
SO BUILDHGT AUXBLR     23.17   23.17   23.17   23.17    0.00   23.47
SO BUILDHGT AUXBLR     23.47   23.47   23.47   23.47   23.47   23.47
SO BUILDHGT AUXBLR     23.47   23.17   29.57   23.17   23.17   23.17
SO BUILDWID AUXBLR     20.73   27.91   19.15   39.53   17.13   29.09
SO BUILDWID AUXBLR     29.43   28.87   27.43   28.87   29.43   29.09
SO BUILDWID AUXBLR     27.87   39.53   34.24   27.91   20.73   12.92
SO BUILDWID AUXBLR     20.73   27.91   34.24   39.53    0.00   29.09
SO BUILDWID AUXBLR     29.43   28.87   27.43   28.87   29.43   29.09
SO BUILDWID AUXBLR     27.87   39.53   19.15   27.91   20.73   12.92
SO BUILDLEN AUXBLR     47.64   47.73   15.33   43.61   18.42   22.95
SO BUILDLEN AUXBLR     19.41   15.27   10.67   15.27   19.41   22.95
SO BUILDLEN AUXBLR     25.81   43.61   46.38   47.73   47.64   46.09
SO BUILDLEN AUXBLR     47.64   47.73   46.38   43.61    0.00   22.95
SO BUILDLEN AUXBLR     19.41   15.27   10.67   15.27   19.41   22.95
SO BUILDLEN AUXBLR     25.81   43.61   15.33   47.73   47.64   46.09
SO XBADJ    AUXBLR    -66.87  -64.94  -80.56  -55.26  -83.51   37.84
SO XBADJ    AUXBLR    -54.21 -101.15 -101.95 -104.43 -103.73  -60.07
SO XBADJ    AUXBLR    -57.75   11.74   14.72   17.25   19.26   20.69
SO XBADJ    AUXBLR     19.24   17.21   14.65   11.65    0.00  -60.79
SO XBADJ    AUXBLR     34.81   40.73   45.42   43.96   41.16   37.12
SO XBADJ    AUXBLR     31.95  -55.35  -80.63  -64.98  -66.90  -66.78
SO YBADJ    AUXBLR     -7.66  -15.02   16.97  -28.16   -8.99  -17.58
SO YBADJ    AUXBLR     26.09   26.08    9.45   -7.47  -24.17  -17.33
SO YBADJ    AUXBLR    -25.50  -28.06  -21.81  -14.89   -7.53    0.07
SO YBADJ    AUXBLR      7.66   15.02   21.93   28.16    0.00   17.58
SO YBADJ    AUXBLR    -26.09  -17.96   -9.29   -0.34    8.62   17.33
SO YBADJ    AUXBLR     25.50   28.06  -17.03   14.89    7.53   -0.07

   SRCGROUP ALL

SO FINISHED
**
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** ISCST3 Receptor Pathway
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**
**
RE STARTING
   INCLUDED RIVFHCS.ROU
RE FINISHED
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** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE C:\amodmet\PBIMIA01.SFC
```

```
   PROFFILE C:\amodmet\PBIMIA01.PFL
   SURFDATA 12844 2001 WEST_PALM_BEACH/INT'L_ARPT
   UAIRDATA 92803 2001 MIAMI/FIU
   PROFBASE 19 FEET
ME FINISHED
**
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** AERMOD Output Pathway
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**
**
OU STARTING
   RECTABLE ALLAVE FIRST
OU FINISHED
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APPENDIX 10.2.6

AIR OPERATION PERMIT

NOTE: The existing Riviera Plant is authorized to operate under Final Title V Permit No. 0990042-004-AV issued by FDEP effective January 1, 2009. Once RBEC becomes operational, a Title V revision will be requested for the converted Plant. The application for the Title V revision for RBEC will be submitted pursuant to the FDEP rules in 62-213.420 Florida Administrative Code.

The Clean Air Interstate Rule (CAIR) part of the Title V Permit (0990042-005-AV) was issued as draft/proposed filed January 20, 2009.

APPENDIX 10.2.7

COASTAL ZONE MANAGEMENT CERTIFICATIONS

NOTE: The Florida Coastal Management Act (§380.205-380.27, Florida Statutes) requires that the Coastal Zone Management Section of FDEP be responsible for certification of consistency with the Florida Coastal Management Program (FCMP) for all federal licenses, permits, activities, and projects listed in §380.23(3)(c), Florida Statutes, when such activities are subject to federal consistency review and affect land or water use, are seaward of the jurisdiction of the state, or there is no state agency with sole jurisdiction for such consistency review. The issuance of federal permits listed in §380.23(3)(c), Florida Statutes is not required for this Project. Nonetheless, issuance of the final Site Certification constitutes consistency with the Federal Coastal Zone Management Act.

APPENDIX 10.2.8

OTHER FEDERAL PERMITS OR APPROVALS

U.S. FISH AND WILDLIFE SERVICE

DEPREDATION
PERMIT NO. MB135540-0

DEPARTMENT OF THE INTERIOR
U S FISH AND WILDLIFE SERVICE

3-201
(1/97)

FEDERAL FISH AND WILDLIFE PERMIT

2 AUTHORITY-STATUTES
16 USC 703-712

REGULATIONS *(Attached)*
50 CFR Part 13
50 CFR 21 41

1 PERMITTEE

FLORIDA POWER AND LIGHT COMPANY
700 UNIVERSE BOULEVARD
JUNO BEACH, FL 33408
U S A

3 NUMBER
MB135540-0

4 RENEWABLE
☒ YES
☐ NO

5 MAY COPY
☒ YES
☐ NO

6. EFFECTIVE
04/01/2008

7 EXPIRES
03/31/2009

8 NAME AND TITLE OF PRINCIPAL OFFICER *(If #1 is a business)*
STACY M FOSTER
SENIOR ENVIRONMENTAL SPECIALIST

9 TYPE OF PERMIT
DEPREDATION

10 LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED
Service territory in Florida

11 CONDITIONS AND AUTHORIZATIONS:

A GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2 ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORD WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY, OR RENEWAL OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS

B THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN STATE LOCAL OR OTHER FEDERAL LAW

C VALID FOR USE BY PERMITTEE NAMED ABOVE

D. You are authorized to take (relocate) in emergency situations throughout the State of Florida active migratory bird nests (except endangered or threatened species or bald and golden eagles) when birds, nests and eggs are posing a direct threat to human health and safety or when the safety of the bird is at risk if the nest and/or birds are not removed.

E. The following subpermittees are authorized: any other person who is (1) employed by or under contract to you for the activities specified in this permit, or (2) otherwise designated a subpermittee by you in writing, may exercise the authority of this permit

F You and any subpermittees must comply with the attached Standard Conditions for Migratory Bird Depredation Permits.

For suspected illegal activity, immediately contact USFWS Law Enforcement at: 352-429-1037.

☒ ADDITIONAL CONDITIONS AND AUTHORIZATIONS ALSO APPLY

12 REPORTING REQUIREMENTS
ANNUAL REPORT DUE: 1/31

ISSUED BY	TITLE	DATE
Cormon P. Simonton	PERMITS ADMINISTRATOR-REGION 4 MIGRATORY BIRD PERMIT PROGRAM	05/20/2008

Standard Conditions
Migratory Bird Depredation Permits
50 CFR 21.41

All of the provisions and conditions of the governing regulations at 50 CFR part 13 and 50 CFR part 21.41 are conditions of your permit. The standard conditions below are additional provisions and conditions of your permit. Failure to comply with the conditions of your permit could be cause for suspension of the permit. If you have questions regarding these conditions, refer to the regulations or, if necessary, contact your migratory bird permit issuing office. For copies of the regulations and forms, or to obtain contact information for your issuing office, visit: www.fws.gov/permits/mbpermits/birdbasics.html.

1. To minimize the lethal take of migratory birds, you are required to continually apply non-lethal methods of harassment in conjunction with lethal control.

2. Shotguns used to take migratory birds can be no larger than 10-gauge and must be fired from the shoulder. You must use nontoxic shot listed in 50 CFR 20.21(j).

3. You may not use blinds, pits, or other means of concealment, decoys, duck calls, or other devices to lure or entice migratory birds into gun range.

4. You are not authorized to take, capture, harass, or disturb bald eagles or golden eagles, or species listed as threatened or endangered under the Endangered Species Act found in 50 CFR 17, without additional authorization.

   For a list of threatened and endangered species in your state, visit the U.S. Fish and Wildlife Service's Threatened and Endangered Species System (TESS) at: www.fws.gov/endangered.

5. If you encounter a migratory bird with a Federal band issued by the U.S. Geological Survey Bird Banding Laboratory, Laurel, MD, report the band number to 1-800-327-BAND or www.reportband.gov.

6. This permit does not authorize take or release of any migratory birds, nests, or eggs on Federal lands without additional prior written authorization from the applicable Federal agency.

7. This permit does not authorize take or release of any migratory birds, nests, or eggs on State lands or other public or private property without prior written permission or permits from the landowner or custodian.

8. Unless otherwise specified on the face of the permit, migratory birds, nests, or eggs taken under this permit must be:
   (a) turned over to the U.S. Department of Agriculture for official purposes,
   (b) donated to a public educational or scientific institution as defined by 50 CFR 10, or
   (c) completely destroyed by burial or incineration.

9. Subpermittees must be at least 18 years of age. As the permittee, you are legally responsible for ensuring that your subpermittees are adequately trained and adhere to the terms of your permit. You are responsible for maintaining current records of who you have designated as a subpermittee, including copies of letters you have provided.

10. You and any subpermittees must carry a legible copy of this permit and display it upon request whenever you are exercising its authority.

11. You must maintain records as required in 50 CFR 13.46 and 50 CFR 21.41. All records relating to the permitted activities must be kept at the location indicated in writing by you to the migratory bird permit issuing office.

12. Acceptance of this permit authorizes the U.S. Fish and Wildlife Service to inspect any wildlife held, and to audit or copy any permits, books, or records required to be kept by the permit and governing regulations.

13. You may not conduct the activities authorized by this permit if doing so would violate the laws of the applicable State, county, municipal or tribal government or any other applicable law.

(DPRD - 4/7/2008)

U.S. FISH AND WILDLIFE SERVICE

SPECIAL PURPOSE SALVAGE
PERMIT NO. MB697722-0

DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE

3-201
(1/97)

FEDERAL FISH AND WILDLIFE PERMIT

1 PERMITTEE

FLORIDA POWER AND LIGHT COMPANY
700 UNIVERSE BOULEVARD
JUNO BEACH, FL 33408

2 AUTHORITY-STATUTES
16 USC 703-712

REGULATIONS *(Attached)*
50 CFR Part 13
50 CFR 21.27

3 NUMBER
MB697722-0

4 RENEWABLE
☒ YES
☐ NO

5 MAY COPY
☒ YES
☐ NO

6 EFFECTIVE
04/01/2006

7 EXPIRES
03/31/2009

8 NAME AND TITLE OF PRINCIPAL OFFICER *(If #1 is a business)*
JAMES R LINDSAY
PRINCIPAL ENVIRONMENTAL SPECIALIST

9 TYPE OF PERMIT
SPECIAL PURPOSE SALVAGE

10 LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED
SAME AS ABOVE

11 CONDITIONS AND AUTHORIZATIONS:

A GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2 ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORD WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY, OR RENEWAL, OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS

B THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN STATE LOCAL OR OTHER FEDERAL LAW

C VALID FOR USE BY PERMITTEE NAMED ABOVE

D You are authorized to salvage migratory birds found dead that you had no part in the killing or death thereof. You are also authorized to salvage abandoned nests and addled eggs after the nesting season. These authorizations do not apply to bald and/or golden eagles or to threatened or endangered species

E. Dead bald or golden eagles must be reported immediately to the National Eagle Repository at 303-287-2110. The Repository will provide directions for shipment of these birds

F Specimens are to be destroyed by incineration or burial

G. Authorized to possess live migratory birds for the purpose of transporting to a State and Federally permitted rehabilitator

H You must comply with the attached Standard Conditions for Special Purpose - Salvage.

I. Any person who is under the direct control of the permittee, or who is employed by or under contract to the permittee for purposes authorized by this permit, may carry out the activity authorized by this permit.

J. Direct control of the permittee means that the permittee and the subpermittee has entered into an identifiable relationship where there is evidence that the permittee has relayed instructions outlining the authority given to the subpermittee for activities authorized by this permit.

☒ ADDITIONAL CONDITIONS AND AUTHORIZATIONS ALSO APPLY

12 REPORTING REQUIREMENTS
ANNUAL REPORT DUE: 01/31

ISSUED BY	TITLE	DATE
Carmen P. Smith	FOR: ARD-MIGRATORY BIRDS & STATE PROGRAMS	06/13/2006

For suspected illegal activity, immediately contact USFWS, Law Enforcement at: St Petersburg Florida at 727-570-5398 or Miami, Florida at 305-526-2610

Standard Conditions
Special Purpose - Salvage
50 CFR 21.27

All of the provisions and conditions of the governing regulations at 50 CFR part 13 and 50 CFR 21.27 are conditions of your permit. The standard conditions below are additional provisions and conditions of your permit. Failure to comply with the conditions of your permit could be cause for suspension of the permit. If you have any questions regarding these conditions, refer to the regulations or, if necessary, contact your issuing migratory bird permit office. For copies of the regulations and forms, or to obtain contact information for your migratory bird permit office, visit: http://www.permits.fws.gov/mbpermits/birdbasics.html

1. You, and any subpermittees, must carry a legible copy of this permit and display it upon request whenever you are exercising its authority.

2. You may not exercise the authorization granted by this permit contrary to the laws of the applicable state, county, municipal, tribal, or foreign government or any other applicable laws.

4 You must maintain records as required by 50 CFR 13.46 and 50 CFR 21.27.

5. You must keep all records relating to the permitted activities at the location identified in writing by you to the issuing office.

6. Carcasses unsuitable for donation must be completely destroyed by burial or incineration.

7. This permit **DOES NOT** authorize salvage of specimens on federal lands without additional written authorization from the applicable federal agency.

   This permit **DOES NOT** authorize salvage of specimens on state lands or other public or private property without written permission or permits from landowner or custodian.

8. Within 48 hours report to the issuing office if any threatened or endangered species as listed in 50 CFR 17, and/or bald or golden eagles have been salvaged.

9. Immediately report any carcasses found in a situation indicating poisoning or criminal activity. These should not be salvaged, but reported immediately to state and federal wildlife law enforcement authorities.

10. You must tag each bird you salvage. Each tag must have the following information: (a) date and location the specimen was salvaged; (b) name of the person who salvaged the specimen; and (c) the permit number under which the specimen was salvaged.

11. All birds salvaged under this authorization must be deposited with the designated repository as indicated on the face of this permit within six (6) months of acquisition. Any migratory bird carcasses that are sent to a taxidermist must be returned to the designated repository for final disposition. All birds salvaged during any calendar year must be deposited with the repository by December 31 of that calendar year. **This permit does not allow personal possession of any birds salvaged** under the authority of this permit.

12. Acceptance of this permit authorizes inspection in accordance with 50 CFR 13.47. (9/12/2005)

U.S. FISH AND WILDLIFE SERVICE

SPECIAL PURPOSE SALVAGE
PERMIT NO. MB697722-1

DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE

3-201
(1/97)

FEDERAL FISH AND WILDLIFE PERMIT

1 PERMITTEE

FLORIDA POWER AND LIGHT COMPANY
700 UNIVERSE BOULEVARD
JUNO BEACH, FL 33408

2 AUTHORITY-STATUTES
16 USC 703-712

REGULATIONS *(Attached)*
50 CFR Part 13
50 CFR 21 27

3 NUMBER
MB697722-1 AMENDMENT

4 RENEWABLE
☒ YES
☐ NO

5 MAY COPY
☒ YES
☐ NO

6 EFFECTIVE
07/28/2006

7 EXPIRES
03/31/2009

8 NAME AND TITLE OF PRINCIPAL OFFICER *(If #1 is a business)*
JAMES R LINDSAY
PRINCIPAL ENVIRONMENTAL SPECIALIST

9 TYPE OF PERMIT
SPECIAL PURPOSE SALVAGE

10 LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED
SAME AS ABOVE

11 CONDITIONS AND AUTHORIZATIONS:

A GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2 ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORD WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY, OR RENEWAL OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS. INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS

B THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN STATE LOCAL OR OTHER FEDERAL LAW

C VALID FOR USE BY PERMITTEE NAMED ABOVE

D You are authorized to salvage migratory birds found dead that you had no part in the killing or death thereof. You are also authorized to salvage abandoned nests and addled eggs after the nesting season.

E. Dead bald or golden eagles must be reported immediately to the National Eagle Repository at 303-287-2110 The Repository will provide directions for shipment of these birds

F Specimens are to be destroyed by incineration or burial.

G Authorized to possess live migratory birds for the purpose of transporting to a State and Federally permitted rehabilitator.

H You must comply with the attached Standard Conditions for Special Purpose - Salvage

I. Any person who is under the direct control of the permittee, or who is employed by or under contract to the permittee for purposes authorized by this permit may carry out the activity authorized by this permit.

J. Direct control of the permittee means that the permittee and the subpermittee has entered into an identifiable relationship where there is evidence that the permittee has relayed instructions outlining the authority given to the subpermittee for activities authorized by this permit
For suspected illegal activity, immediately contact USFWS, Law Enforcement at: Clermont, Florida at 352-429-1037 or Miami, Florida at 305-526-2610.

☒ ADDITIONAL CONDITIONS AND AUTHORIZATIONS ALSO APPLY

12 REPORTING REQUIREMENTS
ANNUAL REPORT DUE: 01/31

ISSUED BY	TITLE	DATE
Carmen P. Smarda	FOR: ARD-MIGRATORY BIRDS & STATE PROGRAMS	07/28/2006

Standard Conditions
Special Purpose - Salvage
50 CFR 21.27

All of the provisions and conditions of the governing regulations at 50 CFR part 13 and 50 CFR 21.27 are conditions of your permit. The standard conditions below are additional provisions and conditions of your permit. Failure to comply with the conditions of your permit could be cause for suspension of the permit. If you have any questions regarding these conditions, refer to the regulations or, if necessary, contact your issuing migratory bird permit office. For copies of the regulations and forms, or to obtain contact information for your migratory bird permit office, visit: http://www.permits.fws.gov/mbpermits/birdbasics.html

1 You, and any subpermittees, must carry a legible copy of this permit and display it upon request whenever you are exercising its authority.

2. You may not exercise the authorization granted by this permit contrary to the laws of the applicable state, county, municipal, tribal, or foreign government or any other applicable laws.

4. You must maintain records as required by 50 CFR 13.46 and 50 CFR 21.27.

5. You must keep all records relating to the permitted activities at the location identified in writing by you to the issuing office.

6. Carcasses unsuitable for donation must be completely destroyed by burial or incineration.

7. This permit **DOES NOT** authorize salvage of specimens on federal lands without additional written authorization from the applicable federal agency.

   This permit **DOES NOT** authorize salvage of specimens on state lands or other public or private property without written permission or permits from landowner or custodian.

8. Within 48 hours report to the issuing office if any threatened or endangered species as listed in 50 CFR 17, and/or bald or golden eagles have been salvaged.

9. Immediately report any carcasses found in a situation indicating poisoning or criminal activity. These should not be salvaged, but reported immediately to state and federal wildlife law enforcement authorities.

10. You must tag each bird you salvage. Each tag must have the following information: (a) date and location the specimen was salvaged; (b) name of the person who salvaged the specimen; and (c) the permit number under which the specimen was salvaged

11. All birds salvaged under this authorization must be deposited with the designated repository as indicated on the face of this permit within six (6) months of acquisition. Any migratory bird carcasses that are sent to a taxidermist must be returned to the designated repository for final disposition. All birds salvaged during any calendar year must be deposited with the repository by December 31 of that calendar year. **This permit does not allow personal possession of any birds salvaged** under the authority of this permit.

12. Acceptance of this permit authorizes inspection in accordance with 50 CFR 13.47. (9/12/2005)

FEDERAL AVIATION ADMINISTRATION

DETERMINATION OF NO HAZARD TO AIR NAVIGATION

Federal Aviation Administration
Air Traffic Airspace Branch, ASW-520
2601 Meacham Blvd.
Fort Worth, TX 76137-0520

Aeronautical Study No.
2008-ASO-591-OE

Issued Date: 03/17/2008

Jacquelyn Lorne
Florida Power & Light
700 Universe Blvd.
JES/JB
Juno Beach, FL 33408

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Stack Unit 3 and 4 Stacks at Riviera Power Plant
Location:	Riviera Beach, FL
Latitude:	26-45-55.62N NAD 83
Longitude:	80-03-08.54W
Heights:	309 feet above ground level (AGL)
	318 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is marked and/or lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, a med-dual system - Chapters 4,8(M-Dual),&12.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

This aeronautical study included evaluation of a structure that exists at this time. Action will be taken to ensure aeronautical charts are updated to reflect the most current coordinates, elevation and height as indicated in the case description.

A copy of this determination will be forwarded to the Federal Communications Commission if the structure is subject to their licensing authority.

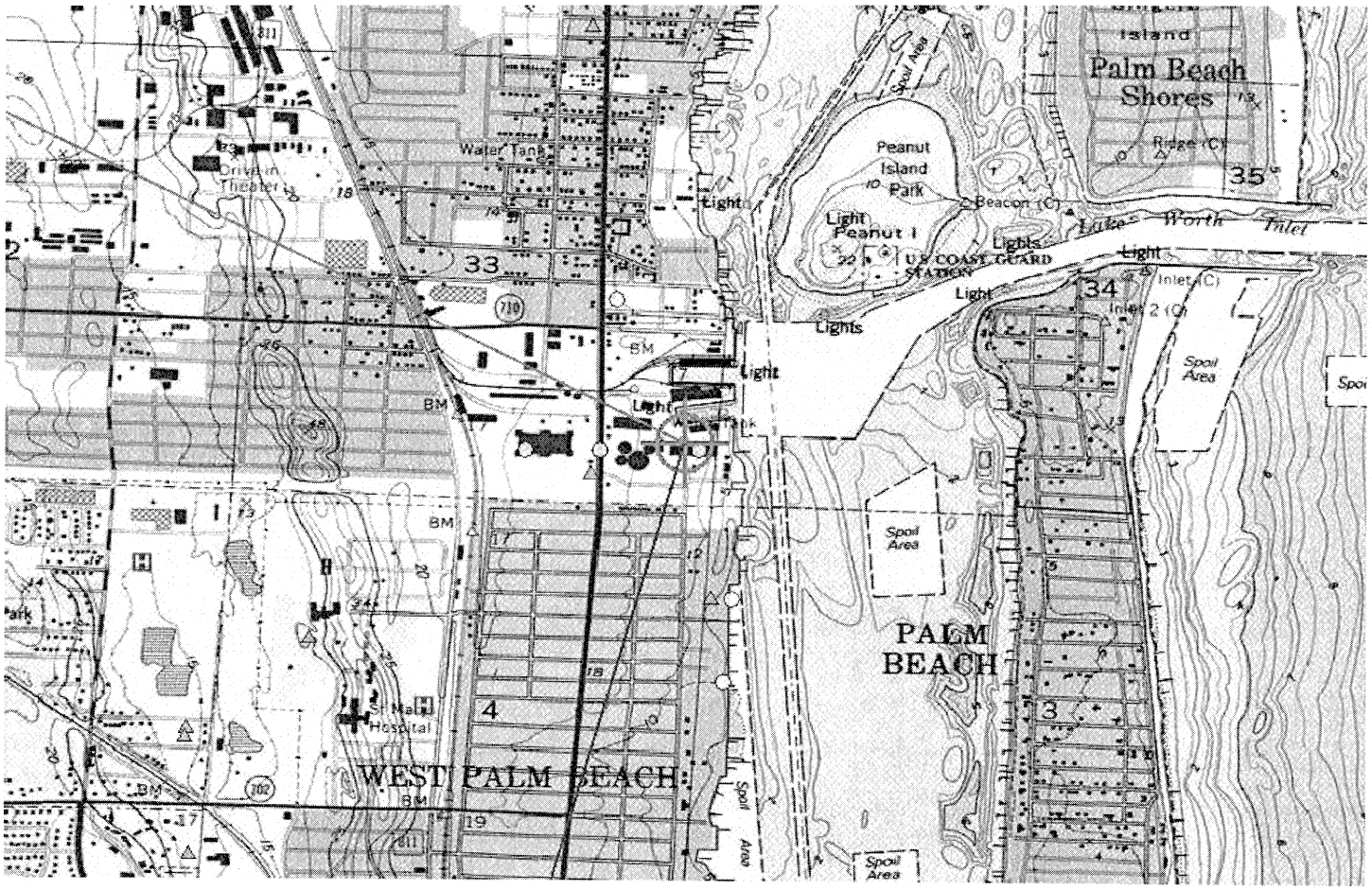
If we can be of further assistance, please contact our office at (770) 909-4329. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2008-ASO-591-OE.

Signature Control No: 559389-101860838 (DNE)
Michael Blaich
Specialist

Attachment(s)
Map(s)

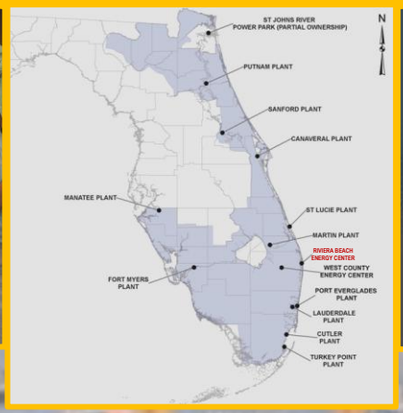
cc: NACO w/map 12-001066

Verified Map for ASN 2008-ASO-591-OE



Riviera Beach

Energy Center



Site Certification Application

Volume III of III

February 2009

FPL

SITE CERTIFICATION APPLICATION
RIVIERA BEACH ENERGY CENTER

VOLUME 3 OF 3

Submitted by:

Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408

February 2009

0838-7633

Kennard F. Kosky, P.E.
Professional Registered Engineer No. 14996

Golder Associates Inc.*
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500

*** Board of Professional Engineers**
Certificate of Authorization No. 00001670

SEAL

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ACRONYMS AND ABBREVIATIONS

AAQS	ambient air quality standards
ABI	Applied Biology Inc.
ANSI	American National Standards Institute
APPZ	Avon Park Permeable Zone
BACT	Best Available Control Technology
BBtu/hr	billion British thermal units per hour
BMP	Best Management Practice
Btu/kWh	British thermal unit per kilowatt hour
Btu/lb	British thermal unit per pound
Btu/scf	British thermal unit per standard cubic foot
°C	degrees Celsius
CAA	Clean Air Act
CadnaA	Computer Aided Noise Abatement
C&D	construction and demolition
CEM	continuous emission monitoring
CFR	Code of Federal Regulations
cfs	cubic feet per second
cf/yr	cubic foot per year
CLG	Certified Local Government
CO	carbon monoxide
CO_2	carbon dioxide
CPUE	catch per unit effort
CRA	Community Redevelopment Area
CT	combustion turbine
dB	decibel
dBA	A-weighted decibel
DHR	Division of Historical Resources
DLN	dry low-NO_x
DO	dissolved oxygen
EAI	Ecological Associates, Inc.
ECRWRF	East Central Regional Water Reclamation Facility
EDTA	ethylene diamine tetra-acetic acid
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ERP	Environmental Resource Permit
°F	degrees Fahrenheit
F.A.C.	Florida Administrative Code
FAS	Floridan Aquifer System
FCREPA	Florida Committee on Rare and Endangered Plants and Animals
FDACS	Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection

FDHR	Florida Division of Historical Resources
FEMA	Federal Emergency Management Agency
FFWCC	Florida Fish and Wildlife Conservation Commission
FGT	Florida Gas Transmission
FIND	Florida Inland Navigation District
FLUCFCS	Florida Land Use, Cover and Forms Classification System
FMSF	Florida Master Site File
FNAI	Florida Natural Area Inventory
FP	fibropapillomatosis
FPL	Florida Power & Light Company
FPSC	Florida Public Service Commission
FR	Federal Register
F.S.	Florida Statutes
ft^2/day	square feet per day
ft-bgs	feet below ground surface
ft-msl	feet above mean sea level
g/bhp-hr	grams per brake horsepower-hour
GHG	greenhouse gas
GLO	General Land Office
gpm	gallons per minute
gr/100 scf	grains per 100 standard cubic feet
H_2SO_4	sulfuric acid
HAP	hazardous air pollutant
HHV	high heating value
hp	horsepower
hr/yr	hour per year
HRSG	heat recovery steam generator
Hz	hertz
ICU	Intermediate Confining Unit
IRG	Inwater Research Group
KMIA	NWS station at Miami International Airport
KPBI	NWS station at Palm Beach International Airport
kg	kilogram
km	kilometer
kV	kilovolt
kW	kilowatt
lb/hr	pound per hour
lb/MW-hr	pound per megawatt-hour
lb/MMBtu	pound per million British thermal units
LEED	Leadership in Energy and Environmental Design
LFA	Lower Floridan Aquifer
LHV	low heating value

m	meter
MACT	maximum achievable control technology
MCU	Middle Confining Unit
MGD	million gallons per day
mg/L	milligrams per liter
MMBtu/hr	million British thermal units per hour
MMcf/hr	million cubic feet per hour
mph	miles per hour
MPS	Mitsubishi Power Systems
MSGP	Multi-sector Generic Permit
MSW	municipal solid waste
MW	megawatt
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NGVD	national geodetic vertical datum
NO_2	nitrogen dioxide
NOI	Notice of Intent
NOT	Notice of Termination
NO_x	nitrogen oxides
NOAA	National Oceanic and Atmospheric Administration
NP	National Park
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NSPS	New Source Performance Standards
NWA	National Wilderness Area
NWS	National Weather Service
O_2	oxygen
O_3	ozone
OSHA	Occupational Safety and Health Administration
Pb	lead
PBCERM	Palm Beach County Department of Environmental Resources Management
PEP	Partnership for Ecosystem Protection
PM	particulate matter
$PM_{2.5}$	particulate matter with an aerodynamic diameter of 2.5 micrometers or less
PM_{10}	particulate matter with an aerodynamic diameter of 10 micrometers or less
POTW	privately owned treatment works
ppm	parts per million
ppmvd	parts per million by volume dry
PPSA	Power Plant Siting Act
ppt	parts per thousand
PSD	prevention of significant deterioration
PVC	polyvinyl chloride

QA/QC	quality assurance/quality control
RBEC	Riviera Beach Energy Center
RICE	reciprocating internal combustion engines
RO/MB	reverse osmosis/mixed bed
SAS	surficial aquifer system
SCA	Site Certification Application
scf/yr	standard cubic foot per year
SCR	selective catalytic reduction
SCRAM	Support Center for Regulatory Air Models
SFHA	Special Flood Hazard Area
SFWMD	South Florida Water Management District
SHPO	State Historic Preservation Office
SO_2	sulfur dioxide
SPL	sound pressure level
SRPP	Strategic Regional Policy Plan
SWPPP	Stormwater Pollution Prevention Plan
TDS	total dissolved solids
TPY	ton per year
TTN	Technology Transfer Network
UFA	Upper Floridan Aquifer
UF/BEBR	University of Florida, Bureau of Economic and Business Research
$\mu g/m^3$	micrograms per cubic meter
µm	micrometer
µPa	micropascal
µS/cm	microsiemens per centimeter
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VAMC	Veterans Administration Medical Center
VOC	volatile organic compound
vph	vehicle per hour

SCA DEFINITIONS

1. "Riviera Plant" or "existing Plant" – refers to the existing Florida Power & Light Company (FPL) power plant, including Units 3 and 4 and support facilities, located on the existing Site.

2. "Riviera Plant Site" or "existing Site" – refers to the approximately 46 acres of FPL-owned property: approximately 39 acres east of U.S. Highway 1 (including submerged lands and intake culvert and oil pipeline easements) and approximately 7 acres west of U.S. Highway 1 containing transmission lines.

3. "Riviera Beach Energy Center" or "RBEC" or "converted Plant" – refers to the proposed combined cycle generating unit and support facilities to be constructed and operated on a portion of the existing Site (i.e., on FPL-owned property east of U.S. Highway 1).

4. "Riviera Beach Energy Center Project" or "Project" – refers to the entire "Project" for which FPL seeks certification, including dismantlement of the existing Plant, construction of the converted Plant, the construction parking and laydown area, certain transmission-related activities, and the manatee viewing center.

5. "Riviera Beach Energy Center Site" or "Site" – refers to the property on which the converted Plant will be located, as the Site to be certified for the Riviera Beach Energy Center (i.e., 39 contiguous acres including leased submerged lands and intake culvert and oil pipeline easements).

6. "Power Block" – refers to the area that will be occupied by the proposed combined cycle unit that includes three combustion turbines/heat recovery steam generators (CTs/HRSGs), steam turbine generator, fuel heater, auxiliary boiler, emergency generators, and fire pump engine.

7. "Construction support area" – refers to the FPL-owned property located on the southern portion of the existing Site. This area will be used for temporary construction parking and office trailers during construction of the Project.

8. "Construction parking and laydown area" – refers to the 7 acres of FPL-owned property located to the west of U.S. Highway 1 across from the Site. This area will be used during construction of the Project for parking and construction laydown.

9. "Construction" – refers to work to be performed as part of the Project, including dismantlement of existing Plant facilities, as well as construction of the converted Plant, the construction parking and laydown area, certain transmission-related activities, and the manatee viewing center.

10. "Dismantlement" – refers to all activities associated with the removal of existing Riviera Plant facilities.

11. "Manatee embayment" – refers to the area previously used for the Units 1 and 2 discharge and which now is and in the future will receive a small portion of the once-through cooling water discharge from Units 3 and 4 for the manatees.

12. "Manatee viewing center" – refers to a manatee viewing area (overlooking the manatee embayment), a parking area, and a building for public access to be constructed and operated on the southern portion of the existing Site.. The parking area and building will be located in the portion of the Site to be used for the construction support area.

APPENDIX 10.3

ZONING DESCRIPTIONS

RESOLUTION NO. 124-08

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF RIVIERA BEACH, PALM BEACH COUNTY, FLORIDA, APPROVING A SITE PLAN APPLICATION FROM FLORIDA POWER AND LIGHT (FPL) FOR A NATURAL GAS POWER PLANT AND A 23,700 SQUARE FOOT ADMINISTRATION/CONTROL BUILDING WITH 50 PARKING SPACES TO BE LOCATED ON A 25.46 ACRE SITE AT 300 BROADWAY, RIVIERA BEACH, FLORIDA, IN THE UTILITY ZONING DISTRICT.

WHEREAS, the Florida Power & Light Company (FPL) seeks to convert the existing Riviera Beach Power Plant into a Natural Gas Power Plant; and

WHEREAS, the existing generators at the Power Plant went into operation in 1962 and 1963; and

WHEREAS, converting the Power Plant to a Natural Gas facility will generate more electricity with a lower emissions rate; and

WHEREAS, the Community Redevelopment Agency Board met on August 13, 2008 to review the site plan application and found that it was consistent with the adopted Redevelopment Plan and recommended approval; and

WHEREAS, the City Council finds that the proposed site plan is consistent with adopted City of Riviera Beach Comprehensive Plan and the Land Development Code.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF RIVIERA BEACH, PALM BEACH COUNTY, FLORIDA AS FOLLOWS:

SECTION 1. The site plan application from the Florida Power and Light Company for the conversion of the Riviera Beach Power Plant is approved with the following conditions:

1. The site plan and approved use shall be vested for development upon the receipt of a Final Order granting certification pursuant to the Florida Electric Power Plant Siting Act (PPSA). FPL shall record a copy of the Final Site Plan approved by the Siting Board in the public records of the City of Riviera Beach prior to commencement of development.

2. FPL shall comply with the Florida Building Code for the construction of the administration portion of the administration/warehouse/control building.

3. At least thirty (30) days prior to recording the Final Site Plan, FPL shall submit a construction coordination plan to the City to address issues such as fire coordination, demolition coordination, traffic coordination and inspections.

4. The building permit and impact fees associated with the administrative portion of the administration/warehouse/control room shall be paid by FPL within 30 days of recording the Final Site Plan.

5. FPL shall complete the landscaping on the site plan within 90 days of the commercial operation date of the Riviera Beach Clean Energy Center.

6. All future advertising must state that the development is in the City of Riviera Beach. A fine of $500 per day will be levied against the property owner for violation of this condition.

SECTION 2. This resolution shall take effect immediately upon its approval and passage.

PASSED and APPROVED this 1 **day of** October**, 2008.**

THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK

RESOLUTION NO. 124-08
PAGE 3

APPROVED:

THOMAS A. MASTERS
MAYOR

CEDRICK A. THOMAS
CHAIRPERSON

ATTEST:

CARRIE E. WARD
MASTER MUNICIPAL CLERK
CITY CLERK

DAWN S. PARDO
CHAIR PRO TEM

JUDY L. DAVIS
COUNCILPERSON

LYNNE L. HUBBARD
COUNCILPERSON

SHELBY L. LOWE
COUNCILPERSON

MOTIONED BY: D. PARDO

SECONDED BY: L. HUBBARD

C. THOMAS	aye
D. PARDO	aye
J. DAVIS	aye
L. HUBBARD	aye
S. LOWE	aye

REVIEWED AS TO LEGAL SUFFICIENCY

PAMALA HANNA RYAN, CITY ATTORNEY

DATE: 9/24/08

PLANNING AND ZONING DEPARTMENT
P.O. Box 3366
West Palm Beach, Florida 33402
Telephone: (561) 822-1435
Fax: (561) 822-1460
Zoning Division

The City of West Palm Beach

"The Capital City of the Palm Beaches"

December 10, 2008

Florida Power & Light
Attn: Chuck Millar
700 Universe Blvd. JB/Law
Juno Beach, Florida 33408

Re: Zoning Verification – 5904 North Flagler Drive, West Palm Beach, FL (PCNs 74-43-43-04-02-000-0010, 74-43-43-04-01-000-0760 & 74-43-43-04-06-038-0010)

Dear Mr. Millar:

This letter is written to confirm that the three parcels generally located at 5904 North Flagler Drive (PCNs 74-43-43-04-02-000-0010, 74-43-43-04-01-000-0760 & 74-43-43-04-06-038-0010) are currently zoned Multifamily High Density ("MF32") Residential, and have a Multifamily ("MF") Future Land Use designation.

Please refer to the attached section from the Permitted Use Table that shows the zoning districts where temporary offices for construction are allowed. Further information may be obtained from the Zoning and Land Development Regulations ("ZLDRs") available online at www.municode.com or at the City of West Palm Beach Planning and Zoning Department's website at www.cityofwpb.com/plan/index.htm.

If you have any further questions, please do not hesitate contact me at (561) 822-1435.

Sincerely,

Eric Schneider, AICP
Principal Planner

08-057

TABLE IX-1
PERMITTED USE TABLE

USES		SF3–SF11	SF14	MF14	MF20	MF32	OC	POR	AC	NC	GC	CM	CC2	IND	ROS	CS	W	NMUD
157.	TEMPORARY OFFICES AND FACILITIES FOR CONSTRUCTION, STORAGE/SECURITY	PXR	PXR	PXR	PXR	PXR	PXR	PXR	PXR	PXR	PXR	PXR	PXR	PXR	PXR	PXR	PXR	PXR

Section 94-273(d)74:

TEMPORARY OFFICES AND FACILITIES FOR CONSTRUCTION, STORAGE AND SECURITY (PXR: See Item 157, Table IX-1).

a. Additional application requirements. None.

b. Additional standards.

1. Temporary construction offices, storage buildings, trailers, and watchmen's quarters shall be permitted to expedite construction on the property on which located.

2. All such structures, including trailers, shall be removed within seven days of the final construction inspection by the city and prior to the issuance of a certificate of occupancy.

Return to: (enclose self-addressed stamped envelope)

Name

Address:

SEP-27-1993 3:06PM 93-307536
ORB 7902 Pg 1247
Con 675,000.00 Doc 4,725.00

Property Appraisers Parcel Identification (Folio) Number(s):

Grantees Address Furnished

Return to:
Jay W. Molyneaux
Land Resources Investment Co.
11770 U.S. Highway 1 or P.O. Box 088801
North Palm Beach, FL 33408-8801

Prepared by:
George U. Lane
General Services Administration
Office of Regional Counsel
GSA, Region IV, Atlanta, GA
4-U-FL-922

QUITCLAIM DEED

THIS INDENTURE, made this 21st day of September 1993, between the UNITED STATES OF AMERICA, acting by and through the Administrator of General Services, under and pursuant to the powers and authority contained in the provisions of the Federal Property and Administrative Services Act of 1949, approved June 30, 1949 (P.L. 81-152), as amended (40 U.S.C. 484), and regulations and orders promulgated thereunder, Grantor, and LAND RESOURCES INVESTMENT CO. of North Palm Beach, Florida, Grantee.

WITNESSETH:

That the Grantor, for and in consideration of the sum of SIX HUNDRED SEVENTY FIVE THOUSAND AND NO/100 DOLLARS ($675,000.00), cash in hand paid and receipt of which is hereby acknowledged, has remised, released, and forever quitclaimed and by these presents does remise, release and forever quitclaim unto the Grantee its successors and assigns, all right, title, interest, claim and demand which the said Grantor has or may have had in and to that certain parcel of land in Section 3 and 4, Township 43 South, Range 43 East, City of West Palm Beach, Palm Beach County, Florida, and being more particularly described as follows:

COMMENCING at the Southwest corner of Lot 3, Block 38, North Palm Beach Plat No. 3, as recorded in Plat Book 6, Page 39, Public Records, Palm Beach County, Florida, said corner being the Point of Beginning (P.O.B.); thence run Northerly along the Easterly Right-of-Way Line of North Dixie Highway, a distance of 75.02 feet to the Northwest corner of Lot 1, Block 38, said North Palm Beach; thence continue Northerly along said Easterly Right-of-Way Line making a deflection to the East of 00° 13' 30", a distance of 253.39 feet to the North Line of Township 43, South Range 43 East, thence run Easterly along said North Line of Township 43 South, making an angle with the preceding course of 90° 03' 00" as turned from South to East, a distance of 581.20 feet to the intersection with the City of West Palm Beach 1963 Bulkhead line as recorded in Plat Book 27, Pages 231-239; thence run Southerly along said Bulkhead line a distance of 328.13 feet, more or less, to the intersection with the South Line of aforementioned Lot 3, Block 38; thence run Westerly along said South Line, a distance of 585.35 feet, more or less, to the Point of Beginning.

CONTAINING 4.396 acres, more or less.

TOGETHER with all the improvements located on the above described lands and together with all rights, hereditaments, and appurtenances thereto belonging, including the riparian and littoral rights appurtenant thereto, and including all rights, title or interest of the Grantor in and to any alleys, streets, ways, strips or gores abutting or adjoining said lands.

SUBJECT, HOWEVER, to all existing easements, including but not limited to, rights-of-way for highways, pipelines, and public utilities, if any, whether of public record or not.

FURTHER SUBJECT to the following:

a.) Bulkhead line established by the City of West Palm Beach as recorded in Official Record Book 968, at Page 49, and in Plat Book 27, Pages 231 and 239.

b.) Easement as granted to the City of West Palm Beach by Deed dated January 27, 1955, and recorded in Deed Book 1080, at Page 244.

c.) Easement as granted to Southern Bell Telephone and Telegraph Co. by permit dated September 5, 1959, and recorded in Official Record book 102, at Page 251.

d.) Easement as granted to Florida Public Utilities Co., by Deed dated January 12, 1967, and recorded in Official Record Book 1474, at Page 542.

e.) Easement as granted to Florida Power and Light Company, by instrument dated April 5, 1979.

f.) Reservations as set forth in Deed No. 2237 (52350) Corrective, dated December 14, 1962, from the Trustees of the Internal Improvement Fund of the State of Florida, Recorded in Official Record Book 855, page 449, Public Records of Palm Beach County, Florida.

g.) Reservations as contained in Deed dated April 5, 1940, from James Jorgensen and Florence E. Jorgensen, his wife, to J. Kirby Thompkins and Hazel Thompkins, his wife, as recorded in Deed Book 603, page 319, Palm Beach County Records.

TO HAVE AND TO HOLD the same, together with all and singular the appurtenances thereunto belonging or in anywise appertaining, and all the estate, right, title, interest or claim whatsoever of the said Grantor, either in law or in equity.

The property hereby conveyed has heretofore been declared surplus to the needs of the UNITED STATES OF AMERICA, is presently under the jurisdiction of the General Services

ORB 7902 Pg 1250
RECORD VERIFIED DOROTHY H WILKEN
CLERK OF THE COURT - PB COUNTY, FL

Administration as available for disposal and its disposal has been heretofore authorized by the Administrator of General Services acting pursuant to the above referred to laws, regulations and orders.

IN WITNESS WHEREOF, the UNITED STATES OF AMERICA has caused these presents to be executed in its name and on its behalf the day and year first above written.

UNITED STATES OF AMERICA
Acting by and through
Administrator of General Services

WITNESSES:

W. N. Holcombe Jr.
Katherine D. Nichols

By: Betty E. Lemmon
BETTY E. LEMMON
Contracting Officer
Office of Real Estate Sales
General Services Administration
Region IV, Atlanta, Georgia

STATE OF GEORGIA)
)
COUNTY OF FULTON)

This day, before the undersigned, personally appeared BETTY E. LEMMON, to me well known and known to be the person described in and who executed the foregoing instrument of conveyance on behalf of the UNITED STATES OF AMERICA, and acknowledged that she, being thereunto duly authorized as Contracting Officer, Office of Real Estate Sales, General Services Administration, Region 4, Atlanta, Georgia, executed the same for the purposes therein mentioned as the free act and deed of the UNITED STATES OF AMERICA and General Services Administration.

IN WITNESS WHEREOF, I have hereunto affixed my official seal of office in Atlanta, Georgia, this the 21st day of September, 1993.

NANCY L. SELLERS NOTARY PUBLIC DEKALB COUNTY, GEORGIA

Notary Public, DeKalb County, Georgia
My Commission Expires February 27, 1996

Nancy L. Sellers
Nancy L. Sellers
Notary Public
State of Georgia

457600

ARTICLES OF MERGER
Merger Sheet

MERGING:

300002724393--7

LAND RESOURCES INVESTMENT CO., a Florida corporation, 457600

INTO

FLORIDA POWER & LIGHT COMPANY, a Florida corporation, 106395

File date: December 24, 1998

Corporate Specialist: Velma Shepard

APPENDIX 10.4

ENVIRONMENTAL RESOURCE PERMIT

Note: This appendix, presented as part of the Site Certification Application (SCA), provides the substantive requirements related to an ERP for RBEC. The Project involves several components related to the requirements of an ERP. These components are the Nationwide permits for the maintenance, repair, and refurbishment of existing structures and construction of the temporary manatee heating system, the stormwater design for RBEC, and the submerged land lease for an existing discharge structure, and associated submerged land that was filled prior to the ERP requirements. The stormwater management plant is attached to this appendix and addresses the stormwater requirements of Section E.

The construction of RBEC will require the following: 1) repair of existing seawall; 2) repair of stormwater outfalls; 3) intake/discharge structure repair; 4) maintenance dredging of the manatee embayment area; and 5) construction of a temporary manatee heating system.

FPL intends to repair an existing, functioning seawall including placing fill on the landward side of the seawall. This repair is exempt from State Environmental Resource Permit (ERP) requirements pursuant to Rule 62-312.050(1)(j), F.A.C., which allows for seawall restoration is upland areas or within 1 foot waterward of its previous location.

FPL intends to repair or refurbish existing stormwater outfalls or install new outfalls to support RBEC. FPL intends to conduct repair, refurbishment, and maintenance work on the existing intake and discharge structures for the Units 1 through 4. The intake structure for Units 1 and 2 will be temporarily incorporated into the manatee heating system. After construction is complete, the intake and discharge structures for Units 1 and 2 will be closed off at the existing seawall and backfilled. The intake and discharge structures for Units 3 and 4 will remain and be incorporated into RBEC. In accordance with Section 403.813(2)(f), F.S., FPL will also conduct maintenance dredging within the manatee embayment during the Project construction period to restore the area to its historical design depth and enhance the area as a manatee refuge. The dredging required for the replacement of equipment within the intake and discharge areas for Units 3 and 4 and the manatee embayment qualifies for an FDEP exemption for performance of maintenance dredging of existing manmade canals, channels, basins, berths, and intake and discharge structures.

Stormwater retention areas on the existing Plant Site will be impacted by construction of RBEC. The total acreage of these areas is approximately 0.37 acre. Although these areas meet the criteria for a wetland (hydric soils, hydrophytic vegetation, hydrology), according to Chapter 62-340, Section 62-340.700, F.A.C., they do not require compensatory mitigation if impacted, since they are part of a previously permitted spill containment system or stormwater management system and are less than 0.5 acre in combined area.

The sovereign submerged land, of approximately 5.41 acres, is located south-east and adjacent to the discharge structure (a copy of the legal description and location sketch are attached). This parcel is shown in SCA Figure 3.1.0-3. By this SCA, FPL seeks a sovereign submerged lands lease as a condition of certification. In the 1960s, the discharge structure was created on submerged land using material generated from dredging activities during construction of the Riviera Plant. FPL requests a perpetual easement to maintain this discharge structure.

To meet, as part of this SCA, the substantive requirements of Chapters 62-330 and 62-25 F.A.C., a stormwater management plan has been developed to address these ERP requirements. The stormwater management plan is included as part of this appendix. The design stormwater system is based on the criteria set forth in the South Florida Water Management District Regulations of Stormwater Management Systems and Management of Storage of Surface Waters.

JOINT APPLICATION FOR
ENVIRONMENTAL RESOURCE PERMIT

FORM#: 62-343.900(1)
FORM TITLE: JOINT ENVIRONMENTAL
RESOURCE PERMIT APPLICATION
DATE: October 3, 1995

JOINT APPLICATION FOR ENVIRONMENTAL RESOURCE PERMIT/

AUTHORIZATION TO USE SOVEREIGN SUBMERGED LANDS/

FEDERAL DREDGE AND FILL PERMIT

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION/
WATER MANAGEMENT DISTRICTS/
U.S. ARMY CORPS OF ENGINEERS

INSTRUCTIONS FOR JOINT APPLICATION FOR ENVIRONMENTAL RESOURCE PERMIT/AUTHORIZATION TO USE STATE OWNED SUBMERGED LANDS/FEDERAL DREDGE AND FILL PERMIT

INTRODUCTION

Attached is a joint application for:

1) activities regulated under Part IV of Chapter 373, F.S.;
2) activities which require authorization to use state owned submerged lands; and
3) activities which require federal dredge and fill permit.

Certain activities may qualify for an exemption. If an activity qualifies for an exemption, an application is not required, although the use of this application form is the most expeditious way for the agencies to make the determination that the activity qualifies for an exemption. Attachment 2 lists various regulated activities and the type of permit required for each activity. If you have any questions, please contact the staff of the nearest office of either the Florida Department of Environmental Protection (DEP) or a Water Management District (WMD).

PROCESSING AGENCY/DISTRICT SERVICE CENTERS

The Department of Environmental Protection ("Department" or "DEP") regulates some types of activities, and the Water Management Districts ("WMDs") regulate others. Attachment 1, DEP/WMD Permitting Responsibilities, specifies which activities are regulated by each agency. Environmental Resource Permit Applications shall be made to the appropriate District/Department office serving the area in which the activity is proposed. Attachment 4 designates the appropriate agency office for each geographic area.

COPIES/APPLICATION FEES

Submit an original signed application form plus **four** copies of the form, and **five** complete sets of all the requested drawings and other information to the appropriate DEP or WMD office. Submit the appropriate fee with your application. Application fees are listed in Attachment 3.

DISTRIBUTION TO U.S. ARMY CORPS OF ENGINEERS

When activities are proposed in, on or over wetlands or other surface waters, a portion of the application (Section A and Section C, with the associated drawings) will be forwarded to the Army Corps of Engineers (ACOE) by the reviewing agency. The ACOE will advise you of any additional information that may be required to complete your federal dredge and fill permit application. It is not necessary for the applicant to submit a separate application to the ACOE. The information requested in this application form may be more than required to make a complete application to the ACOE. However, it is useful and may be essential for subsequent evaluation. Reducing unnecessary paperwork and delays is a continuing goal of the ACOE.

DISTRIBUTION TO THE DEP FOR STATE LAND APPROVAL

If the applicant checks the box to request authorization to use sovereign submerged lands, the Department will begin processing the request for sovereign submerged lands approval. Additionally, if at any time during the processing of the application, it appears that the proposed activities may take place on sovereign submerged lands, the Department will initiate a review for the authorization to use such lands. For an explanation of sovereign submerged lands approval see Attachment 5.

NOTE: The information listed in Sections B, D, E, and F of this application package is not intended to be all-inclusive. Additional information may be requested by the reviewing agency in order to complete your application.

TABLE OF CONTENTS
FOR ERP APPLICATION FORM PACKAGE

HEADING:	SUBJECT:
Section A	Basic application form
Section B	Information for noticed general environmental resource permits
Section C	Notice of receipt of application
Section D	Information required for standard general and individual environmental resource permit applications related to a single family dwelling unit
Section E	Information requested for standard general, individual and conceptual environmental resource permit applications not related to a single family dwelling unit
Table 1	Project impact summary
Table 2	On-site mitigation summary
Table 3	Off-site mitigation summary
Table 4	Docking facility summary
Table 5	Shoreline stabilization summary
Section F	Information for mitigation banks
Section G	Application for authorization to use sovereign submerged lands
Attachment 1	DEP and WMD permitting responsibilities
Attachment 2	Summary of activities typically authorized by each permit type
Attachment 3	Permit application processing fees
Attachment 4	Mailing instructions for submitting ERP applications to DEP, with map showing the DEP district boundaries and addresses
Attachment 5	Proprietary verses regulatory authorization

"What Sections of the Application Must I Fill Out?"

Section:	Noticed General Permits	Individual Permits		
		Single-Family Residences	Others	Mitigation Banks
Section A	Yes	Yes	Yes	Yes
Section B	Yes			
Section C		Yes	Yes	Yes
Section D		Yes		
Section E			Yes	
Section F				Yes
Section G	As Needed	As Needed	As Needed	As Needed

SECTION A

FOR AGENCY USE ONLY	
ACOE Application #	DEP/WMD Application #
Date Application Received	Date Application Received
Proposed Project Lat.	Fee Received $
Proposed Project Long.	Fee Receipt #

PART 1:
Are any of the activities described in this application proposed to occur in, on, or over wetlands or other surface waters?
☒ yes ☐ no
Is this application being filed by or on behalf of a government entity or drainage district? ☐yes ☒no

PART 2:

A. Type of Environmental Resource Permit Requested (check at least one). See Attachment 2 for thresholds and descriptions.

☐ Noticed General - include information requested in Section B.
☐ Standard General (Single Family Dwelling) - include information requested in Sections C and D.
☐ Standard General (all other Standard General projects) - include information requested in Sections C and E.
☐ Individual (Single Family Dwelling) - include information requested in Sections C and D.
☒ Individual (all other Individual projects) - include information requested in Sections C and E.
☐ Conceptual - include information requested in Sections C and E.
☐ Mitigation Bank Permit (construction) - include information requested in Sections C and F. (If the proposed mitigation bank involves the construction of a surface water management system requiring another permit defined above, check the appropriate box and submit the information requested by the applicable section.)
☐ Mitigation Bank (conceptual) - include information requested in Sections C and F.

B. Type of activity for which you are applying (check at least one)

☒ Construction or operation of a new system, other than a solid waste facility, including dredging or filling in, on or over wetlands and other surface waters.
☐ Construction, expansion or modification of a solid waste facility.
☐ Alteration or operation of an existing system which was not previously permitted by a WMD or DEP.
☐ Modification of a system previously permitted by a WMD or DEP.
Provide previous permit numbers:___
☐ Alteration of a system
☐ Abandonment of a system
☐ Removal of a system
☐ Extension of permit duration
☐ Construction of additional phases of a system

C. Are you requesting authorization to use Sovereign Submerged Lands?
☒yes ☐no
(See Section G and Attachment 5 for more information before answering this question.)

D. For activities in, on,or over wetlands or other surface waters, check type of federal dredge and fill permit requested:
☐Individual ☐Programmatic General ☐General
☒Nationwide ☒Not Applicable

E. Are you claiming to qualify for an exemption? ☒yes ☐no
If yes, provide rule number if known. **Rule 62-312.050(1)(j), F.A.C.**

PART 3: **A. OWNER(S) OF LAND**	**B. ENTITY TO RECEIVE PERMIT (IF OTHER THAN OWNER)**
Name **Florida Power & Light Company**	Name **Florida Power & Light Company**
Title and Company	Title and Company
Address **700 Universe Blvd.**	Address **700 Universe Blvd.**
City, State, Zip **Juno Beach, FL 33408**	City, State, Zip **Juno Beach, FL 33408**
Telephone and Fax	Telephone and Fax
C. AGENT AUTHORIZED TO SECURE PERMIT	**D. CONSULTANT (IF DIFFERENT FROM AGENT)**
Name **Barbara Linkiewicz**	Name
Title and Company **Director of Environmental Licensing**	Title and Company
Address **700 Universe Blvd.**	Address
City, State, Zip **Juno Beach, FL 33408**	City, State, Zip
Telephone and Fax **(561) 691-7518; (561) 691-7049**	Telephone and Fax

PART 4: (Please provide metric equivalent for federally funded projects): (see Part 6)

A. Name of Project, including phase if applicable: **Riviera Beach Energy Center**

B. Is this application for part of a multi-phase project?
☐yes ☒no

C. Total applicant-owned area contiguous to the project?
~33 ac.; ___ ha. See Stormwater Management Plan

D. Total area served by the system: ~26 ac.; ___ ha. **See Stormwater Management Plan**

E. Impervious area for which a permit is sought: ~13 ac.; ___ ha. **See Stormwater Management Plan**

F. Volume of water that the system is capable of impounding:
~3 ac. ft.; ___ m **See Stormwater Management Plan**

G. What is the total area of work in, on, or over wetlands or other surface waters?
~0.4 ac.; ___ ha. ___ sq. ft.; ___ sq. m. **See also Part 6**

H. Total volume of material to be dredged: * yd; 0 m **See also Part 6**

I. Number of new boat slips proposed: 0 wet slips; 0 dry slips

PART 5:

Project location (use additional sheets if needed): See SCA Section 3.1.
County(ies)Palm Beach

Section(s) **33 and 34**	Township **42S**	Range **43E**
Section(s) **3 and 4**	Township **43S**	Range **43E**
Section(s)	Township	Range

Land Grant name, if applicable:

Tax Parcel Identification Number: **56-43-42-33-00-000-5180 & 56-43-42-33-00-004-0020**

Street Address Road or other location:**300 Broadway**

City, Zip Code, if applicable: **Riviera Beach, FL 33404-7706**

PART 6: Describe in general terms the proposed project, system, or activity.

This application form is being included as part of the Site Certification Application (SCA) as a means to present ERP information. The RBEC Project involves multiple components related to the ERP requirements. These components are repair, refurbishment, and maintenance work on existing structures, construction of a temporary manatee heating system, the stormwater design for RBEC, submerged land lease for an existing discharge structure, and associated submerged land that was filled prior to the ERP requirements. The stormwater management plant is attached to this application and addresses the stormwater requirements of Section E.

The construction of RBEC will require the following: 1) repair of existing seawall; 2) repair of stormwater outfalls; 3) intake/discharge structure repair; 4) maintenance dredging of the manatee embayment area; and 5) construction of a temporary manatee heating system.

FPL intends to repair an existing, functioning seawall including placing fill on the landward side of the seawall. This repair is exempt from State Environmental Resource Permit (ERP) requirements pursuant to Rule 62-312.050(1)(j), F.A.C., which allows for seawall restoration is upland areas or within 1 foot waterward of its previous location. FPL intends to repair or refurbish existing stormwater outfalls or install new outfalls to support RBEC. FPL intends to conduct repair, refurbishment, and maintenance work on the existing intake and discharge structures for the Units 1 through 4. The intake structure for Units 1 and 2 will be temporarily incorporated into the manatee heating system. After construction is complete, the intake and discharge structures for Units 1 and 2 will be closed off at the existing seawall and backfilled. The intake and discharge structures for Units 3 and 4 will remain and be incorporated into RBEC. In accordance with

Section 403.813(2)(f), F.S., FPL will also conduct maintenance dredging within the manatee embayment during the Project construction period to restore the area to its historical design depth and enhance the area as a manatee refuge. The dredging required for the replacement of equipment within the intake and discharge areas for Units 3 and 4 qualifies for an FDEP exemption for performance of maintenance dredging of existing manmade canals, channels, basins, berths, and intake and discharge structures.

Stormwater retention areas on the existing Plant Site will be impacted by construction of RBEC. The total acreage of these areas is approximately 0.37 acres. Although these areas meet the criteria for a wetland (hydric soils, hydrophytic vegetation, hydrology), according to Chapter 62-340, Section 62-340.700, F.A.C., they do not require compensatory mitigation if impacted, since they are part of a previously permitted spill containment system or stormwater management system and are less than 0.5 acre in combined area.

The sovereign submerged land, of approximately 5.41 acres, is located south-east and adjacent to the discharge structure (a copy of the legal description and location sketch are attached). This parcel is shown in SCA Figure 3.1.0-3. By this SCA, FPL seeks a sovereignty submerged lands lease as a condition of certification. In the 1960s, the discharge structure was created on submerged land using material generated from dredging activities during construction of the Riviera Plant. FPL requests a perpetual easement to maintain this discharge structure.

PART 7:

A. If there have been any pre-application meetings, including on-site meetings, with regulatory staff, please list the date(s), location(s), and names of key staff and project representatives.

___

B. Please identify by number any MSSW/Wetland Resource/ERP/ACOE Permits pending, issued or denied for projects at the location, and any related enforcement actions.

Agency	Date	No.\Type of Application	Action Taken
___	___	___	___
___	___	___	___
___	___	___	___

C. Note: The following information is required for projects proposed to occur in, on or over wetlands that need a federal dredge and fill permit or an authorization to use state owned submerged lands. Please provide the names, addresses and zip codes of property owners whose property directly adjoins the project (excluding application) and/or (for proprietary authorizations) is located within a 500 ft. radius of the applicant's land. Please attach a plan view showing the owner's names and adjoining property lines. Attach additional sheets if necessary.

1. 2.

3. 4.

5. 6.

7. 8.

PART 8:

A. By signing this application form, I am applying, or I am applying on behalf of the applicant, for the permit and any proprietary authorizations identified above, according to the supporting data and other incidental information filed with this application. I am familiar with the information contained in this application and represent that such information is true, complete and accurate. I understand this is an application and not a permit, and that work prior to approval is a violation. I understand that this application and any permit issued or proprietary authorization issued pursuant thereto, does not relive me of any obligation for obtaining any other required federal, state, water management district or local permit prior to commencement of construction. I agree, or I agree on behalf of the applicant, to operate and maintain the permitted system unless the permitting agency authorizes transfer of the permit to a responsible operation entity. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Barbara Linkiewicz
Typed/Printed Name of Applicant (If no Agent is used) or Agent (If one is so authorized below)

_____ _____
Signature of Applicant/Agent Date
Director of Environmental Licensing
(Corporate Title if applicable)

AN AGENT MAY SIGN ABOVE ONLY IF THE APPLICANT COMPLETES THE FOLLOWING:

B. I hereby designate and authorize the agent listed above to act on my behalf, or on behalf of my corporation, as the agent in the processing of this application for the permit and/or proprietary authorization indicated above; and to furnish, on request, supplemental information in support of the application. In addition, I authorize the above-listed agent to bind me, or my corporation, to perform any requirements which may be necessary to procure the permit or authorization indicated above. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Typed/Printed Name of Applicant	Signature of Applicant	Date

(Corporate Title if applicable)

Please note: The applicant's original signature (not a copy) is required above.

PERSON AUTHORIZING ACCESS TO THE PROPERTY MUST COMPLETE THE FOLLOWING:

C. I either own the property described in this application or I have legal authority to allow access to the property, and I consent, after receiving prior notification, to any site visit on the property by agents or personnel from the Department of Environmental Protection, the Water Management District and the U.S. Army Corps of Engineers necessary for the review and inspection of the proposed project specified in this application. I authorize these agents or personnel to enter the property as many times as may be necessary to make such review and inspection. Further, I agree to provide entry to the project site for such agents or personnel to monitor permitted work if a permit is granted.

Typed/Printed Name of Applicant	Signature of Applicant	Date

(Corporate Title if applicable)

SECTION C

Environmental Resource Permit Notice of Receipt of Application

Note: this form does not need to be submitted for noticed general permits.
This information is required in addition to that required in other sections of the application. Please submit five copies of this notice of receipt of application and all attachments with the other required information. Please submit all information on 8 1/2" x 11" paper.

Project Name	**Riviera Beach Energy Center**
County	**Palm Beach**
Owner	**Florida Power & Light Company**
Applicant:	
Applicant's Address:	**700 Universe Blvd., Juno Beach, FL 33408**

1. Indicate the project boundaries on a USGS quadrangle map. Attach a location map showing the boundary of the proposed activity. The map should also contain a north arrow and a graphic scale; show Section(s), Township(s), and Range(s); and must be of sufficient detail to allow a person unfamiliar with the site to find it.
See SCA Chapter 3, Figure 3.1 USGS Map.

2. Provide the names of all wetlands, or other surface waters that would be dredged, filled, impounded, diverted, drained, or would receive discharge (either directly or indirectly), or would otherwise be impacted by the proposed activity, and specify if they are in an Outstanding Florida Water or Aquatic Preserve:
Lake Worth Lagoon is adjacent to the Project. Maintenance dredging may will be conducted within the intake and discharge areas for Units 3 and 4 to allow for replacement of equipment. Maintenance dredging will also need to be conducted within the manatee embayment area to restore the area to its historical design depth..

3. Attach a depiction (plan and section views), which clearly shows the works or other facilities proposed to be constructed. Use multiple sheets, if necessary. Use a scale sufficient to show the location and type of works.

4. Briefly describe the proposed project (such as "construct dock with boat shelter", "replace two existing culverts", "construct surface water management system to serve 150 acre residential development"):
Stormwater release to Lake Worth Lagoon, maintain submerged land uses.

5. Specify the acreage of wetlands or other surface waters, if any, that are proposed to be filled, excavated, or otherwise disturbed or impacted by the proposed activity: .

filled ___ ac.; ___ excavated ac.;

other impacts0 ac. Dredged (maintenance dredging only)

6. Provide a brief statement describing any proposed mitigation for impacts to wetlands and other surface waters (attach additional sheets if necessary):
Mitigation is not required..

FOR AGENCY USE ONLY

Application Name:
Application Number:
Office where the application can be inspected:

Note to Notice recipient: The information in this notice has been submitted by the applicant, and has not been verified by the agency. It may be incorrect, incomplete or may be subject to change.

SECTION E

INFORMATION REQUESTED FOR STANDARD GENERAL, INDIVIDUAL AND CONCEPTUAL ENVIRONMENTAL RESOURCE PERMIT APPLICATIONS NOT RELATED TO A SINGLE FAMILY DWELLING UNIT

Please provide the information requested below if the proposed project requires either a standard general, individual, or conceptual approval environmental resource permit and is not related to an individual, single family dwelling unit, duplex or quadruplex. The information listed below represents the level of information that is usually required to evaluate an application. The level of information required for a specific project will vary depending on the nature and location of the site and the activity proposed. Conceptual approvals generally do not require the same level of detail as a construction permit. However, providing a greater level of detail will reduce the need to submit additional information at a later date. If an item does not apply to your project, proceed to the next item. Please submit all information that is required by the Department on either 8 1/2 in. X 11 in. paper or 11 in. X 17 in. paper. Larger drawings may be submitted to supplement but not replace these smaller drawings.

I. Site Information

A. Provide a map(s) of the project area and vicinity delineating USDA/SCS soil types. **See Stormwater Management Plan (SMP).**

B. Provide recent aerials, legible for photo interpretation with a scale of 1" = 400 ft, or more detailed, with project boundaries delineated on the aerial. **See SMP.**

C. Identify the seasonal high water or mean high tide elevation and normal pool or mean low tide elevation for each on site wetland or surface water, including receiving waters into which runoff will be discharged. Include dates, datum, and methods used to determine these elevations. **See SMP.**

D. Identify the wet season high water tables at the locations representative of the entire project site. Include dates, datum, and methods used to determine these elevations. **See SMP.**

II. Environmental Considerations

A. Provide results of any wildlife surveys that have been conducted on the site, and provide any comments pertaining to the project from the Florida Game and Fresh Water Fish Commission and the U.S. Fish and Wildlife Service. **See SCA Section 3.3.5 and 3.3.6.**

B. Provide a description of how water quantity, quality, hydroperiod, and habitat will be maintained in on-site wetlands and other surface waters that will be preserved or will remain undisturbed. Appropriate Best Management Practices (BMPs) such as the use of silt screens, silt fence, construction fence, and turbidity curtains will be used to protect preserved habitats and water quality.

C. Provide a narrative description of any proposed mitigation plans, including purpose, maintenance, monitoring, and construction sequence and techniques, and estimated costs. **Not Applicable.**

D. Describe how boundaries of wetlands or other surface waters were determined. If there has ever been a jurisdictional declaratory statement, a formal wetland determination, a formal determination, a validated informal determination, or a revalidated jurisdictional determination, provide the identifying number. **See SCA Section 3.3.6.3.**

E. Impact Summary Tables:

1. For all projects, complete Tables 1, 2 and 3 as applicable. **See attached Table 1.**

2. For docking facilities or other structures constructed over wetlands or other surface waters, provide the information requested in Table 4. **Not Applicable.**

3. For shoreline stabilization projects, provide the information requested in Table 5. **See attached Table 5.**

III. Plans

Provide clear, detailed plans for the system including specifications, plan (overhead) views, cross sections (with the locations of the cross sections shown on the corresponding plan view), and profile (longitudinal) views of the proposed project. The plans must be signed and sealed by a an appropriate registered professional as required by law. Plans must include a scale and a north arrow. These plans should show the following:

A. Project area boundary and total land area, including distances and orientation from roads or other land marks; **See SCA Section 3.1.**

B. Existing land use and land cover (acreage and percentages), and on-site natural communities, including wetlands and other surface waters, aquatic communities, and uplands. Use the Florida Land Use Cover & Classification System (FLUCCS)(Level 3) for projects proposed in the South Florida Water Management District, the St. Johns River Water Management District, and the Suwannee River Water Management District and use the National Wetlands Inventory (NWI) for projects proposed in the Southwest Florida Water Management District. Also identify each community with a unique identification number which must be consistent in all exhibits. **See SCA Sections 3.3.5 and 3.3.6 and Figure 3.3.5-1.**

C. The existing topography extending at least 100 feet off the project area, and including adjacent wetlands and other surface waters. All topography shall include the location and a description of known benchmarks, referenced to NGVD. For systems waterward of the mean high water (MHW) or seasonal high water lines, show water depths, referenced to mean low water (MLW) in tidal areas or seasonal low water in non-tidal areas, and list the range between MHW and MLW. For docking facilities, indicate the distance to, location of, and depths of the nearest navigational channel and access routes to the channel. **See SCA Section 3.1 and SMP.**

D. If the project is in the known flood plain of a stream or other water course, identify the following: 1) the flood plain boundary and approximate flooding elevations; and 2) the 100-year flood elevation and floodplain boundary of any lake, stream or other watercourse located on or adjacent to the site; **See SCA Section 3.1 and 5.1.3.**

E. The boundaries of wetlands and other surface waters within the project area. Distinguish those wetlands and other surface waters that have been delineated by any binding jurisdictional determination; **See SCA Sections 3.3.5 and 3.3.6 and Figure 3.3.5-1.**

F. Proposed land use, land cover and natural communities (acreage and percentages), including wetlands and other surface waters, undisturbed uplands, aquatic communities, impervious surfaces, and water management areas. Use the same classification system and community identification number used in III (B) above. **See SCA Chapter 4.0.**

G. Proposed impacts to wetlands and other surface waters, and any proposed connections/outfalls to other surface waters or wetlands; **See SCA Section 5.4.1.2**

H. Proposed buffer zones; **Not Applicable.**

I. Pre- and post-development drainage patterns and basin boundaries showing the direction of flows, including any off-site runoff being routed through or around the system; and connections between wetlands and other surface waters; **See SMP.**

J. Location of all water management areas with details of size, side slopes, and designed water depths; **See SMP.**

K. Location and details of all water control structures, control elevations, any seasonal water level regulation schedules; and the location and description of benchmarks (minimum of one benchmark per structure); **See SMP.**

L. Location, dimensions and elevations of all proposed structures, including docks, seawalls, utility lines, roads, and buildings; **Not Applicable.**

M. Location, size, and design capacity of the internal water management facilities; **See SMP.**

N. Rights-of-way and easements for the system, including all on-site and off-site areas to be reserved for water management purposes, and rights-of-way and easements for the existing drainage system, if any; **See SMP.**

O. Receiving waters or surface water management systems into which runoff from the developed site will be discharged; **Lake Worth Lagoon.**

P. Location and details of the erosion, sediment and turbidity control measures to be implemented during each phase of construction and all permanent control measures to be implemented in post-development conditions; **See SCA Chapter 4; Section 4.8; and SMP.**

Q. Location, grading, design water levels, and planting details of all mitigation areas; **Not Applicable.**

R. Site grading details, including perimeter site grading; **See SCA Section 4.8 and SMP.**

S. Disposal site for any excavated material, including temporary and permanent disposal sites; **Maintenance dredged materials will be disposed of in a FDEP approved manner.**

T. Dewatering plan details; **See SCA Chapter 5.**

U. For marina facilities, locations of any sewage pumpout facilities, fueling facilities, boat repair and maintenance facilities, and fish cleaning stations; **Not Applicable.**

V. Location and description of any nearby existing offsite features which might be affected by the proposed construction or development such as stormwater management ponds, buildings or other structures, wetlands or other surface waters. **See SCA Chapter 3.**

W. For phased projects, provide a master development plan. **Not Applicable.**

IV. Construction Schedule and Techniques

Provide a construction schedule, and a description of construction techniques, sequencing and equipment. This information should specifically include the following:

A. Method for installing any pilings or seawall slabs;
Only maintenance will be performed.

B. Schedule of implementation of temporary or permanent erosion and turbidity control measures; **See SCA Chapter 5.**

C. For projects that involve dredging or excavation in wetlands or other surface waters, describe the method of excavation, and the type of material to be excavated; See **SCA Chapters 5.**

D. For projects that involve fill in wetlands or other surface waters, describe the source and type of fill material to be used. For shoreline stabilization projects that involve the installation of riprap, state how these materials are to be placed, (i.e., individually or with heavy equipment) and whether the rocks will be underlain with filter cloth; **Not Applicable.**

E. If dewatering is required, detail the dewatering proposal including the methods that are proposed to contain the discharge, methods of isolating dewatering areas, and indicate the period dewatering structures will be in place (Note: a consumptive use or water use permit may by required); **See SCA Chapter 5.**

F. Methods for transporting equipment and materials to and from the work site. If barges are required for access, provide the low water depths and draft of the fully loaded barge; **See SCA Chapter 4.9.**

G. Demolition plan for any existing structures to be removed; and **See SCA Chapter 5.**

H. Identify the schedule and party responsible for completing monitoring, record drawings, and as-built certifications for the project when completed. **Not Applicable.**

V. Drainage Information (Refer to Stormwater Management Plan)

A. Provide pre-development and post-development drainage calculations, signed and sealed by an appropriate registered professional, as follows:

1. Runoff characteristics, including area, runoff curve number or runoff coefficient, and time of concentration for each drainage basin;

2. Water table elevations (normal and seasonal high) including aerial extent and magnitude of any proposed water table draw down;

3. Receiving water elevations (normal, wet season, design storm);

4. Design storms used including rainfall depth, duration, frequency, and distribution;

5. Runoff hydrograph(s) for each drainage basin, for all required design storm event(s);

6. Stage-storage computations for any area such as a reservoir, close basin, detention area, or channel, used in storage routing;

7. Stage-discharge computations for any storage areas at a selected control point, such as control structure or natural restriction;

8. Flood routings through on-site conveyance and storage areas;

9. Water surface profiles in the primary drainage system for each required design storm event(s);

10. Runoff peak rates and volumes discharged from the system for each required design storm event(s);

11. Tail water history and justification (time and elevation); and

12. Pump specifications and operating curves for range of possible operating conditions (if used in system).

B. Provide the results of any percolation tests, where appropriate, and soil borings that are representative of the actual site conditions;

C. Provide the acreage, and percentages of the total project, of the following:

1. Impervious surfaces, excluding wetlands;

2. Pervious surfaces (green areas, not including wetlands);

3. Lakes, canals, retention areas, other open water areas; and

4. Wetlands.

D. Provide an engineering analysis of floodplain storage and conveyance (if applicable), including:

1. Hydraulic calculations for all proposed traversing works;

2. Backwater water surface profiles showing upstream impact of traversing works;

3. Location and volume of encroachment within regulated floodplain(s); and

4. Plan for compensating floodplain storage, if necessary, and calculations required for determining minimum building and road flood elevations.

E. Provide an analysis of the water quality treatment system including:

1. A description of the proposed stormwater treatment methodology that addresses the type of treatment, pollution abatement volumes, and recovery analysis; and

2. Construction plans and calculations that address stage-storage and design elevations, which demonstrate compliance with the appropriate water quality treatment criteria.

F. Provide a description of the engineering methodology, assumptions and references for the parameters listed above, and a copy of all such computations, engineering plans, and specifications used to analyze the system. If a computer program is used for the analysis, provide the name of the program, a description of the program, input and output data, two diskette copies, if available, and justification for model selection.

VI. Operation and Maintenance and Legal Documentation

A. Describe the overall maintenance and operation schedule for the proposed system. **See SMP.**

B. Identify the entity that will be responsible for operating and maintaining the system in perpetuity if different than the permittee, a draft document enumerating the enforceable affirmative obligations on the entity to properly operate and maintain the system for its expected life, and documentation of the entity's financial responsibility for long-term maintenance. If the proposed operation and maintenance entity is not a property owner's association, provide proof of the existence of an entity, or the future acceptance of the system by an entity which will operate and maintain the system. If a property owner's association is the proposed operation and maintenance entity, provide copies of the articles of incorporation for the association and copies of the declaration, restrictive covenants, deed restrictions, or other operational documents that assign responsibility for the operation and maintenance of the system. Provide information ensuring the continued adequate access to the system for maintenance purposes. Before transfer of the system to the operating entity will be approved, the permittee must document that the transferee will be bound by all terms and conditions of the permit. **Not Applicable.**

C. Provide copies of all proposed conservation easements, storm water management system easements, property owner's association documents, and plats for the property containing the proposed system. **Not Applicable.**

D. Provide indication of how water and waste water service will be supplied. Letters of commitment from off-site suppliers must be included. **See SCA Section 4.5.**

E. Provide a copy of the boundary survey and/or legal description and acreage of the total land area of contiguous property owned/controlled by the applicant. **See SCA Section 3.1.**

VII. Water Use

A. Will the surface water system be used for water supply, including landscape irrigation, or recreation. **See SCA Section 4.5.**

B. If a Consumptive Use or Water Use permit has been issued for the project, state the permit number. **See SCA Section 4.5, Appendix 10.6.**

C. If no Consumptive Use or Water Use permit has been issued for the project, indicate if such a permit will be required and when the application for a permit will be submitted. **Not Applicable.**

D. Indicate how any existing wells located within the project site will be utilized or abandoned. **Not Applicable.**

TABLE 1
Project Impact Summary

WL & SW ID	WL & SW TYPE	WL & SW SIZE (ac.) ON SITE	WL & SW ACRES NOT IMPACTED	PERMANENT IMPACTS TO WL & SW		TEMPORARY IMPACTS TO WL & SW		MITIGATION ID
				IMPACT SIZE (acres)	IMPACT CODE	IMPACT SIZE (acres)	IMPACT CODE	
Existing Intake/Discharge Structure Area with LWL						**Only maintenance dredging**	**D**	**N/A**
Manatee Embayment						**Only maintenance dredging**	**D**	**N/A**

WL = Wetland; **SW** = Surface water; **ID** = Identification number, letter, etc.
Wetland Type: Use an established wetland classification system and, in the comments section below, indicate which classification system is being used.
Impact Code (Type): D = dredge; F = fill; H = change hydrology; S = shading; C = clearing; O = other. Indicate the final impact if more than one impact type is proposed in a given area. For example, show F only for an area that will first be demucked and then backfilled.

Note: Multiple entries per cell are not allowed, except in the "Mitigation ID" column. Any given acreage of wetland should be listed in one row only, such that the total of all rows equals the project total for a given category (column). For example, if Wetland No. 1 includes multiple wetland types and multiple impact codes are proposed in each type, then each proposed impact in each wetland type should be shown on a separate row, while the size of each wetland type found in Wetland No. 1 should be listed in only one row.

Comments: LWL = Lake Worth Lagoon.

Table 5: SHORELINE STABILIZATION
IF YOU ARE CONSTRUCTING A SHORELINE STABILIZATION PROJECT, PLEASE PROVIDE THE FOLLOWING:

Type of Stabilization Being Done	Length (in feet) of New	Length (in feet) of Replaced	Length (in feet) of Repaired	Length (in feet) of Removed	Slope: H: V:	Width of the Toe (in feet)
Vertical Seawall						
Seawall plus Rip-Rap						
Rip-Rap						
Rip-Rap plus Vegetation						
Other Type of Stabilization Being Done:						

Size of the Rip Rap: ___

Type of Rip Rap:___

COMMENTS:

See PART 6

SECTION G

Application for Authorization to Use Sovereign Submerged Lands

Part 1: Sovereign Submerged Lands title information (see Attachment 5 for an explanation). Please read and answer the applicable questions listed below:

A. I have a sovereign submerged lands title determination from the Division of State Lands which indicates that the proposed project is NOT ON sovereign submerged lands (Please attach a copy of the title determination to the application). Yes☐ No☐

- If you answered Yes to Question A and you have attached a copy of the Division of State Lands Title Determination to this application, you do not have to answer any other questions under Part I or II of Section G.

B. I have a sovereign submerged lands title determination from the Division of State Lands which indicates that the proposed project is ON sovereign submerged lands (Please attach a copy of the title determination to the application). Yes☐ No☐

- If you answered yes to question B please provide the information requested in Part II. Your application will be deemed incomplete until the requested information is submitted.

C. I am not sure if the proposed project is on sovereign submerged lands (please check here). ☒

- If you have checked this box department staff will request that the Division of State Lands conduct a title determination. If the title determination indicates that the proposed project or portions of the project are located on sovereign submerged lands you will be required to submit the information requested in Part II of this application. The application will be deemed incomplete until the requested information is submitted.

D. I am not sure if the proposed project is on sovereign submerged lands and I DO NOT WISH to contest the Department's findings (please check here). ☐

- If you have checked this box refer to Part II of this application and provide the requested information. The application will be deemed incomplete until the requested information is submitted.

E. It is my position that the proposed project is NOT on sovereign submerged lands (please check here)☐

- If you have evidence that indicates that the proposed project is not on sovereign submerged lands please attach the documentation to the application. If the Division of State Lands title determination indicates that your proposed project or portion of your proposed project are on sovereign submerged lands you will be required to provide the information requested in Part II of this application.

F. If you wish to contest the findings of the title determination conducted by the Division of State Lands please contact the Department of Environmental Protection's Office of General Counsel. Your proposed project will be deemed incomplete until either the information requested in Part II is submitted or a legal ruling indicates that the proposed project is not on sovereign submerged lands.

Part II: If you were referred to this section by Part I, please provide this additional information. Please note that if your proposed project is on sovereign submerged lands and the below requested information is not provided, your application will be considered incomplete.

A. Provide evidence of title to the subject riparian upland property in the form of a recorded deed, title insurance, legal opinion of title, or a long-term lease which specifically includes riparian rights. Evidence submitted must demonstrate that the application has sufficient title interest in the riparian upland property. See attached information on FPL ownership, Attachment G, Part IIA.Subaqueous pipeline will be integral to operation of RBEC. See SCA Section 4.5.

B. Provide a detailed statement describing the existing and proposed upland uses and activities. For commercial uses, indicate the specific type of activity, such as marina, ship repair, dry storage (including the number of storage spaces), commercial fishing/seafood processing, fish camp, hotel, motel resort restaurant, office complex, manufacturing operation, etc. **(Refer to SCA Chapter 4).**

For rental operations, such as trailer or recreational vehicle parks and apartment complexes, indicate the number of wet slip units/spaces available for rent or lease and describe operational details (e.g., are spaces rented on a month-to-month basis or through annual leases).

For multi-family residential developments, such as condominiums, townhomes, or subdivisions, provide the number of living units/lots and indicate whether or not the common property (including the riparian upland property) is or will be under the control of a homeowners association.

For projects sponsored by a local government, indicate whether or not the facilities will be open to the general public. Provide a breakdown of any fees that will be assessed, and indicate whether or not such fees will generate revenue or will simply cover costs associates with maintaining the facilities.

C. Provide a detailed statement describing the existing and proposed activities located on or over the sovereign submerged lands at the project site. This statement must include a description of docks and piers, types of vessels (e.g., commercial fishing, liveaboards, cruise ships, tour boats), length and draft of vessels, sewage pumped facilities, fueling facilities, boat hoists, boat ramps, travel lifts, railways, and any other structure or activities existing or proposed to be located waterward of the mean/ordinary high water line. **(Refer to SCA Chapter 4).**

If slips are existing and/or proposed, please indicate the number of powerboat slips and sailboat slips and the percentage of those slips available to the general public on a "first come, first served" basis. This statement must include a description of channels, borrow sites, bridges, groins, jetties, pipelines, or other utility crossings, and any other structures or activities existing or proposed to be located waterward of the mean/ordinary high water line. For shoreline stabilization activities, this statement must include a description of seawalls, bulkheads, riprap, filling activities, and any other structure or activities existing or proposed to be located along the shoreline.

D. Provide the linear footage of shoreline at the mean/ordinary high water line owned by the application which borders sovereign submerged lands. **See SCA Section 3.1, Appendix 10.6.**

E. Provide a recent aerial photo of the area. A scale of 1"=200' is preferred. Photos are generally available at minimal cost from your local government property appraiser's office or from district Department of Transportation offices. Indicate on the photo the specific location of your property/project site. **See SCA Section 3.1.**

PROPRIETARY PROJECT DESCRIPTIONS

Refer to SCA Chapter 4.

Please check the most applicable activity which applies to your project(s):

Leases

☐ Commercial marinas (renting wet slips) including condos, etc., if 50% or more of their wet slips are available to the general public
☐ Public/Local governments
☐ Yacht Clubs/Country Clubs (when a membership is required)
☐ Condominiums (requires upland ownership)
☐ Commercial Uplands Activity (temporary docking and/or fishing pier associated with upland revenue generating activities, i.e., restaurants, hotels, motels) for use of the customer at not charge
☐ Miscellaneous Commercial Upland Enterprises where there is a charge associated with the use of overwater structure (Charter Boats, Tour Boats, Fishing Piers)
☐ Ship Building/Boat Repair Service Facilities
☐ Commercial Fishing Related (Offloading, Seafood Processing)
☐ Private Single-family Residential Docking Facilities; Townhome Docking Facilities; Subdivision Docking Facilities (upland lots privately owned)

Public Easements and Use Agreements

☐ Miscellaneous Public Easements and Use Agreements
☐ Bridge Right-of-way (DOT, local government)
☐ Breakwater of groin
☐ Subaqueous Utility Cable (TV, telephone, electrical)
☐ Subaqueous Outfall or Intake
☐ Subaqueous Utility Water/Sewer
☐ Overhead Utility w/Support Structure on Sovereign Submerged Lands
☐ Disposal Site for Dredged Material
☐ Pipeline (gas)
☐ Borrow Site

Private Easements

☐ Miscellaneous Private Easements
☐ Bridge Right-of-way
☐ Breakwater Groin
☐ Subaqueous Utility Cable (TV, telephone, electrical)
☒ Subaqueous Outfall or Intake
☐ Subaqueous Utility Water/Sewer
☐ Overhead Utility Crossing
☐ Disposal Site for Dredged Material
☐ Pipeline (gas)

Consents of Use

- ☐ Aerial Utility Crossing w/no support structures on sovereign submerged lands
- ☐ Private Dock
- ☐ Public Dock
- ☐ Multi-family Dock
- ☐ Fishing Pier (private or Multi-family)
- ☐ Private Boat Ramp
- ☐ Sea Wall
- ☐ Dredge
- ☐ Maintenance Dredge
- ☐ Navigation Aids/Markers
- ☐ Artificial Reef
- ☐ Riprap
- ☐ Public Boat Ramp
- ☐ Public Fishing Pier
- ☐ Repair/Replace Existing Public Fishing Pier
- ☐ Repair/Replace Existing Private Dock
- ☐ Repair/Replace Existing Public Dock
- ☐ Repair/Replace Existing Multi-family Dock
- ☐ Repair/Replace Existing Fishing Pier (Private or Multi-family)
- ☐ Repair/Replace Existing Private Boat Ramp
- ☐ Repair/Replace Existing Sea Wall, Revetments, or Bulkheads
- ☐ Repair/Replace/Modify structures/activities within an exiting lease, easement, management agreement or use agreement area or repair/replace existing grandfathered structures
- ☐ Repair/Replace Existing Public Boat Ramp

Miscellaneous

- ☐ Biscayne Bay Letters of Consistency/Inconsistency w/258.397, F.S.
- ☐ Management Agreements - Submerged Lands
- ☐ Reclamation
- ☐ Purchase of Filled, Formerly Submerged Lands
- ☐ Purchase of Reclaimed Lake Bottom
- ☐ Treasure Salvage
- ☐ Insect Control Structures/Swales
- ☐ Miscellaneous projects which do not fall within the activity codes listed above

FPL SUB-AQUEOUS PIPELINE
LEGAL DESCRIPTION
AND
LOCATION SKETCH

Legal Description

FPL sub-aqueous pipeline, Lake Worth, Palm Beach County, Florida Power & Light Company Riviera Power Plant

A 100 foot-wide strip of submerged land, in Section 33, Township 42 South, Range 43 East, in Palm Beach County, Florida and being more particularly described as follows:

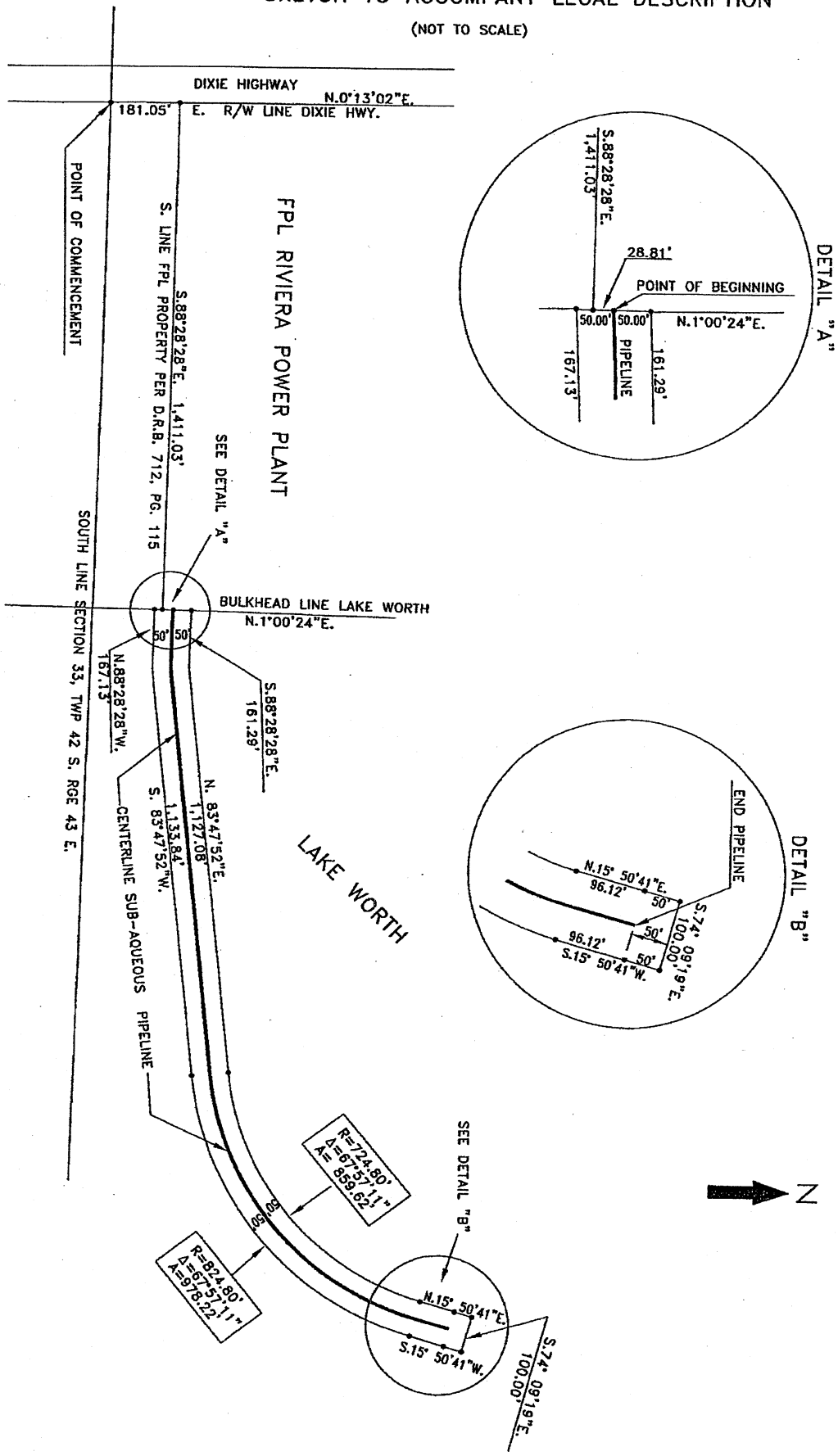
Commence at the point of intersection of the easterly right-of-way line of Dixie Highway [State Highway 5] with the south line of Section 33, Township 42 South, Range 43 East; thence North 0° 13' 02" East along said easterly right-of-way line of Dixie Highway for 181.05 feet to the Southwest corner of that certain parcel of land owned by Florida Power & Light Company and described in Deed Records Book 712, Page 115, of the Public Records of Palm Beach County, Florida; thence South 88° 28' 28" East along the south line of said parcel of land for 1,411.03, feet more or less, to the bulkhead line on the westerly edge of Lake Worth; thence North 1° 00' 24" East along said bulkhead line for 28.81 feet to the center of an existing discharge structure and to the POINT OF BEGINNING of said 100 foot-wide strip of submerged land; thence continues North 1° 00' 24" East along said bulkhead line for 50.00 feet; thence along a line 50 feet northwesterly of, and parallel to centerline of an existing sub-aqueous pipeline for the following 4 courses; 1) South 88° 28' 28" East for 161.29 feet; 2) North 83° 47' 52" East for 1,127.08 feet to the point of curvature of a circular curve concave to the northwest; 3) Northeasterly along the arc of said circular curve having as its elements a radius of 724.80 feet and a central angle of 67° 57" 11" for an arc distance of 859.62 feet to a point of tangency; 4) North 15° 50" 41" East for 96.12 feet; thence continues North 15° 50" 41" East along a line 50 feet northwesterly of and parallel to the northeasterly projection of the centerline of said pipeline for 50.00 feet; thence South 74°09'19" East for 100.00 feet; thence South 15° 50" 41" West along a line 50 feet southeasterly of, and parallel to the northeasterly projection of the centerline of said pipeline for 50.00 feet; thence along a line 50 feet southeasterly of, and parallel to the centerline said pipeline for the following 4 courses; 1) thence South 15° 50" 41" for 96.12 feet to the point of curvature of a circular curve concave to the northwest; 2) Southwesterly along the arc of said circular curve having as its elements a radius of 824.80 feet and a central angle of 67° 57" 11" for an arc distance of 978.22 feet to a point of tangency; 3) South 83° 47' 52" West for 1,33.84 feet; 4) South 88° 28' 28" West for 167.13 feet to the point of intersection with the bulkhead line on the westerly edge of Lake Worth; thence North 1° 00' 24" East along said bulkhead line for 50.00 feet to the Point of Beginning. all of the above in Palm Beach County, Florida and containing 235,971 square feet more or less.

See page 2 of 2 for Sketch of Legal Description

Date: Dec 29, 2008
I. S.

SKETCH TO ACCOMPANY LEGAL DESCRIPTION

(NOT TO SCALE)



ATTACHMENT G, IIA

FPL OWNERSHIP DOCUMENTS FOR THE RIVIERA PLANT

Southeast Guaranty & Title, Inc.

1645 Palm Beach Lakes Blvd. Suite 160
West Palm Beach, Florida 33401
(561) 712-0005 Fax: (561) 712-8662

File No.: **2806021**

OWNERSHIP AND ENCUMBRANCE REPORT

THIS CERTIFIES, that according to the records in the Office of the Clerk of the Circuit Court of **Palm Beach** County, Florida, as of **June 13, 2008 at 8:00 AM.**, FLORIDA POWER & LIGHT COMPANY, A FLORIDA CORPORATION, is the apparent record owner(s) of the following described land (hereinafter referred to as the "Property"), situate, lying and being in the County of **Palm Beach**, State of Florida, to-wit:

LEGAL DESCRIPTION:

Lots 1 through 28, KNOWLES COURT ADDITION, according to the Plat thereof on file in the Office of the Clerk of the Circuit Court in and for Palm Beach County, Florida, recorded in Plat Book 9, Page 82.

SUBJECT TO THE FOLLOWING:

1. Easements and all other matters as reserved and shown on the plat of KNOWLES COURT ADDITION recorded in Plat Book 9, Page 82.
2. Easement Agreement recorded in Deed Book 793, Page 428. (As to Lots 20 and 21)
3. Right of Way for Poinsettia Avenue as laid out and in use.
4. Note: Title to the East 71 feet of Lots 1 and 2 is shown in Land Resources Investment Company. This company merged into Florida Power & Light Company as evidenced by Certificate of Merger recorded in Official Record Book 10864, Page 494.

THIS COMPANY, in issuing the O & E Report (hereinafter referred to as the "Report"), assumes no liability on account of any instrument or proceedings, in the chain of title to the Property, which may contain defects that would render such instrument or proceedings null and void or defective. All instruments in the chain of title to the Property are assumed to be good and valid.

The Company's liability for this Report is limited to the amount paid and extends only to the Customer who placed the order with the Company. No one else may rely upon this Report. Customer, by accepting this Report, agrees to indemnify and hold Company harmless from any claims or losses in excess of the limited amount stated above. This Report contains no expressed or implied opinion, warranty, guarantee, insurance or other similar assurance as to the status of title to real property. This report should only be relied upon for title information and, therefore, should be verified by a commitment for title insurance.

Dated at West Palm Beach, Florida, this June 20, 2008.

Southeast Guaranty & Title, Inc.

BY: _____
Authorized Signature

Property Appraiser's Public Access System

Property Appraiser

Home

Property Information

View Map

Calculate Portability

Location Address: 407 59TH ST

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-01-000-0011

Subdivision: KNOWLES COURT ADD IN

Official Records Book: 15309 Page: 1512 Sale Date: May-2003

Legal Description: KNOWLES COURT ADD W 50 FT OF LTS 1 & 2

Owner Information

All Owners

Name: FLORIDA POWER & LIGHT COMPANY

Mailing Address: PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

All Sales

Sales Date	Book/Page	Price	Sale Type	Owner
May-2003	15309/1512	$10	WARRANTY DEED	FLORIDA POWER & LIGHT COMPANY
Dec-1997	10159/0979	$43,500	WARRANTY DEED	COYLE DENNIS P TR
Dec-1997	10159/0978	$100	QUIT CLAIM	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$27,492	$37,868	$34,425
Total Market Value:	$27,492	$37,868	$34,425

Property Information
Number of Units: 0

Use Code: 0000 Description: VACANT

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$27,492	$37,868	$34,425
Exemption Amount:	$0	$0	$0
Taxable Value:	$27,492	$37,868	$34,425

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$576	$865	$814
Non Ad Valorem:	$0	$0	$0
Total Tax:	$576	$865	$814

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

Return to: (enclose self-addressed stamped envelope)

Chicago Title Insurance Agency, Inc.
3067 East Commercial Blvd.
Fort Lauderdale, Florida 33308
FILE 33526

This Instrument Prepared by:

Alene S. Egol, Esq.
Address:
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408
Property Appraisers Parcel Identification (Folio) Numbers(s):

74-43-43-04-01-000-0011

SPECIAL WARRANTY DEED

06/03/2003 10:13:26 20030320995
OR BK 15309 PG 1512
Palm Beach County, Florida
AMT 10.00
Doc Stamp 0.70
Dorothy H. Wilken, Clerk

SPACE ABOVE THIS LINE FOR RECORDING DATA

This Special Warranty Deed *Made the* 13th *day of* MAY 2003 *A. D.* 19 *by*
DENNIS P. COYLE, individually and as Trustee, whose mailing address if P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantor, to
FLORIDA POWER & LIGHT COMPANY, a Florida corporation

whose postoffice address is
P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantee:

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: *That the grantor, for and in consideration of the sum of* $ 10.00 *and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee, all that certain land situate in* County, Florida, *viz:*

The westerly 50 feet of Lot 1 and 2, of Knowles Court Addition, according to the Plat thereof on file in the Office of the Clerk of the Circuit Court in and for Palm Beach County, Florida, recorded in Plat Book 9, Page 82.

The above subject property is not the homestead property of the Grantor herein nor does the property abut the homestead property of the Grantor. The Grantor herein resides in the City of Juno Beach.

Together, *with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.*

To Have and to Hold, *the same in fee simple forever.*

And *the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons claiming by, through or under the said grantor.*

In Witness Whereof, *the said grantor has hereunto set* his *hand and seal the day and year first above written.*

Signed, sealed and delivered in our presence:

Roberta A. Economy
Alene S. Egol

DENNIS P. COYLE, individually and as Trustee (L.S.)
(L.S.)

STATE OF FLORIDA,
COUNTY OF PALM BEACH

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid, to take acknowledgments, personally appeared DENNIS P. COYLE, individually and as Trustee to me known to be the person described in and who executed the foregoing instrument and he acknowledged before me that he executed the same.

WITNESS my hand and official seal in the County and State last aforesaid this 13th day of May A. D. 19 2003

NOTARY PUBLIC - STATE OF FLORIDA
HOLLY M. ALTMAN
COMMISSION # CC859079
EXPIRES 7/29/2003
BONDED THRU ASA 1-800-NOTARY1

Holly M. Altman

Property Appraiser's Public Access System

Home

Property Information

View Map

Calculate Portability

Location Address: 6001 N FLAGLER DR

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-01-000-0012

Subdivision: KNOWLES COURT ADD IN

Official Records Book: 08251 Page: 1663 Sale Date: May-1994

Legal Description: KNOWLES COURT ADD E 71 FT OF LTS 1 & 2

Owner Information

All Owners

Name: LAND RESOURCES INV CO

Mailing Address: PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

Sales Date	Book/Page	Price	Sale Type	Owner
May-1994	08251/1663 ✓	$145,000	WARRANTY DEED	
Oct-1990	06656/0328	$115,000	WARRANTY DEED	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$35,284	$53,460	$48,600
Total Market Value:	$35,284	$53,460	$48,600

Use Code: 0000 Description: VACANT

Property Information
Number of Units: 0

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$35,284	$53,460	$48,600
Exemption Amount:	$0	$0	$0
Taxable Value:	$35,284	$53,460	$48,600

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$739	$1,222	$1,150
Non Ad Valorem:	$0	$0	$0
Total Tax:	$739	$1,222	$1,150

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

FILE NO.: 94032271

Return to: (enclose self-addressed stamped envelope)
Name: LAND RESOURCES INVESTMENT CO.
Address: C/o Post Office Box 14000
Juno Beach, FL 33408

This Instrument Prepared by: STEWART TITLE
Address: PREPARED BY KIMBERLY A. NICHOLS AS AGENT FOR SECURITY ABSTRACT & INSURANCE CO. 1555 PALM BEACH LAKES BLVD. WEST PALM BEACH, FLORIDA. TO FULFILL THE CONDITIONS DESCRIBED IN A TITLE INSURANCE COMMITMENT ISSUED BY SAID COMPANY.

Property Control Parcel Identification (Folio) Number(s):
74-43-43-04-01-000-0012

Grantee(s) S.S. #(s):

SPACE ABOVE THIS LINE FOR PROCESSING DATA

WARRANTY DEED
INDIVID. TO INDIVID.

MAY-04-1994 10:08am 94-161887
ORB 8251 Pg 1663
Con 145.00 Doc 1.05 .00
RECORD VERIFIED DOROTHY H WILKEN
CLERK OF THE CIRCUIT COURT - PB COUNTY, FL

SPACE ABOVE THIS LINE FOR RECORDING DATA

This Warranty Deed *Made the* 5th *day of* MAY *A.D.* 1994 *by*
ERNST MICHEL , A SINGLE MAN
hereinafter called the grantor, to
LAND RESOURCES INVESTMENT CO. , A FLORIDA CORPORATION, AS TRUSTEE
whose post office address is POST OFFICE BOX 14000
hereinafter called the grantee: JUNO BEACH, FL 33408-

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: *That the grantor, for and in consideration of the sum of $10.00 and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee all that certain land situate in* PALM BEACH *County, State of Florida, viz:*

Lots 1 and 2, EXCEPT the West 50 feet thereof, KNOWLES COURT ADDITION, according to the Plat thereof on file in the Office of the Clerk of the Circuit Court in and for Palm Beach County, Florida, recorded in Plat Book 9, Page 82.

Together, *with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.*

To Have and to Hold, *the same in fee simple forever.*

And *the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 19 93, and restrictions, reservations, easements and covenants of record.*

In Witness Whereof, *the said grantor has signed and sealed these presents the day and year first above written.*

Signed, sealed and delivered in the presence of:

Signature
WITNESS: KIMBERLY A. NICHOLS
Printed Signature

Signature
WITNESS: IORETTA ROSSANO
Printed Signature

Signature
WITNESS:
Printed Signature

Signature
WITNESS:
Printed Signature

Signature
ERNST MICHEL
Printed Signature
5295 Marcia Place
Post Office Address West Palm Beach, FL 33401

Signature

Printed Signature

Post Office Address

STATE OF FLORIDA)
COUNTY OF PALM BEACH)

I hereby Certify that on this day, before me, an officer duly authorized to administer oaths and take acknowledgments, personally appeared ERNST MICHEL , A SINGLE MAN known to me to be the person(s) described in and who executed the foregoing instrument, who acknowledged before me that executed the same, that I relied upon the following form(s) of identification of the above-named person(s): FLORIDA DRIVERS LICENSE and that an oath (was/was not) taken.

Witness my hand and official seal in the County and State last aforesaid this 5th day of MAY, A.D. 1994.

Notary Signature
KIMBERLY A. NICHOLS
Printed Notary Signature My Commission Expires:

KIMBERLY A. NICHOLS
MY COMMISSION # CC 236916
EXPIRES: December 6, 1995
Bonded Thru Notary Public Underwriters

Property Appraiser's Public Access System

Home

Property Information

View Map

Calculate Portability

Location Address: 409 59TH ST

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-01-000-0030

Subdivision: KNOWLES COURT ADD IN

Official Records Book: 06298 Page: 1982 Sale Date: Nov-1989

Legal Description: KNOWLES COURT ADD LTS 3 & 4

Owner Information

All Owners

Name: FLORIDA POWER & LIGHT CO

Mailing Address: PO BOX 14000 - JLM
NORTH PALM BEACH FL 33408 0420

Sales Information

Sales Date	Book/Page	Price	Sale Type	Owner
Nov-1989	06298/1982	$45,000	WARRANTY DEED	
Jul-1988	05742/1283	$100	QUIT CLAIM	
Jun-1988	05742/1282	$100	QUIT CLAIM	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$27,492	$41,654	$34,425
Total Market Value:	$27,492	$41,654	$34,425

Property Information
Number of Units: 0

Use Code: 0000 Description: VACANT

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$27,492	$41,654	$34,425
Exemption Amount:	$0	$0	$0
Taxable Value:	$27,492	$41,654	$34,425

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$576	$952	$814
Non Ad Valorem:	$0	$0	$0
Total Tax:	$576	$952	$814

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

This instrument prepared by:
SOUTHATLANTIC TITLE AGENCY, INC.
11380 PROSPERITY FARMS ROAD #110
PALM BEACH GARDENS, FLORIDA 33410

RECORD AND RETURN TO:
FLORIDA POWER & LIGHT COMPANY
Attn: Robert Hardee
P.O. Box 14000
Juno Beach, Fl. 33408-0420

DEC-20-1989 03:01PM 89-364847
ORB 6298 Pg 1982
Con 45,000.00 Doc 247.50
JOHN B DUNKLE, CLERK - PB COUNTY, FL

74-43-43-04-01-000-0030

[Space Above This Line For Recording Data]

Warranty Deed

(STATUTORY FORM—SECTION 689.02 F.S.)

This Indenture, made this 8th day of December 1989. **Between** MARY ELLIOTT, AKA MARY W. ELLIOTT, and AGNES GEISSINGER

of the County of PALM BEACH, State of FLORIDA, grantor*, and FLORIDA POWER & LIGHT COMPANY

whose post office address 1809 59TH STREET, WEST PALM BEACH, FL 33409

of the County of PALM BEACH, State of FLORIDA, grantee*,

Witnesseth: That said grantor, for and in consideration of the sum of TEN DOLLARS AND NO/100THS

and other good and valuable considerations to said grantor in hand paid by said grantee, the receipt whereof is hereby acknowledged, has granted, bargained and sold to the said grantee, and grantee's heirs and assigns forever, the following described land, situate, lying and being in County, Florida, to-wit:

LOTS 3 AND 4, KNOWLES COURT ADDITION TO CITY OF WEST PALM BEACH, ACCORDING TO THE PLAT THEREOF ON FILE IN THE OFFICE OF THE CLERK OF THE CIRCUIT COURT IN AND FOR PALM BEACH COUNTY, FLORIDA RECORDED IN PLAT BOOK 9, PAGE 82.

Subject to restrictions, reservations, easements and limitations of record, if any, provided that this shall not serve to reimpose same, zoning ordinances, and taxes for the current year and subsequent years.
Said grantor does hereby fully warrant the title to said land, and will defend that same against the lawful claims of all persons whomsoever.
*"Grantor" and "grantee" are used for singular or plural, as context requires.

In Witness Whereof, Grantor has hereunto set grantor's hand and seal the day and year first above written.
Signed, sealed and delivered in our presence.

Witness: _____
Witness: _____

Mary W. Elliott
MARY ELLIOTT
Agnes Geissinger
AGNES GEISSINGER

STATE OF ~~FLORIDA~~ N.Y.
COUNTY OF ~~PALM BEACH~~ SUFFOLK

I Hereby Certify that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid to take acknowledgments, personally appeared

~~MARY ELLIOTT, AKA MARY W. ELLIOTT,~~ and AGNES GEISSINGER

to me known to be the person described in and who executed the foregoing instrument and acknowledged before me that executed the same.

WITNESS my hand and official seal in the County and State last aforesaid this 28th day of ~~December~~ Nov. 19 89

89-6305

Notary Public
My commission expires:

MAURICE LEVENSTON
Notary Public, State of New York
Qualified in Suffolk County
No. 03-[illegible]
My Commission expires March 30, 1990

This is a Non-Official Copy

Property Appraiser's Public Access System

Home

Property Information

View Map

Calculate Portability

Location Address: 415 59TH ST

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-01-000-0050

Subdivision: KNOWLES COURT ADD IN

Official Records Book: 15309 Page: 1511 Sale Date: May-2003

Legal Description: KNOWLES COURT ADDITION LTS 5 TO 7 INC

Owner Information

All Owners

Name: FLORIDA POWER & LIGHT COMPANY

Mailing Address: PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

Sales Date	Book/Page	Price	Sale Type	Owner
May-2003	15309/1511	$10	WARRANTY DEED	FLORIDA POWER & LIGHT COMPANY
Aug-1995	08866/1757	$70,000	WARRANTY DEED	
Dec-1991	07056/1526	$55,000	WARRANTY DEED	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$35,284	$58,806	$48,600
Total Market Value:	$35,284	$58,806	$48,600

Property Information
Number of Units: 0

Use Code: 0000 Description: VACANT

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$35,284	$58,806	$48,600
Exemption Amount:	$0	$0	$0
Taxable Value:	$35,284	$58,806	$48,600

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$739	$1,344	$1,150
Non Ad Valorem:	$0	$0	$0
Total Tax:	$739	$1,344	$1,150

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

2) Return to: (enclose self-addressed stamped envelope)

Name

Chicago Title Insurance Agency, Inc.
3067 East Commercial Blvd.
Fort Lauderdale, Florida 33308
FILE 33526

Alene S. Egol, Esq.
Address:
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408
Property Appraisers Parcel Identification (Folio) Number(s):

74-43-43-04-01-000-0050

SPECIAL WARRANTY DEED

06/03/2003 10:13:26 20030320994
OR BK 15309 PG 1511
Palm Beach County, Florida
AMT 10.00
Doc Stamp 0.70
Dorothy H. Wilken, Clerk

SPACE ABOVE THIS LINE FOR RECORDING DATA

This Special Warranty Deed *Made the* 13th *day of* MAY *A. D.* 2003 *by*
DENNIS P. COYLE, individually and as Trustee, whose mailing address is P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantor, to
FLORIDA POWER & LIGHT COMPANY, a Florida corporation

whose postoffice address is
P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantee:

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: *That the grantor, for and in consideration of the sum of* $ 10.00 *and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee, all that certain land situate in* County, Florida, viz:

Lots 5, 6 and 7, Knowles Court Addition, according to the Plat thereof on file in the Office of the Clerk of the Circuit Court in and for Palm Beach County, Florida. recorded in Plat Book 9, Page 82.

The above subject property is not the homestead property of the Grantor herein nor does the property abut the homestead property of the Grantor. The Grantor herein resides in the City of Juno Beach.

Together, *with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.*

To Have and to Hold, *the same in fee simple forever.*

And *the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons claiming by, through or under the said grantor.*

In Witness Whereof, *the said grantor has hereunto set* his *hand and seal the day and year first above written.*

Signed, sealed and delivered in our presence:

Roberta L. Economy
Alene S. Egol

DENNIS P. COYLE, individually and as Trustee (L.S.)
(L.S.)

STATE OF FLORIDA,
COUNTY OF PALM BEACH

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid, to take acknowledgments, personally appeared DENNIS P. COYLE, individually and as Trustee

to me known to be the person described in and who executed the foregoing instrument and he acknowledged before me that he executed the same.

WITNESS my hand and official seal in the County and State last aforesaid this 13th day of May A. D. 2003

NOTARY PUBLIC-STATE OF FLORIDA
HOLLY M. ALTMAN
COMMISSION # CC936078
EXPIRES 7/26/2003
BONDED THRU ASA 1-888-NOTARY1

Holly M. Altman

Property Appraiser's Public Access System

Home

Property Information

View Map

Calculate Portability

Location Address: 423 59TH ST

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-01-000-0080

Subdivision: KNOWLES COURT ADD IN

Official Records Book: 15343 Page: 301 Sale Date: May-2003

Legal Description: KNOWLES COURT ADDITION LOTS 8 TO 10 INC

Owner Information

All Owners

Name: FLORIDA POWER & LIGHT COMPANY

Mailing Address: PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

Sales Date	Book/Page	Price	Sale Type	Owner
May-2003	15343/0301	$10	WARRANTY DEED	FLORIDA POWER & LIGHT COMPANY
Sep-1993	07903/0458	$53,000	WARRANTY DEED	
Aug-1989	06167/1551	$48,500	WARRANTY DEED	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$35,284	$58,806	$48,600
Total Market Value:	$35,284	$58,806	$48,600

Property Information
Number of Units: 0

Use Code: 0000 Description: VACANT

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$35,284	$58,806	$48,600
Exemption Amount:	$0	$0	$0
Taxable Value:	$35,284	$58,806	$48,600

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$739	$1,344	$1,150
Non Ad Valorem:	$0	$0	$0
Total Tax:	$739	$1,344	$1,150

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

Return to: (enclose self-addressed stamped envelope)

Chicago Title Insurance Agency, Inc.
3067 East Commercial Blvd.
Fort Lauderdale, Florida 33308

33526

This Instrument Prepared by:
Alene S. Egol, Esq.

Address:
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408

Property Appraisers Parcel Identification (Folio) Number(s):
74-43-43-04-01-000-0080

SPECIAL WARRANTY DEED

RAMCO FORM 03

06/09/2003 12:38:35 20030335352
OR BK 15343 PG 0301
Palm Beach County, Florida
AMT 10.00
Doc Stamp 0.70
Dorothy H. Wilken, Clerk

SPACE ABOVE THIS LINE FOR RECORDING DATA

This Special Warranty Deed *Made the* 20th *day of* MAY *A. D.* ~~19~~ 2003 *by*
JOHN T. BLOUNT, individually and as Trustee, whose mailing address is P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantor, to

FLORIDA POWER & LIGHT COMPANY, a Florida corporation

whose postoffice address is
P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantee:

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: *That the grantor, for and in consideration of the sum of* $ 10.00 *and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee, all that certain land situate in* PALM BEACH *County, Florida, viz:*
Lots 8, 9 and 10, Knowles Court Addition, according to the Plat thereof on file in the Office of the Clerk of the Circuit Court in and for Palm Beach County, Florida, recorded in Plat Book 9, Page 82.

The above subject property is not the homestead property of the Grantor herein nor does the property abut the homestead property of the Grantor. The Grantor herein resides in the City of BONITA SPRINGS FL

Together, *with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.*

To Have and to Hold, *the same in fee simple forever.*

And *the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons claiming by, through or under the said grantor.*

In Witness Whereof, *the said grantor has hereunto set* his *hand and seal the day and year first above written.*

Signed, sealed and delivered in our presence:

Audrey Leyden
AUDREY LOY CHIN
Nelli Becerra
Nelli Becerra

John T. Blount (L.S.)
JOHN T. BLOUNT, individually and as Trustee (L.S.)

STATE OF FLORIDA,
COUNTY OF MIAMI-DADE

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid, to take acknowledgments, personally appeared JOHN T. BLOUNT, individually and as Trustee, PERSONALLY KNOWN TO ME, to me known to be the person described in and who executed the foregoing instrument and he acknowledged before me that he executed the same.

WITNESS my hand and official seal in the County and State last aforesaid this 20th day of MAY A. D. ~~19~~ 2003

JOAQUIN E. LEON
MY COMMISSION # DD 060552
EXPIRES: November 20, 2005
Bonded Thru Budget Notary Services

Property Appraiser's Public Access System

Property Appraiser

Home

Property Information

View Map

Calculate Portability

Location Address: 425 59TH ST

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-01-000-0110

Subdivision: KNOWLES COURT ADD IN

Official Records Book: 08137 Page: 1995 Sale Date: Feb-1994

Legal Description: KNOWLES COURT ADD LTS 11 & 12

Owner Information

All Owners

Name: FLORIDA POWER & LIGHT CO

Mailing Address: PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

Sales Date	Book/Page	Price	Sale Type	Owner
Feb-1994	08137/1995	$45,000	WARRANTY DEED	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$27,492	$41,654	$34,425
Total Market Value:	$27,492	$41,654	$34,425

Use Code: 0000 Description: VACANT

Property Information
Number of Units: 0

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$27,492	$41,654	$34,425
Exemption Amount:	$0	$0	$0
Taxable Value:	$27,492	$41,654	$34,425

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$576	$952	$814
Non Ad Valorem:	$0	$0	$0
Total Tax:	$576	$952	$814

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

FILE NO.: 94011581

Return to: (enclose self-addressed stamped envelope)
Name FLORIDA POWER & LIGHT
Address: Atten: Jim Weeks
GRANTEE

This Instrument Prepared by: STEWART TITLE
Address: PREPARED BY KINGSLEY K NICHOLS AS AGENT FOR SECURITY ABSTRACT & INSURANCE CO. 1555 PALM BEACH LAKES BLVD. WEST PALM BEACH, FLORIDA TO FULFILL THE CONDITIONS DESCRIBED IN A TITLE INSURANCE COMMITMENT ISSUED BY SAID COMPANY

Property Control Parcel Identification (Folio) Number(s):
74-43-43-04-01-000-0110

Grantee(s) S.S. #(s):

SPACE ABOVE THIS LINE FOR PROCESSING DATA

WARRANTY DEED
INDIVID. TO INDIVID.

FEB-24-1994 3:04pm 94-066061
ORB 8137 Pg 1995
Doc 45,000.00 Doc 315.00
RECORD VERIFIED DOROTHY H WILKEN
CLERK OF THE COURT - PB COUNTY, FL

SPACE ABOVE THIS LINE FOR RECORDING DATA

This Warranty Deed *Made the* 23rd *day of* FEBRUARY *A.D.* 1994 *by*
ROBERT BENJAMIN FULTZ AND LOIS A. FULTZ , HIS WIFE
hereinafter called the grantor, to
FLORIDA POWER & LIGHT COMPANY , A FLORIDA CORPORATION

whose post office address is 11770 U.S. Highway One
hereinafter called the grantee: North Palm Beach, Fla. 33408
(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: *That the grantor, for and in consideration of the sum of $10.00 and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee all that certain land situate in* PALM BEACH *County, State of Florida, viz:*

Lots 11 and 12, KNOWLES COURT ADDITION, according to the Plat thereof on file in the Office of the Clerk of the Circuit Court in and for Palm Beach County, Florida, recorded in Plat Book 9, Page 82.

Together, *with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.*

To Have and to Hold, *the same in fee simple forever.*

And *the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 19 93, and restrictions, reservations, easements and covenants of record.*

In Witness Whereof, *the said grantor has signed and sealed these presents the day and year first above written.*

Signed, sealed and delivered in the presence of:

Signature
WITNESS: KIMBERLY A. NICHOLS
Printed Signature

Signature
WITNESS: DIANE W. BISCHOFF
Printed Signature

Signature
WITNESS: KIMBERLY A. NICHOLS
Printed Signature

Signature
WITNESS: DIANE W. BISCHOFF
Printed Signature

Signature
ROBERT BENJAMIN FULTZ
Printed Signature
12204 Colony Ave PBG FL
Post Office Address 33410

Signature
LOIS A. FULTZ
Printed Signature
12204 Colony Ave. PBG, FL
Post Office Address 33410

STATE OF FLORIDA
COUNTY OF PALM BEACH

I hereby Certify that on this day, before me, an officer duly authorized to administer oaths and take acknowledgments, personally appeared ROBERT BENJAMIN FULTZ AND LOIS A. FULTZ , HIS WIFE known to me to be the person(s) described in and who executed the foregoing instrument, who acknowledged before me that THEY executed the same, that I relied upon the following form(s) of identification of the above-named person(s): FLORIDA DRIVERS LICENSE and that an oath (was/was not) taken.

Witness my hand and official seal in the County and State last aforesaid this 23rd day of FEBRUARY, A.D. 1994.

Notary Signature
KIMBERLY A. NICHOLS
Printed Notary Signature My Commission Expires:

KIMBERLY A. NICHOLS
MY COMMISSION # CC 206015
EXPIRES: December 8, 1995
Bonded Thru Notary Public Underwriters

Property Appraiser's Public Access System

Property Appraiser

Home

Property Information

View Map

Calculate Portability

Location Address: 429 59TH ST

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-01-000-0130

Subdivision: KNOWLES COURT ADD IN

Official Records Book: 15309 Page: 1510 Sale Date: May-2003

Legal Description: KNOWLES COURT ADD LTS 13 & 14

Owner Information

All Owners

Name: FLORIDA POWER & LIGHT COMPANY

Mailing Address: PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

All Sales

Sales Date	Book/Page	Price	Sale Type	Owner
May-2003	15309/1510	$10	WARRANTY DEED	FLORIDA POWER & LIGHT COMPANY
~~Sep-1996~~	~~09426/1439~~	~~$65,000~~	~~WARRANTY DEED~~	
Oct-1990	06617/0742	$38,500	QUIT CLAIM	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$27,492	$41,654	$34,425
Total Market Value:	$27,492	$41,654	$34,425

Property Information
Number of Units: 0

Use Code: 0000 Description: VACANT

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$27,492	$41,654	$34,425
Exemption Amount:	$0	$0	$0
Taxable Value:	$27,492	$41,654	$34,425

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$576	$952	$814
Non Ad Valorem:	$0	$0	$0
Total Tax:	$576	$952	$814

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

Return to: (enclose self-addressed stamped envelope)

Name
Chicago Title Insurance Agency, Inc.
3067 East Commercial Blvd.
Fort Lauderdale, Florida 33308
FILE 33526

This Instrument Prepared by:
Alene S. Egol, Esq.

Address:
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408

Property Appraisers Parcel Identification (Folio) Number(s):

74-43-43-04-01-000-0130

SPECIAL WARRANTY DEED

06/03/2003 10:13:26 20030320993
OR BK 15309 PG 1510
Palm Beach County, Florida
AMT 10.00
Doc Stamp 0.70
Dorothy H. Wilken, Clerk

SPACE ABOVE THIS LINE FOR RECORDING DATA

This Special Warranty Deed *Made the* 13th *day of* MAY A. D. 19 2003 *by*
DENNIS P. COYLE, individually and as Trustee, whose mailing address is P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantor, to
FLORIDA POWER & LIGHT COMPANY, a Florida corporation

whose postoffice address is
P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantee:

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: *That the grantor, for and in consideration of the sum of* $ 10.00 *and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee, all that certain land situate in* County, Florida, viz:

Lots 13 and 14, Knowles Court Addition, according to the Plat thereof on file in the Office of the Clerk of the Circuit Court in and for Palm Beach County, Florida, recorded in Plat Book 9, Page 82.

The above subject property is not the homestead property of the Grantor herein nor does the property abut the homestead property of the Grantor. The Grantor herein resides in the City of Juno Beach.

Together, *with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.*

To Have and to Hold, *the same in fee simple forever.*

And *the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons claiming by, through or under the said grantor.*

In Witness Whereof, *the said grantor has hereunto set* his *hand and seal the day and year first above written.*

Signed, sealed and delivered in our presence:

Roberta A. Economy
Diane Dr Dent

DENNIS P. COYLE, individually and as Trustee (L.S.)
(L.S.)

STATE OF FLORIDA,
COUNTY OF PALM BEACH

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid, to take acknowledgments, personally appeared DENNIS P. COYLE, individually and as Trustee

to me known to be the person described in and who executed the foregoing instrument and he acknowledged before me that he executed the same.

WITNESS my hand and official seal in the County and State last aforesaid this 13th day of May A. D. 19 2003

NOTARY PUBLIC - STATE OF FLORIDA
HOLLY M ALTMAN
COMMISSION # CC859079
EXPIRES 7/28/2003
BONDED THRU ASA 1-800-NOTARY1

Holly M Altman

Property Appraiser's Public Access System

Property Appraiser

Home

Property Information

View Map

Calculate Portability

Location Address: 433 59TH ST

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-01-000-0150

Subdivision: KNOWLES COURT ADD IN

Official Records Book: 06533 Page: 1487 Sale Date: Jul-1990

Legal Description: KNOWLES COURT ADD LTS 15 & 16

Owner Information

All Owners

Name: FLORIDA POWER & LIGHT CO

Mailing Address: PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

Sales Date	Book/Page	Price	Sale Type	Owner
Jul-1990	06533/1487	$34,000	WARRANTY DEED	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$27,492	$41,654	$34,425
Total Market Value:	$27,492	$41,654	$34,425

Property Information
Number of Units: 0

Use Code: 0000 Description: VACANT

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$27,492	$41,654	$34,425
Exemption Amount:	$0	$0	$0
Taxable Value:	$27,492	$41,654	$34,425

Structure Details

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$576	$952	$814
Non Ad Valorem:	$0	$0	$0
Total Tax:	$576	$952	$814

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

Return to: (enclose self-addressed stamped envelope)

Name: W/C#10
CT-18521

Address:

This Instrument Prepared by: EARLINE WOODS
CHICAGO TITLE INSURANCE COMPANY
Address: 2393 SOUTH CONGRESS AVENUE
WEST PALM BEACH, FLORIDA 33406

Property Appraisers Parcel Identification (Folio) Number(s):
74 43 43 04 01 000 0150

WARRANTY DEED
FROM INDIVIDUAL TO CORPORATION

RAMCO FORM 34

JUL-31-1990 10:44am 90-218859
ORB 6533 Pg 1487
Con 34,000.00 Doc 187.00
JOHN B DUNKLE, CLERK - PB COUNTY, FL

SPACE ABOVE THIS LINE FOR RECORDING DATA

This Warranty Deed *Made the* 30TH *day of* JULY *A. D. 1990 by*
CHARLES F. KEYSER AND VERDA KEYSER, HIS WIFE
hereinafter called the grantor, to
FLORIDA POWER & LIGHT COMPANY
a corporation existing under the laws of the State of FLORIDA *, with its permanent postoffice address at* 700 Universe Boulevard, Juno Beach, Florida 33405
hereinafter called the grantee:

(Whenever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: *That the grantor, for and in consideration of the sum of* $ 10.00 *and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee, all that certain land situate in* PALM BEACH *County, Florida, viz:*

LOTS 15 AND 16, KNOWLES COURT ADDITION, A SUBDIVISION IN THE CITY OF WEST PALM BEACH, FLORIDA, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 9, PAGE 82, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SUBJECT TO RESTRICTIONS, RESERVATIONS AND EASEMENTS OF RECORD, IF ANY; TAXES FOR THE YEAR 1990 AND SUBSEQUENT YEARS AND ANY AND ALL VALID ZONING ORDINANCES.

Together *with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.*

To Have and to Hold, *the same in fee simple forever.*

And *the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land; that the grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 1989*

RECORD VERIFIED
PALM BEACH COUNTY, FLA
JOHN B. DUNKLE
CLERK CIRCUIT COURT

In Witness Whereof, *the said grantor has hereunto set hand and seal the day and year first above written.*

Signed, sealed and delivered in our presence:

Ellen C. Lyons
Jan H. Edderger

Charles F. Keyser (L.S.)
CHARLES F. KEYSER
Verda Keyser (L.S.)
VERDA KEYSER

STATE OF FLORIDA,
COUNTY OF PALM BEACH

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid to take acknowledgments, personally appeared
CHARLES F. KEYSER AND VERDA KEYSER, HIS WIFE
to me known to be the person S described in and who executed the foregoing instrument and THEY acknowledged before me that THEY executed the same.

WITNESS my hand and official seal in the County and State last aforesaid this 30TH day of JULY, A.D. 1990.

OFFICIAL NOTARY SEAL
JAN H. EDDERGER
NOTARY PUBLIC STATE OF FLORIDA
My Commission Exp. JUNE 5,1994

My Commission Expires:

Jan H. Edderger
NOTARY PUBLIC

Property Appraiser's Public Access System

Home

Property Information

View Map

Calculate Portability

Location Address: 437 59TH ST

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-01-000-0170

Subdivision: KNOWLES COURT ADD IN

Official Records Book: 15309 Page: 1515 Sale Date: May-2003

Legal Description: KNOWLES COURT ADD LOTS 17 & 18

Owner Information

All Owners

Name: FLORIDA POWER & LIGHT COMPANY

Mailing Address: PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

Sales Date	Book/Page	Price	Sale Type	Owner
May-2003	15309/1515 ✓	$10	WARRANTY DEED	FLORIDA POWER & LIGHT COMPANY
Mar-1999	10981/1503	$59,000	WARRANTY DEED	COYLE DENNIS TR

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$27,492	$41,654	$34,425
Total Market Value:	$27,492	$41,654	$34,425

Property Information
Number of Units: 0

Use Code: 0000 Description: VACANT

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$27,492	$41,654	$34,425
Exemption Amount:	$0	$0	$0
Taxable Value:	$27,492	$41,654	$34,425

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$576	$952	$814
Non Ad Valorem:	$0	$0	$0
Total Tax:	$576	$952	$814

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

Return to: (enclose self-addressed stamped envelope)

Chicago Title Insurance Agency, Inc.
3067 East Commercial Blvd.
Fort Lauderdale, Florida 33308
FILE 33526

This Instrument Prepared by:

Alene S. Egol, Esq.
Address:
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408
Property Appraisers Parcel Identification (Folio) Number(s):
74-43-43-04-01-00-0170

SPECIAL WARRANTY DEED

06/03/2003 10:13:26 20030320998
OR BK 15309 PG 1515
Palm Beach County, Florida
AMT 10.00
Doc Stamp 0.70
Dorothy H. Wilken, Clerk

SPACE ABOVE THIS LINE FOR RECORDING DATA

This Special Warranty Deed *Made the* 13th *day of* MAY *A. D.* ~~19~~ 2003 *by*
DENNIS P. COYLE, individually and as Trustee, whose mailing address is P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantor, to
FLORIDA POWER & LIGHT COMPANY, a Florida corporation

whose postoffice address is
P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantee:

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: *That the grantor, for and in consideration of the sum of* $ 10.00 *and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee, all that certain land situate in County, Florida, viz:*

Lots 17 and 18 of Knowles Court Addition, according to the Plat thereof on file in the Office of the Clerk of the Circuit Court in and for Palm Beach County, Florida, recorded in Plat Book 9, Page 82.

The above subject property is not the homestead property of the Grantor herein nor does the property abut the homestead property of the Grantor. The Grantor herein resides in the City of Juno Beach.

Together, *with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.*

To Have and to Hold, *the same in fee simple forever.*

And *the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons claiming by, through or under the said grantor.*

In Witness Whereof, *the said grantor has hereunto set* his *hand and seal the day and year first above written.*

Signed, sealed and delivered in our presence:

Roberta L. Economy
Ilene A. Usnek

DENNIS P. COYLE, individually and as Trustee (L.S.)
(L.S.)

STATE OF FLORIDA,
COUNTY OF PALM BEACH

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid, to take acknowledgments, personally appeared DENNIS P. COYLE, individually and as Trustee

to me known to be the person described in and who executed the foregoing instrument and he acknowledged before me that he executed the same.

WITNESS my hand and official seal in the County and State last aforesaid this 13th day of May A. D. ~~19~~ 2003

NOTARY PUBLIC - STATE OF FLORIDA
HOLLY M. ALTMAN
COMMISSION # CC856079
EXPIRES 7/28/2003
BONDED THRU ASA 1-888-NOTARY1

Holly M. Altman

Property Appraiser's Public Access System

Home

Property Information

View Map

Calculate Portability

Location Address: 441 59TH ST

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-01-000-0190

Subdivision: KNOWLES COURT ADD IN

Official Records Book: 07973 Page: 0111 Sale Date: Dec-1992

Legal Description: KNOWLES COURT ADD LTS 19 & 20

Owner Information

All Owners

Name: FLORIDA POWER & LIGHT CO

Mailing Address: PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

All Sales

Sales Date	Book/Page	Price	Sale Type	Owner
Dec-1992	07973/0111	$52,000	WARRANTY DEED	
~~Feb-1992~~	~~07170/1188~~	~~$100~~	~~WARRANTY DEED~~	
Dec-1986	05123/0643	$65,000	WARRANTY DEED	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$27,492	$37,868	$34,425
Total Market Value:	$27,492	$37,868	$34,425

Property Information
Number of Units: 0

Use Code: 0000 Description: VACANT

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$27,492	$37,868	$34,425
Exemption Amount:	$0	$0	$0
Taxable Value:	$27,492	$37,868	$34,425

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$576	$865	$814
Non Ad Valorem:	$0	$0	$0
Total Tax:	$576	$865	$814

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

FILE NO.: 92100921

Return to: (enclose self-addressed stamped envelope)
Name: FLORIDA POWER & LIGHT COMPANY
Address: C/O Real Estate Division
GRANTEE

This Instrument Prepared by: STEWART TITLE
Address: PREPARED BY KIMBERLY A. NICHOLS AS AGENT FOR SECURITY ABSTRACT & INSURANCE CO., 1555 PALM BEACH LAKES BLVD. WEST PALM BEACH, FLORIDA. TO FULFILL THE CONDITIONS DESCRIBED IN A TITLE INSURANCE COMMITMENT ISSUED BY SAID

Property Control Parcel Identification (Folio) Number(s):
74-43-43-04-01-000-0190

Grantee(s) S.S. #(s):

SPACE ABOVE THIS LINE FOR PROCESSING DATA

WARRANTY DEED
INDIVID. TO INDIVID.

NOV-09-1993 12:33PM 93-362951
ORB 7973 Pg 111
Con 52,000.00 Doc 364.00
RECORD VERIFIED DOROTHY H WILKEN
CLERK OF THE COURT - PB COUNTY, FL

SPACE ABOVE THIS LINE FOR RECORDING DATA

This Warranty Deed Made the 22nd *day of* December *A.D.* 1992 *by*
GERALD E. WHITE AND GLORIA WHITE , HIS WIFE
hereinafter called the grantor, to
FLORIDA POWER & LIGHT COMPANY, a Florida Corporation
whose post office address is P.O. BOX 14000, JUNO BEACH, FLORIDA 33408
hereinafter called the grantee:

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: That the grantor, for and in consideration of the sum of $10.00 and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee all that certain land situate in PALM BEACH *County, State of Florida, viz:*

Lots 19 and 20, KNOWLES COURT ADDITION, according to the Plat thereof on file in the Office of the Clerk of the Circuit Court in and for Palm Beach County, Florida, recorded in Plat Book 9, Page 82.

Together, with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

To Have and to Hold, the same in fee simple forever.

And the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 19 91 , and restrictions, reservations, easements and covenants of record.

In Witness Whereof, the said grantor has signed and sealed these presents the day and year first above written.

Signed, sealed and delivered in the presence of:

Signature
WITNESS: Kimberly A. Nichols
Printed Signature

Signature
WITNESS: Loretta Rossano
Printed Signature

Signature
WITNESS: Kimberly A. Nichols
Printed Signature

Signature
WITNESS: Loretta Rossano
Printed Signature

Signature
GERALD E. WHITE
Printed Signature
1149 North Harbour Drive
Post Office Address Singer Island, Florida 33404

Signature
GLORIA WHITE
Printed Signature
1149 North Harbour Drive
Post Office Address Singer Island, Florida 33404

STATE OF FLORIDA)
COUNTY OF PALM BEACH)

I hereby Certify that on this day, before me, an officer duly authorized to administer oaths and take acknowledgments, personally appeared GERALD E. WHITE AND GLORIA WHITE , HIS WIFE known to me to be the person(s) described in and who executed the foregoing instrument, who acknowledged before me that THEY executed the same, that I relied upon the following form(s) of identification of the above-named person(s): Florida Drivers License and that an oath (was/was not) taken.

Witness my hand and official seal in the County and State last aforesaid this 22nd day of December, A.D. 1992

Notary Signature
Kimberly A. Woolrige
Printed Notary Signature

(SEAL)

My Commission Expires:

Gary R. Nikolits, CFA Property Appraiser's Public Access System

PROPERTY APPRAISER

Home

Property Information

View Map

Calculate Portability

Location Address: 445 59TH ST

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-01-000-0210

Subdivision: KNOWLES COURT ADD IN

Official Records Book: 15343 Page: 300 Sale Date: May-2003

Legal Description: KNOWLES COURT ADD LOTS 21 & 22

Owner Information

All Owners

Name: FLORIDA POWER & LIGHT COMPANY

Mailing Address: PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

Sales Date	Book/Page	Price	Sale Type	Owner
May-2003	15343/0300 ✓	$10	WARRANTY DEED	FLORIDA POWER & LIGHT COMPANY
Sep-1993	07903/0495	$42,000	WARRANTY DEED	
Mar-1982	03686/1947	$24,700	WARRANTY DEED	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$27,492	$37,868	$34,425
Total Market Value:	$27,492	$37,868	$34,425

Property Information
Number of Units: 0

Use Code: 0000 Description: VACANT

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$27,492	$37,868	$34,425
Exemption Amount:	$0	$0	$0
Taxable Value:	$27,492	$37,868	$34,425

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$576	$865	$814
Non Ad Valorem:	$0	$0	$0
Total Tax:	$576	$865	$814

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

Return to: (enclose self-addressed stamped envelope)
Chicago Title Insurance Agency, Inc.
3067 East Commercial Blvd.
Fort Lauderdale, Florida 33308

33526

Juno Beach, FL 33408
This Instrument Prepared by:
Alene S. Egol, Esq.

Address:
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408

Property Appraisers Parcel Identification (Folio) Number(s):

74 43 43 04 01 000 0210

SPECIAL WARRANTY DEED

RAMCO FORM 03

06/09/2003 12:38:35 20030335351
OR BK 15343 PG 0300
Palm Beach County, Florida
AMT 10.00
Doc Stamp 0.70
Dorothy H. Wilken, Clerk

SPACE ABOVE THIS LINE FOR RECORDING DATA

This Special Warranty Deed *Made the* 20th *day of* MAY *A. D.* 2003 *by*
JOHN T. BLOUNT, individually and as Trustee, whose mailing address is P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantor, to
FLORIDA POWER & LIGHT COMPANY

whose postoffice address is
P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantee:

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: *That the grantor, for and in consideration of the sum of* $10.00 *and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee, all that certain land situate in* PALM BEACH *County, Florida, viz:*

~~Lots 21 and 22, Knowles Court Addition, according to the Plat thereof on file in the~~ Office of the Clerk of the Circuit Court in and for Palm Beach County, Florida, recorded in Plat Book 9, Page 82.

The above subject property is not the homestead property of the Grantor herein nor does the property abut the homestead property of the Grantor. The Grantor herein resides in the City of BONITA SPRINGS, FL.

Together, *with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.*

To Have and to Hold, *the same in fee simple forever.*

And *the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons claiming by, through or under the said grantor.*

In Witness Whereof, *the said grantor has hereunto set* his *hand and seal the day and year first above written.*

Signed, sealed and delivered in our presence:

Audrey Loy Chin
AUDREY LOY CHIN
Milli Becerra
Milli Becerra

John T. Blount (L.S.)
JOHN T. BLOUNT, individually and (L.S.) Trustee

STATE OF FLORIDA,
COUNTY OF MIAMI-DADE

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid, to take acknowledgments, personally appeared **JOHN T. BLOUNT, individually and as Trustee**, PERSONALLY KNOWN TO ME, to me known to be the person described in and who executed the foregoing instrument and he acknowledged before me that he executed the same.

WITNESS my hand and official seal in the County and State last aforesaid this 20th day of MAY A. D. ~~19~~ 2003

JOAQUIN E. LEON
MY COMMISSION # DD 060552
EXPIRES: November 20, 2005
Bonded Thru Budget Notary Services

Gary R. Nikolits, CFA - Property Appraiser - Public Access System

Property Appraiser

Palm Beach County

Home

Property Information

View Map

Calculate Portability

Location Address: 511 59TH ST

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-01-000-0230

Subdivision: KNOWLES COURT ADD IN

Official Records Book: 15309 Page: 1514 Sale Date: May-2003

Legal Description: KNOWLES COURT ADDITION LTS 23 & 24

Owner Information

All Owners

Name: FLORIDA POWER & LIGHT COMPANY

Mailing Address: PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

All Sales

Sales Date	Book/Page	Price	Sale Type	Owner
May-2003	15309/1514	$10	WARRANTY DEED	FLORIDA POWER & LIGHT COMPANY
Jan-2000	11558/0664	$54,000	WARRANTY DEED	COYLE DENNIS TR
Oct-1990	06624/0086	$100	QUIT CLAIM	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$27,492	$41,654	$34,425
Total Market Value:	$27,492	$41,654	$34,425

Property Information
Number of Units: 0

Use Code: 0000 Description: VACANT

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$27,492	$41,654	$34,425
Exemption Amount:	$0	$0	$0
Taxable Value:	$27,492	$41,654	$34,425

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$576	$952	$814
Non Ad Valorem:	$0	$0	$0
Total Tax:	$576	$952	$814

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

Return to: (enclose self-addressed stamped envelope)

Chicago Title Insurance Agency, Inc.
3067 East Commercial Blvd.
Fort Lauderdale, Florida 33308
FILE 33526

This Instrument Prepared by:

Alene S. Egol, Esq.
Address:

Florida Power & Light Company
700 Universe Boulevard
Juno Beach, FL 33408
Property Appraiser's Parcel Identification (Folio) Number(s):
74-43-43-04-01-000-0230

SPECIAL WARRANTY DEED

06/03/2003 10:13:26 20030328997
OR BK 15309 PG 1514
Palm Beach County, Florida
AMT 10.00
Doc Stamp 0.70
Dorothy H. Wilken, Clerk

SPACE ABOVE THIS LINE FOR RECORDING DATA

This Special Warranty Deed *Made the* 13th *day of* May *A. D.* 2003 *by*
DENNIS P. COYLE, individually and as Trustee, whose mailing address is P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantor, to
FLORIDA POWER & LIGHT COMPANY, a Florida corporation

whose postoffice address is
P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantee:

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: *That the grantor, for and in consideration of the sum of* $ 10.00 *and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee, all that certain land situate in County, Florida, viz:*

Lots 23 and 24, Knowles Court Addition, according to the Plat thereof on file in the Office of the Clerk of the Circuit Court in and for Palm Beach County, Florida, recorded in Plat Book 9, Page 82.

The above subject property is not the homestead property of the Grantor herein nor does the property abut the homestead property of the Grantor. The Grantor herein resides in the City of Juno Beach.

Together, *with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.*

To Have and to Hold, *the same in fee simple forever.*

And *the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons claiming by, through or under the said grantor.*

In Witness Whereof, *the said grantor has hereunto set* his *hand and seal the day and year first above written.*

Signed, sealed and delivered in our presence:

Roberta J. Eldridge
Alene S. Egol

DENNIS P. COYLE, individually and as Trustee (L.S.)
(L.S.)

STATE OF FLORIDA,
COUNTY OF PALM BEACH

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid, to take acknowledgments, personally appeared DENNIS P. COYLE, individually and as Trustee

to me known to be the person described in and who executed the foregoing instrument and he acknowledged before me that he executed the same.

WITNESS my hand and official seal in the County and State last aforesaid this 13th day of May A. D. 19 2003

NOTARY PUBLIC - STATE OF FLORIDA
HOLLY M. ALTMAN
COMMISSION # CC859078
EXPIRES 7/28/2003
BONDED THRU ASA 1-888-NOTARY1

Holly M. Altman

Property Appraiser's Public Access System

Home

Property Information

View Map

Calculate Portability

Location Address: 513 59TH ST

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-01-000-0250

Subdivision: KNOWLES COURT ADD IN

Official Records Book: 15309 Page: 1516 Sale Date: May-2003

Legal Description: KNOWLES COURT ADDITION LTS 25 & 26

Owner Information

All Owners

Name: FLORIDA POWER & LIGHT COMPANY

Mailing Address: PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

All Sales

Sales Date	Book/Page	Price	Sale Type	Owner
May-2003	15309/1516	$10	WARRANTY DEED	FLORIDA POWER & LIGHT COMPANY
Apr-1999	11072/1876	$64,000	WARRANTY DEED	
Oct-1986	05040/0682	$55,000	WARRANTY DEED	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$27,492	$37,868	$34,425
Total Market Value:	$27,492	$37,868	$34,425

Property Information
Number of Units: 0

Use Code: 0000 Description: VACANT

Assessed and Taxable Values

Structure Detail

Tax Year:	2007	2006	2005
Assessed Value:	$27,492	$37,868	$34,425
Exemption Amount:	$0	$0	$0
Taxable Value:	$27,492	$37,868	$34,425

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$576	$865	$814
Non Ad Valorem:	$0	$0	$0
Total Tax:	$576	$865	$814

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

Return to: (enclose self-addressed stamped envelope)

Chicago Title Insurance Agency, Inc.
3067 East Commercial Blvd.
Fort Lauderdale, Florida 33308
FILE 33526

This Instrument Prepared by:
Alene S. Egol, Esq.

Address:
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408

Property Appraisers Parcel Identification (Folio) Number(s):
74-43-04-01-000-0250

SPECIAL WARRANTY DEED

06/03/2003 10:13:26 20030320999
OR BK 15309 PG 1516
Palm Beach County, Florida
AMT 10.00
Doc Stamp 0.70
Dorothy H. Wilken, Clerk

SPACE ABOVE THIS LINE FOR RECORDING DATA

This Special Warranty Deed *Made the* 13th *day of* May *A. D.* 2003 *by*
DENNIS P. COYLE, individually and as Trustee, whose mailing address is P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantor, to
FLORIDA POWER & LIGHT COMPANY, a Florida corporation

whose postoffice address is
P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantee:

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: *That the grantor, for and in consideration of the sum of* $ 10.00 *and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee, all that certain land situate in County, Florida, viz:*

Lots 25 and 26, Knowles Court Addition, according to the Plat thereof on file in the Office of the Clerk of the Circuit Court in and for Palm Beach County, Florida, recorded in Plat Book 9, Page 82.

The above subject property is not the homestead property of the Grantor herein nor does the property abut the homestead property of the Grantor. The Grantor herein resides in the City of Juno Beach.

Together, *with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.*

To Have and to Hold, *the same in fee simple forever.*

And *the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons claiming by, through or under the said grantor.*

In Witness Whereof, *the said grantor has hereunto set* his *hand and seal the day and year first above written.*

Signed, sealed and delivered in our presence:

Roberta J. Economy
Alene M. Olmek

DENNIS P. COYLE, Individually and as Trustee (L.S.)
(L.S.)

STATE OF FLORIDA,
COUNTY OF PALM BEACH

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid, to take acknowledgments, personally appeared DENNIS P. COYLE, individually and as Trustee

to me known to be the person described in and who executed the foregoing instrument and he acknowledged before me that he executed the same.

WITNESS my hand and official seal in the County and State last aforesaid this 13th day of May A. D. 19- 2003

NOTARY PUBLIC - STATE OF FLORIDA
HOLLY M. ALTMAN
COMMISSION # CC859079
EXPIRES 7/26/2003
BONDED THRU ASA 1-888-NOTARY1

Holly M. Altman

GREYTHORNE & OLA Property Appraiser's Public Access System

PROPERTY APPRAISER Palm Beach County

Home

Property Information

View Map

Calculate Portability

Location Address: 515 59TH ST

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-01-000-0270

Subdivision: KNOWLES COURT ADD IN

Official Records Book: 15309 Page: 1513 Sale Date: May-2003

Legal Description: KNOWLES COURT ADD LTS 27 & 28

Owner Information

All Owners

Name: FLORIDA POWER & LIGHT COMPANY

Mailing Address: PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

All Sales

Sales Date	Book/Page	Price	Sale Type	Owner
May-2003	15309/1513	$10	WARRANTY DEED	FLORIDA POWER & LIGHT COMPANY
Apr-1995	08717/0500	$30,000	WARRANTY DEED	
Mar-1994	08167/1393	$18,900	STATE DEED	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$27,492	$41,654	$34,425
Total Market Value:	$27,492	$41,654	$34,425

Property Information
Number of Units: 0

Use Code: 0000 Description: VACANT

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$27,492	$41,654	$34,425
Exemption Amount:	$0	$0	$0
Taxable Value:	$27,492	$41,654	$34,425

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$576	$952	$814
Non Ad Valorem:	$0	$0	$0
Total Tax:	$576	$952	$814

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

Return to: (enclose self-addressed stamped envelope)

Chicago Title Insurance Agency, Inc.
3067 East Commercial Blvd.
Fort Lauderdale, Florida 33308
FILE 33526

This Instrument Prepared by:

Alene S. Egol, Esq.
Address:
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408

Property Appraisers Parcel Identification (Folio) Number(s):
74-43-43-04-01-000-0270

SPECIAL WARRANTY DEED

06/03/2003 10:13:26 20030320996
OR BK 15309 PG 1513
Palm Beach County, Florida
AMT 10.00
Doc Stamp 0.70
Dorothy H. Wilken, Clerk

SPACE ABOVE THIS LINE FOR RECORDING DATA

This Special Warranty Deed *Made the* 13th *day of* May *A. D.* 2003 *by*
DENNIS P. COYLE, individually and as Trustee, whose mailing address is P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantor, to
FLORIDA POWER & LIGHT COMPANY, a Florida corporation

whose postoffice address is
P.O. Box 14000, Juno Beach, Florida 33408
hereinafter called the grantee:

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: *That the grantor, for and in consideration of the sum of* $ 10.00 *and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee, all that certain land situate in* County, Florida, *viz:*

Lots 27 and 28, Knowles Court Addition, according to the Plat thereof on file in the Office of the Clerk of the Circuit Court in and for Palm Beach County, Florida, recorded in Plat Book 9, Page 82.

The above subject property is not the homestead property of the Grantor herein nor does the property abut the homestead property of the Grantor. The Grantor herein resides in the City of Juno Beach.

Together, *with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.*

To Have and to Hold, *the same in fee simple forever.*

And *the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons claiming by, through or under the said grantor.*

In Witness Whereof, *the said grantor has hereunto set* his *hand and seal the day and year first above written.*

Signed, sealed and delivered in our presence:

Roberta J. Economy
Diane D. Sand

DENNIS P. COYLE, individually and as Trustee (L.S.)
(L.S.)

STATE OF FLORIDA,
COUNTY OF PALM BEACH

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid, to take acknowledgments, personally appeared DENNIS P. COYLE, individually and as Trustee

to me known to be the person described in and who executed the foregoing instrument and he acknowledged before me that he executed the same.

WITNESS my hand and official seal in the County and State last aforesaid this 13th day of May A. D. 19- 2003

NOTARY PUBLIC - STATE OF FLORIDA
HOLLY M. ALTMAN
COMMISSION # CC856078
EXPIRES 7/26/2003
BONDED THRU ASA 1-888-NOTARY1

Holly M. Altman

CT Corp System
1200 S. Pine Island Rd
Plantation, Fl. 33324

Jan-08-1999 02:56pm 99-009578
ORB 10864 Pg 494
DOROTHY H. WILKEN, CLERK PB COUNTY, FL

State of Florida

Department of State

I certify from the records of this office that Articles of Merger were filed on December 24, 1998 merging LAND RESOURCES INVESTMENT CO., a Florida corporation into FLORIDA POWER & LIGHT COMPANY, the surviving Florida corporation.

The document number of the surviving corporation is 106395.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capitol, this the Sixth day of January, 1999

GREAT SEAL OF THE STATE OF FLORIDA
IN GOD WE TRUST

Katherine Harris

Katherine Harris
Secretary of State

CR2EO22 (1-99)

9 - 82

KNOWLES COURT ADDITION

SITUATED IN SECTION 4 T43S. R43E.
PALM BEACH COUNTY FLORIDA
JAN. 1924 SCALE 1"=100
SURVEYED & PLATTED
BY
CARR & McFADDEN

Dedication

State of Florida
County of Palm Beach } ss

KNOW ALL MEN BY THESE PRESENTS, That H W DOBBINS, Jr. and OFOROIANA I Dobbins, his wife, and who the owners in fee simple of the land known as KNOWLES COURT ADDITION and more particularly described as follows: [illegible] the remainder of the South 385 feet of [illegible] Section 4, Township 43 South, Range 43 East, lying between the East [illegible] Atlantic Ave. have caused the same to be surveyed and platted as shown hereon and do hereby dedicate to the use and actual use of the public, as public highways, the avenues, highways and court as shown hereon, reserving unto themselves, their heirs, successors, assigns or legal representatives, the reversion or reversions of same whenever abandoned by the public or discontinued by law.

Witness:

[illegible] } as to both

H W Dobbins Jr. (Seal)

Georgiana Dobbins (Seal)

Acknowledgement

State of Florida
County of Palm Beach } ss

I, THE UNDERSIGNED OFFICER, DO HEREBY CERTIFY, That on this day, personally appeared before me H W DOBBINS, Jr. and OFOROIANA DOBBINS, husband and wife, to me well-known and by me well-known to be the persons described in and who executed the foregoing instrument, and severally acknowledged to and before me that they executed the same for the uses and purposes therein expressed.

I FURTHER CERTIFY, That the said OFOROIANA DOBBINS, known by me to be the wife of the said H W DOBBINS, Jr., on a separate and private examination, taken and made by and before me, separate and apart from her said husband, did acknowledge that she executed the same freely and voluntarily and without compulsion, fear, apprehension, or constraint of or from her said husband.

WITNESS, my hand and official seal at West Palm Beach this 4th day of March A D 1924

[illegible] Notary Public

My commission expires Jan. 21st 1928.

Affidavit

State of Florida
County of Palm Beach } ss

WE HEREBY CERTIFY, That the plat upon which this dedication appears was made under our direction after an actual survey upon the ground, and that, to the best of our knowledge, the angles and distances shown hereon are correct.

This the 4th day of March A D 1924

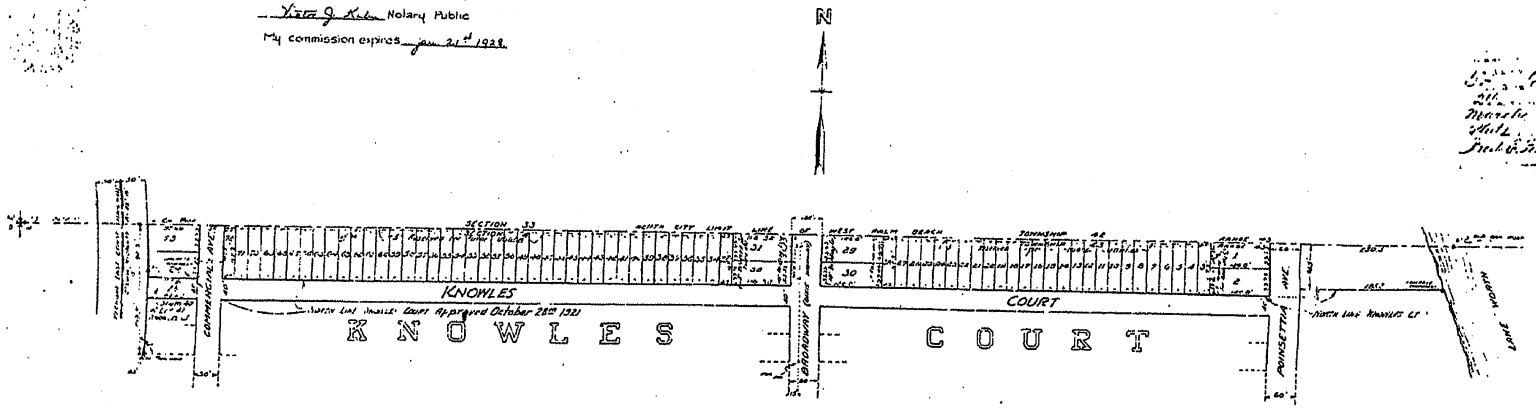
Carr & McFadden, Inc
Civil Engineers

By [illegible]
Vice Pres

Subscribed and sworn to before me this 4th day of March A D 1924

[illegible] Notary Public

My commission expires Jan 21st 1928



Approved: City Planning Board
Chairman

Approved:
City Manager

DRAWING NO. 2050

File No.: **2806022**

OWNERSHIP AND ENCUMBRANCE REPORT

THIS CERTIFIES, that according to the records in the Office of the Clerk of the Circuit Court of **Palm Beach** County, Florida, as of **June 17, 2008 at 8:00 AM.**, FLORIDA POWER & LIGHT COMPANY, A FLORIDA CORPORATION, is the apparent record owner(s) of the following described land (hereinafter referred to as the "Property"), situate, lying and being in the County of **Palm Beach**, State of Florida, to-wit:

LEGAL DESCRIPTION:

PARCEL A:

All that part of the South 181 feet (measured at right angles between parallel lines) of Government Lot 4, Section 33, Township 42 South, Range 43 East, Palm Beach County, Florida, lying easterly of the right of way of State Road No. 4 (U.S. Highway No. One), LESS a strip being 2.5 feet wide at the South end and 2.8 feet wide at North end, more particularly described as follows:

Beginning at the intersection of the South line of said Section 33 with the easterly right of way line of the 80 foot wide right of way of State Road No. 5 (U.S. No. 1) as said right of way is shown on F.D.O.T. right of way map Section 9302 revised 2-2-49; thence on an assumed bearing of North 90°00'00" East along the South line of said Section 33, a distance of 1477.86 feet, more or less, to the southeast corner of that certain parcel described by Trustees of the Internal Improvement Fund Deed No. 24202 (1560-50) dated February 16, .1966; thence North 02°19'45" West along the West line of said Deed No. 24202, a distance of 181.15 feet to the North line of the said South 181 feet of Section 33; thence North 90°00'00" West along said North line a distance of 1474.38, more or less, to the said easterly right of way line of State Road No. 5; thence South 01°13'44" East along said right of way line, a distance of 181.04 feet to the Point of Beginning.

PARCEL B:

Part of Section 33, Township 42 South, Range 43 East, Palm Beach County, Florida, more particularly described as follows:

Beginning at the intersection of the South line of said Section 33 with the City of Riviera Beach Bulkhead Line along the westerly shore of Lake Worth as established by Ordinance No. 448 and Ordinance No. 579; thence westerly along the South line of said Section 33 a distance of 46.9 feet, more or less, to a point in the high water line on the westerly shore of Lake Worth, said point being 531.31 feet easterly from (measured along the South line of said Section 33) the easterly right of way line of North Dixie Highway (formerly Poinsettia Avenue) according to the plat of Knowles Court Addition recorded in Flat Book 9 Page 82, Public Records of Palm Beach County, Florida; thence Northerly along said water line, which makes an angle with the preceding course (measured from west to north) of 87°40'15" a distance of 181.15 feet to a point in a line parallel to and 181 feet northerly from (measured at right angles to) the South line of said Section 33; thence easterly along said parallel line a distance of 84.5 feet, more or less, to a point in said Bulkhead Line; thence southerly along said Bulkhead Line a distance of 183.51 feet to the Point of Beginning.

SUBJECT TO THE FOLLOWING:

1. Restrictive covenants and conditions contained in Deed from Bessemer Properties, Incorporated recorded in Deed Book 720, Page 14.

2. Terms and conditions of Agreement recorded in Deed Book 720, Page 10.

3. Any portion of the lands described herein that are submerged are subject to the rights of the United States of America and its control of navigation and commerce.

4. Matters contained on the Plat of Bulkhead Line recorded in Plat Book 28, Page 95, and Certificate of Approval recorded in Official Record Book 1284, Page 285.

5. Oil, gas and mineral reservations contained in Deed No. 24202 from the Trustees of the Internal Improvement Fund. NOTE: The right of Entry and Exploration has been released.

6. Rights of the public to use the water above any submerged land described herein for boating, fishing, navigation and

THIS COMPANY, in issuing the O & E Report (hereinafter referred to as the "Report"), assumes no liability on account of any instrument or proceedings, in the chain of title to the Property, which may contain defects that would render such instrument or proceedings null and void or defective. All instruments in the chain of title to the Property are assumed to be good and valid.

The Company's liability for this Report is limited to the amount paid and extends only to the Customer who placed the order with the Company. No one else may rely upon this Report. Customer, by accepting this Report, agrees to indemnify and hold Company harmless from any claims or losses in excess of the limited amount stated above. This Report contains no expressed or implied opinion, warranty, guarantee, insurance or other similar assurance as to the status of title to real property. This report should only be relied upon for title information and, therefore, should be verified by a commitment for title insurance.

Dated at West Palm Beach, Florida, this June 20, 2008.

Southeast Guaranty & Title, Inc.

BY: _____
Authorized Signature

Portability

Municipality: RIVIERA BEACH
Parcel Control Number: 56-43-42-33-00-004-0020
Subdivision:

Official Records Book: 06275 Page: 0858 Sale Date: Nov-1989

Legal Description: 33-42-43, S 181 FT OF GOV LT 4(LESS WLY 320.61 FT SR 5 R/W) & TR OF SUBMRG LAND IN TIIF DEED NO 24202

Owner Information

All Owners

Name: FLORIDA POWER & LIGHT CO

Mailing Address: PO BOX 14000 - JLM
NORTH PALM BEACH FL 33408 0420

Sales Information

Sales Date	Book/Page	Price	Sale Type	Owner
Nov-1989	06275/0858	$2,200,000	REP DEED	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$304,291	$341,781	$272,381
Land Value:	$1,747,202	$1,747,202	$1,588,365
Total Market Value:	$2,051,493	$2,088,983	$1,860,746

Property Information
Number of Units: 0
*Total Square Feet: 6222
Acres: 4.86

Use Code: 9100 Description: UTILITY

* in residential properties may indicate living area.

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$2,051,493	$2,088,983	$1,860,746
Exemption Amount:	$0	$0	$0
Taxable Value:	$2,051,493	$2,088,983	$1,860,746

Structure Detail

Tax Values

Tax Year:	2007	2006	2005
Ad Valorem:	$44,916	$48,934	$45,271
Non Ad Valorem:	$589	$568	$412
Total Tax:	$45,505	$49,502	$45,683

Tax Calculator
Details
Calculate Additional Homestead

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

DAHLMEIER, BARNER & GRIFFIN
631 U.S. Highway #1 - Suite 410
Post Office Box 14036
North Palm Beach, FL 33408

Con 2,200,000.00 Doc 12,100.00
JOHN B DUNKLE,CLERK - PB COUNTY, FL

PERSONAL REPRESENTATIVE'S DEED

THIS DEED made and executed the 28th day of November A.D., 1989, by BARNETT BANKS TRUST COMPANY, N.A., as Personal Representative of the Estate of Howard C. Hartung, Deceased ("Grantor") to FLORIDA POWER & LIGHT COMPANY, a Florida corporation ("Grantee") whose post office address is P.O. Box 029100, 9250 West Flagler Street, Miami, Florida 33174.

(Wherever used herein the terms "Grantor" and "Grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors, assigns of corporations)

WITNESSETH: That the Grantor, for and in consideration of the sum of TEN DOLLARS ($10.00) and other valuable considerations, receipt whereof is hereby acknowledged, hereby quitclaims unto Grantee, all of Grantor's interest in that certain land situate in Palm Beach County, Florida, viz :

SEE EXHIBIT A ATTACHED HERETO AND MADE A PART HEREOF.

SUBJECT TO restrictions, reservations, easements of record, and taxes and assessments for the year 1989 and thereafter.

TOGETHER WITH all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining, and all the estate, right, title interest, lien, equity and claim whatsoever of the said Grantor in and to the above described property.

TO HAVE AND TO HOLD the Land in fee simple forever.

NOTWITHSTANDING any lack of warranties of title in this conveyance or anything contained herein to the contrary, it is Grantor's express intention that this Deed shall operate so as to conclusively vest in Grantee fee simple title to the real property herein described, and Grantor shall accordingly be estopped to challenge, question or deny the title of Grantee in and to said real property.

IN WITNESS WHEREOF, the Grantor has hereunto caused these presents to be executed in its name, and its corporate seal to be hereunto affixed by its proper officers thereunto duly authorized, the day and year first above written.

Signed, sealed and delivered in the presence of:

BARNETT BANKS TRUST COMPANY, N.A., as Personal Representative of the Estate of Howard C. Hartung,

By: Gwendolyn Burkin
Vice President

Attest:
Secretary

(CORPORATE SEAL)

Security title

THE FOREGOING INSTRUMENT ...

28th day of November, 1989, by Gwendolyn Boyfain President, and by N/A Secretary, of BARNETT BANKS TRUST COMPANY, N.A., as Personal Representative of the Estate of Howard C. Harrung, Deceased, on behalf of the said Personal Representative.

Lucille A. Chittick
Notary Public

My Commission Expires:
NOTARY PUBLIC, STATE OF FLORIDA.
MY COMMISSION EXPIRES: SEPT. 1, 1993.
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

(NOTARY SEAL)

NOTARY PUBLIC STATE OF FLORIDA LUCILLE A. CHITTICK

PARCEL A:

All that part of the South 181 feet (measured at right angles between parallel lines) of Government Lot 4, Section 33, Township 42 South, Range 43 East, Palm Beach County, Florida, lying easterly of the right of way of State Road No. 4 (U.S. Highway no. One), LESS a strip being 2.5 feet wide at the South end and 2.8 feet wide at North end, more particularly described as follows:

Beginning at the intersection of the South line of said Section 33 with the easterly right of way line of the 80 foot wide right of way of State Road No. 5 (U.S. No. 1) as said right of way is shown on F.D.O.T. right of way map Section 9302 revised 2-2-49; thence on an assumed bearing of North 90°00'00" East along the South line of said Section 33, a distance of 1477.86 feet, more or less, to the southeast corner of that certain parcel described by Trustees of the Internal Improvement Fund Deed No. 24202 (1560-50) dated February 16, 1966; thence North 02°19'45" West along the West line of said Deed No. 24202, a distance of 181.15 feet to the North line of the said South 181 feet of Section 33; thence North 90°00'00" West along said North line a distance of 1474.38, more or less, to the said easterly right of way line of State Road No. 5; thence South 01°13'44" East along said right of way line, a distance of 181.04 feet to the Point of Beginning.

PARCEL B:

Part of Section 33, Township 42 South, Range 43 East, Palm Beach County, Florida, more particularly described as follows:

Beginning at the intersection of the South line of said Section 33 with the City of Riviera Beach Bulkhead Line along the westerly shore of Lake Worth as established by Ordinance No. 448 and Ordinance No. 579; thence westerly along the South line of said Section 33 a distance of 46.9 feet, more or less, to a point in the high water line on the westerly shore of Lake Worth, said point being 531.31 feet easterly from (measured along the South line of said Section 33) the easterly right of way line of North Dixie Highway (formerly Poinsettia Avenue) according to the plat of Knowles Court Addition recorded in Plat Book 9 Page 82, Public Records of Palm Beach County, Florida; thence Northerly along said water line, which makes an angle with the preceding course (measured from west to north) of 87°40'15" a distance of 181.15 feet to a point in a line parallel to and 181 feet northerly from (measured at right angles to) the South line of said Section 33; thence easterly along said parallel line a distance of 84.5 feet, more or less, to a point in said Bulkhead Line; thence southerly along said Bulkhead Line a distance of 183.51 feet to the Point of Beginning.

EXHIBIT A

Memorandum

PRELIMINARY OPINION OF TITLE

TO: Florida Power & Light Company DATE: November 25, 1989

FROM: Steel Hector & Davis

SUBJECT: Purchase Hartung Mobile Home Park
Palm Beach County, Florida

LEGAL DESCRIPTION:

As set forth in Rider "A" attached hereto and by reference incorporated herein.

TITLE EVIDENCE:

Chicago Title Insurance Company Commitment for Title Insurance (the "Commitment"), Commitment No. 10 2123 10 00010, having an effective date of November 14, 1989, at 11:00 p.m. Our opinion, as set forth below, is based solely upon an examination of said Commitment for Title Insurance, and we have not examined an abstract of title to the subject lands nor made any search of the public records of Palm Beach County, Florida.

TITLEHOLDER:

The Estate of Howard C. Hartung, deceased, as of November 14, 1989, at 11:00 p.m.

MATTERS TO BE CONSIDERED

1. Taxes and assessments for 1990 and subsequent years. 1989 taxes should be paid at or prior to the closing as required by Item 5 of Schedule B, Section 1 of the Commitment.

2. Parties in possession.

3. Unfiled mechanics' and materialmen's liens.

4. Questions of survey. The boundary survey prepared for the Company by Mock, Roos & Associates, Inc., dated October 7, 1989, and last certified November 16, 1989 by Sanford V. Howard, Registered Land Surveyor No. 1552, shows the following:

   (a) Existing Easterly Bulkhead encroaches over the Easterly boundary line in Northeast and Southeast corners.

(c) Four foot concrete strip in Southeast corner encroaches onto property to South as well as over City Bulkhead line into Lake Worth.
(d) Concrete retaining wall along C.B.S. electrical room encroaches over onto property to the south.
(e) Overhead Metal sign encroaches over onto Right-of-Way of U.S. Highway No. 1.
(f) Water meters in Northwest corner of property encroach partially over onto Right-of-Way of U.S. Highway No. 1.
(g) Six foot chain link fence along North line encroaches onto property to the North along the entire North line of Parcel "A".

5. Applicable zoning ordinances.

6. Applicable Flood Control criteria.

7. Genuineness of signatures on instruments within the chain of title.

8. Liability for municipal improvements made or authorized, and all liens for utilities and services, not of record.

9. Existing, platted and zoned road rights of way, and right-of-way conveyances of record.

10. In connection with the issuance of a final title insurance policy based upon the Commitment, the insurer should remove all the Standard Exceptions for taxes and assessments not of record, rights of parties in possession and possible mechanics' and materialmen's liens (Item 2 of Schedule B-Section 2 of the Commitment) based upon an appropriate no-possession and no-liens affidavit executed by the Seller and satisfaction of Items 3 and 4 of Schedule B-Section 1 of the Commitment. The standard general survey exception and the exception for unrecorded easements have been deleted based upon the current survey.

11. All terms and provisions of existing unrecorded leases and all rights thereunder of the Lessees and any person claiming by, through or under said Lessees. This exception which is in the Commitment may be limited to rights of tenants under lessees as identified in the Seller's Affidavit as provided in item 5 of Schedule B-Section 2 of the Commitment.

business as Hartung Lodge, and Outdoor Media, a Florida corporation.

13. Restrictive covenants and conditions contained in Deed from Bessemer Properties, Incorporated recorded in Deed Book 720 Page 14. This item is a "Permitted Exception" under the Company's contract to purchase the subject property.

14. Terms and conditions of Agreement between Florida Power & Light Company and Bessemer Properties Incorporated dated May 9, 1945 recorded in Deed Book 720 Page 10. This item is a "Permitted Exception" under the Company's contract to purchase the subject property.

15. All matters contained on Plat of Bulkhead Line, West side of Lake Worth, Riviera Beach, Florida, recorded in Plat Book 28, Page 95, and Certificate of Approval recorded in Official Records Book 1284 Page 285. This item is a "Permitted Exception" under the Company's contract to purchase the subject property.

16. Title to personal property not owned by the Titleholder, including, but not limited to, the mobile homes located on the subject lands.

---

17. Oil, gas and mineral reservations contained in Deed No. 24202 dated February 16, 1966, from the Trustees of the Internal Improvement Fund to Howard C. Hartung, conveying Parcel B described in Rider A hereto. This deed is to be recorded at closing as required by Item 7 of Schedule B-Section 1 of the Commitment. NOTE: The right of Entry and Exploration has been released by the provisions of Florida Statute 270.11(20).

18. Rights of first refusal under Section 723.071, Florida statutes, in favor of mobile home tenants. The Commitment provides that the following language will appear in the final title insurance policy after this exception upon compliance with item 6 of Schedule B - Section 1 of the Commitment:

"The Company hereby insures the insured against loss or damage sustained by the insured by reason of inaccuracies in the following insurance:

The Company hereby insures the insured that the rights of first refusal set forth in the above do

limitation the sale of said land from Barnett Banks Trust Company, N.A., as Personal Representative of the Estate of Harold C. Hartung, deceased, to Florida Power & Light Company. The Insurance is unapplicable to any future sale of said land by the insured."

19. Rights of the public to use the water above any submerged land described in Parcel B for boating, fishing and other public purposes.

20. As to Parcel B, any claim that title to any portion of the present or former bed of any body of water, all or part of which is included within the lands described in this policy:

    (a) is subject to the right of the United States of America under its control of navigation and commerce as to any portion of the lands described at (b) above; or

    (b) is, together with lands described in this commitment and policy, subject to riparian rights or littoral rights.

21. Item 10 of Schedule B-Section 1 of the Commitment contains the requirement that there be recorded a disclaimer of the State of Florida as to the right, title and interest of the State of Florida in and to that part of the property lying between the original Mean High Water Line and the Mean High Water Line described as the East line of Parcel B. If this disclaimer is not obtained, the title insurer has indicated it will insert in the title policy an exception substantially or follows:

    "Any claim that title to any portion of the present or former bed of any body of water, all or part of which is included within the lands described as Parcel A in this policy:

    (a) is subject to a right of way in favor of others; or
    (b) is vested in the Trustees of the Internal Improvement Trust Fund of the State of Florida because said portion;
        001. falls below what is either the natural ordinary high water mark or natural mean high water line of navigable water lying adjacent to or within the land described in this policy; or

tide; or

003. has been created by other than natural means or has accreted to any such portions so created; or

(c) is subject to the right of the United States of America under its control of navigation and commerce as to any portion of the lands described at (b) above; or

(d) is, together with lands described in this commitment and policy, subject to riparian rights or littoral rights."

If the above exception is contained in the title insurance provided in the Commitment and the final title policy, the Company would not be protected against any loss incurred if the State of Florida or a third party asserts title to formerly submerged lands contained within Parcel A. The reason for this exception is that title to filled-in lands which were submerged beneath navigable waters at the time Florida was admitted to the Union in 1845 became vested in the State of Florida subject to the rights of the United States Government under Commerce Clause of the United States Constitution. Title insurers take the position that in order to properly insure title to formerly submerged lands after they have been artificially filled, there must have been a valid conveyance from the State of Florida which characterizes them as "submerged lands" or "formerly submerged lands" in order to have evidenced the required intent on the part of the State to convey the same. Otherwise title remains in the State of Florida and the Seller will be unable to convey title to the Company. An alternative to obtaining a disclaimer from the State of Florida would be to have the Company's surveyor conduct further inspections to determine if in fact any portion of Parcel A was filled-in-land as asserted by the title insurer.

22. Under Item 1 of Schedule B-Section 1 of the Commitment the subject property is to be conveyed to the Company by Personal Representatives Deed from Barnett Banks Trust Company, N.A., as Personal Representatives of the Estate of Howard C. Hartung, deceased. With respect to the Estate of Howard C. Hartung, additional requirements in Items 8 and 9 of Schedule B-Section 1 of the Commitment which must be satisfied at or prior to closing are as follows:

litigation resulting in Final Judgment filed in Official Records Book 6111 Page 1683 that sale of the subject property shall not be pursuant to Florida Statute 64.071, as set forth in said Final Judgment, and that the sale to the Company is approved by all parties.

(b) Satisfactory evidence must be submitted to the title insurer that all the proceeds obtained from the sale of subject property have been distributed pursuant to court Order provided for in Final Judgment pursuant to Settlement Agreement as contained in Case No. 80-2840CP, Case styled In Re The Estate of Howard C. Hartung, deceased; Mark Angelocci, et al. vs. Janet T. Hartung, etc., et al., filed in Official Records Book 6111 Page 1693, and in Official Records Book 6203 Page 297.

Respectfully submitted,

STEEL HECTOR & DAVIS

By: Thomas J. Matkov, P.A.
Thomas J. Matkov, P.A.

TJM/119

Office File Number: 89685
Commitment Number: 10 2123 10 000110

PARCEL A:

All that part of the South 181 feet (measured at right angles between parallel lines) of Government Lot 4, Section 33, Township 42 South, Range 43 East, Palm Beach County, Florida, lying easterly of the right of way of State Road No. 4 (U.S. Highway no. One), LESS a strip being 2.5 feet wide at the South end and 2.8 feet wide at North end, more particularly described as follows:

Beginning at the intersection of the South line of said Section 33 with the easterly right of way line of the 80 foot wide right of way of State Road No. 5 (U.S. No. 1) as said right of way is shown on F.D.O.T. right of way map Section 9302 revised 2-2-49; thence on an assumed bearing of North 90 00'00" East along the South line of said Section 33, a distance of 1477.86 feet, more or less, to the southeast corner of that certain parcel described by Trustees of the Internal Improvement Fund Deed No. 24202 (1560-50) dated February 16, 1966; thence North 02 19'45" West along the West line of said Deed No. 24202, a distance of 181.15 feet to the North line of the said South 181 feet of Section 33; thence North 90 00'00" West along said North line a distance of 1474.38, more or less, to the said easterly right of way line of State Road No. 5; thence South 01 13'44" East along said right of way line, a distance of 181.04 feet to the Point of Beginning.

PARCEL B:

Part of Section 33, Township 42 South, Range 43 East, Palm Beach County, Florida, more particularly described as follows:

Beginning at the intersection of the South line of said Section 33 with the City of Riviera Beach Bulkhead Line along the westerly shore of Lake Worth as established by Ordinance No. 448 and Ordinance No. 579; thence westerly along the South line of said Section 33 a distance of 46.9 feet, more or less, to a point in the high water line on the westerly shore of Lake Worth, said point being 531.31 feet easterly from (measured along the South line of said Section 33) the easterly right of way line of North Dixie Highway (formerly Poinsettia Avenue) according to the plat of Knowles Court Addition recorded in Plat Book 9 Page 82, Public Records of Palm Beach County, Florida; thence Northerly along said water line, which makes an angle with the preceding course (measured from west to north) of 87 40'15" a distance of 181.15 feet to a point in a line parallel to and 181 feet northerly from (measured at right angles to) the South line of said Section 33; thence easterly along said parallel line a distance of 84.5 feet, more or less, to a point in said Bulkhead Line; thence southerly along said Bulkhead Line a distance of 183.51 feet to the Point of Beginning.

COMMITMENT FOR TITLE INSURANCE

Issued by

American Title Insurance Company

Miami, Florida
A STOCK COMPANY

A Meridian Company

American Title Insurance Company, a Florida corporation, herein called the Company, for a valuable consideration, hereby commits to issue its policy or policies of title insurance, as identified in Schedule A, in favor of the Proposed Insured named in Schedule A, as owner or mortgagee of the estate or interest covered hereby in the land described or referred to in Schedule A, upon payment of the premiums and charges therefor; all subject to the provisions of Schedules A and B and to the Conditions and Stipulations hereof.

This Commitment shall be effective only when the identity of the Proposed Insured and the amount of the policy or policies committed for have been inserted in Schedule A hereof by the Company, either at the time of the issuance of this Commitment or by subsequent endorsement.

This Commitment is preliminary to the issuance of such policy or policies of title insurance and all liability and obligations hereunder shall cease and terminate within six (6) months after the effective date hereof or when the policy or policies committed for shall issue, whichever first occurs, provided that the failure to issue such policy or policies is not the fault of the Company.

This Commitment shall not be valid or binding until countersigned by either an officer or authorized agent of this Company.

IN WITNESS WHEREOF, American Title Insurance Company has caused its corporate name and seal to be hereunto affixed and these presents to be signed in facsimile under authority of its by-laws on the date shown in Schedule A.

American Title Insurance Company

AMERICAN TITLE INSURANCE COMPANY INCORPORATED 1936 SEAL FLORIDA

President

ATTEST:

Secretary

SCHEDULE A

Office File Number: 89748
Commitment Number: 02-244509
Effective Date: November ~~14~~ 29, 1989 at 11:00PM
Owner's Amount: $2,200,000.00

1. Policy or Policies to be issued:

ALTA LOAN POLICY.
Proposed Insured:

NONE

ALTA OWNER'S POLICY, Form B
Proposed Insured:

FLORIDA POWER & LIGHT COMPANY, a Florida corporation

2. The estate or interest in the land described or referred to in this Commitment and covered herein is a fee simple, and title thereto is at the effective date hereof vested in:

Florida Power & Light Company, a Florida Corporation
~~THE ESTATE OF HOWARD C. HARTUNG, deceased~~

3. The land is described as follows:

SEE RIDER "A" ATTACHED HERETO AND MADE A PART HEREOF

SECURITY TITLE AGENCY, LTD.

By_____
Authorized signatory

SCHEDULE B I

Office File Number: 89748
Commitment Number: 02-244509

Requirements

The following are the requirements to be complied with:

1. Instrument(s) creating the estate or interest to be insured must be approved, executed and filed for record, to wit:

   (a) Personal Representative's Deed from Barnett Banks Trust Company, N.A. as Personal Representative of the Estate of Howard C. Hartung, deceased to Florida Power & Light Company, a Florida corporation.

2. Payment of the full consideration to or for the account of, the grantors or mortgagors.

3. Satisfactory evidence should be had that improvements and/or repairs or alterations thereto are completed; that contractor, subcontractors, labor and materialmen are all paid.

4. Proof of payment of all pending or certified municipal and/or county charges or special assessments.

5. Proof of payment of 1989 Real Estate Taxes, if due and payable at ~~time of closing.~~

6. Satisfactory Affidavit as provided for in Florida Statutes 723.072 with regard to the right of first refusal of Hartung Homeowners Association, Inc. to purchase subject land as evidenced by Notice recorded in Official Records Book 5031 Page 1184.

7. Recording of the Public Records of Palm Beach county, Florida of Deed No.24202 dated February 16, 1966 from the Trustees of the Internal Improvement Fund to Howard C. Hartung, conveying Parcel B as described in Schedule A hereof.

8. Submit written agreement between all parties to the litigation resulting in Final Judgment filed in Official Records Book 6111 Page 1693 that sale of the subject property shall not be pursuant to Florida Statute 64.071, as set forth in said Final Judgment, and that sale to the proposed Insured is approved by all parties.

AMERICAN TITLE INSURANCE COMPANY

SCHEDULE B II

Office File Number: 89748
Commitment Number: 02-244509

Exceptions

Schedule B of the policy or policies to be issued will contain exceptions to the following matters unless the same are disposed of to the satisfaction of the Company.

1. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date the Proposed Insured acquires for value of record the estate or interest or mortgage thereof covered by this Commitment.

Deleted 11/12/99

2. ~~Any owner's policy issued pursuant hereto will contain under Schedule B the standard exceptions set forth on the inside cover; however,~~ Standard exceptions 1, 4 and 5 ~~may be removed from the policy upon receipt of satisfactory~~ seller's Title Affidavit. Any loan policy will also contain under Schedule B thereof, the standard exceptions ~~set forth on the inside cover of this commitment relating to the owner's policy~~. see Hartung Addendum.

Deleted 11/12/99

Standard exceptions 2 and 3 are hereby deleted.

4. Taxes and assessments for the year 1990 and subsequent years.

5. All terms and provisions of existing unrecorded leases and all rights thereunder of the Lessees and any person claiming by, through or under said Lessees, ~~This exceptions may be limited to rights of tenants under leases as identified in seller's Title Affidavit.~~ as shown on Rider B attached hereto.

6. Terms and conditions of unrecorded Lease dated March 31, 1976 between Howard C. Hartung, doing business as Hartung Lodge and Outdoor Media, a Florida corporation.

7. Restrictive covenants and conditions contained in Deed from Bessemer Properties, Incorporated recorded in Deed Book 720 Page 14.

8. Terms and conditions of Agreement between Florida Power & Light Company and Bessemer Properties Incorporated dated May 9, 1945 recorded in Deed Book 720 Page 10.

see continuation Schedule B II

Office File Number: 89748
Commitment Number: 02-244509

Schedule B II continued:

9. As to Parcel B described in Schedule A hereof, any claim that title to any portion of the present or former bed of any body of water, all or part of which is included within the lands described in this policy:

   (a) is subject to the right of the United States of America under its control of navigation and commerce as to any portion of the lands described at (b) above; or
   (b) is, together with lands described in this commitment and policy, subject to riparian rights or littoral rights.

10. All matters contained on Plat of Bulkhead Line, West side of Lake Worth, Riviera Beach, Florida, recorded in Plat Book 28 Page 95, and Certificate of Approval recorded in Official Records Book 1284 Page 285. NOTE: Florida Statutes 253.1221 re-established existing bulkhead lines at the line of mean high water or ordinary high water, and provides that there shall be no filling waterward of the line of mean high water or ordinary high water except upon compliance with Chapter 253 of the Florida Statutes.

11. Title to personal property is not insured herein, including, but not limited to, any mobile homes which may be located on the lands insured by this policy.

12. As to Parcel B in Schedule A hereof Oil, gas and mineral reservations contained in Deed No. 24202 from the Trustees of the Internal Improvement Fund. NOTE: The right of Entry and Exploration has been released by the provisions of Florida Statue 270.11(20). The recording information for this Deed will be added on the Final Policy.

13. Rights of the public to use the water above any submerged land ~~described~~ in Parcel B described in Schedule A hereof as shown on survey dated October 7, 1989 by Sanford B. Howard, registered land surveyor 1552 for boating, fishing and other public purposes.

14. Rights of first refusal under Section 723.071, Florida Statutes. The following language will appear in the final policy after this exception upon compliance with Item 6 of Schedule B - Section 1:

   - The Company hereby insures the insured against loss or damage sustained by the insured by reason of inaccuracies in the following insurance:

see continuation Schedule B II

Office File Number: 89748
Commitment Number: 02-244509

Schedule B II continued:

The Company hereby insures the insured that the rights of first refusal set forth above do not apply to the land insured hereby as of the effective date of this policy, including without limitation the sale of said land from Barnett Banks Trust Company, N.A., as Personal Representative of the Estate of Harold C. Hartung, deceased, to Florida Power & Light Company. The insurance is unapplicable to any future sale of said land by the insured.

15. Survey dated October 7, 1989 by Sanford V. Howard, Registered Land Surveyor No. 1552 shows the following:

    (a) Existing Easterly Bulkhead encroaches over the Easterly boundary line in Northeast and Southeast corners.
    (b) Seven foot wood dock encroaches from the East line of Parcel "B" into Lake Worth.
    (c) Four foot concrete strip in Southeast corner encroaches onto property to South as well as over City Bulkhead line into Lake Worth.
    (d) Concrete retaining wall along C.B.S. electrical room encroaches over onto property to the South.
    (e) Overhead Metal sign encroaches over onto Right-of-Way of U.S. Highway No. 1.
    (f) Water meters in Northwest corner of property encroach partially over onto Right-of-Way of U.S. Highway No. 1
    (g) Six foot chain link fence along North line encroaches onto property to the North along the entire North line of Parcel "A".

16. The Final Policy will insure that Parcel A described in Schedule A hereof is contiguous along its entire North line to the property already owned by Florida Power and Light Company in Government Lot 4 in Section 33, Township 42 South, Range 43 East in Palm Beach County, Florida as shown on survey dated October 7, 1989 by Sanford V. Howard, registered land surveyor No. 1552.

17. The Final Policy will insure that Parcel A described in Schedule A hereof is contiguous to Parcel B in Schedule A hereof as shown on survey dated October 7, 1989 by Sanford V. Howard, registered land surveyor No. 1552.

NOTE: All of the recording information contained herein refers to the Public Records of Palm Beach County, Florida, unless otherwise indicated.

RIDER "A"
Legal Description

Office File Number: 89748
Commitment Number: 02-244509

PARCEL A:

All that part of the South 181 feet (measured at right angles between parallel lines) of Government Lot 4, Section 33, Township 42 South, Range 43 East, Palm Beach County, Florida, lying easterly of the right of way of State Road No. 4 (U.S. Highway no. One), LESS a strip being 2.5 feet wide at the South end and 2.8 feet wide at North end, more particularly described as follows:

Beginning at the intersection of the South line of said Section 33 with the easterly right of way line of the 80 foot wide right of way of State Road No. 5 (U.S. No. 1) as said right of way is shown on F.D.O.T. right of way map Section 9302 revised 2-2-49; thence on an assumed bearing of North 90°00'00" East along the South line of said Section 33, a distance of 1477.86 feet, more or less, to the southeast corner of that certain parcel described by Trustees of the Internal Improvement Fund Deed No. 24202 (1560-50) dated February 16, 1966; thence North 02°19'45" West along the West line of said Deed No. 24202, a distance of 181.15 feet to the North line of the said South 181 feet of Section 33; thence North 90°00'00" West along said North line a distance of 1474.38, more or less, to the said easterly right of way line of State Road No. 5; thence South 01°13'44" East along said right of way line, a distance of 181.04 feet to the Point of Beginning.

PARCEL B:

Part of Section 33, Township 42 South, Range 43 East, Palm Beach County, Florida, more particularly described as follows:

Beginning at the intersection of the South line of said Section 33 with the City of Riviera Beach Bulkhead Line along the westerly shore of Lake Worth as established by Ordinance No. 448 and Ordinance No. 579; thence westerly along the South line of said Section 33 a distance of 46.9 feet, more or less, to a point in the high water line on the westerly shore of Lake Worth, said point being 531.31 feet easterly from (measured along the South line of said Section 33) the easterly right of way line of North Dixie Highway (formerly Poinsettia Avenue) according to the plat of Knowles Court Addition recorded in Plat Book 9 Page 82, Public Records of Palm Beach County, Florida; thence Northerly along said water line, which makes an angle with the preceding course (measured from west to north) of 87°40'15" a distance of 181.15 feet to a point in a line parallel to and 181 feet northerly from (measured at right angles to) the South line of said Section 33; thence easterly along said parallel line a distance of 84.5 feet, more or less, to a point in said Bulkhead Line; thence southerly along said Bulkhead Line a distance of 183.51 feet to the Point of Beginning.

KNOW ALL MEN BY THESE PRESENTS: That the undersigned, the Trustees of the Internal Improvement Fund of the State of Florida, under authority of law, for and in consideration of the sum of Three Hundred Eighty-Two and 47/100 - - - ($382.47)

DOLLARS, to them in hand paid by HOWARD C. HARTUNG

of the County of Palm Beach, State of Florida, have granted, bargained and sold, and do by these presents grant, bargain, sell and convey, unto the said HOWARD C. HARTUNG and his heirs and assigns, the following described lands, to-wit:

A parcel of submerged land in Lake Worth in Section 33, Township 42 South, Range 43 East, Palm Beach County, Florida, more particularly described as follows:

Beginning at the intersection of the south line of said Section 33, with the City of Riviera Beach Bulkhead Line along the westerly shore of Lake Worth, as established by Ordinance No. 448 and Ordinance No. 579; thence westerly along the south line of said Section 33, a distance of 46.9 feet, more or less, to a point in the high water line on the westerly shore of Lake Worth, said point being 531.31 feet easterly from (measured along the south line of said Section 33) the easterly right of way line of North Dixie Highway (formerly Poinsettia Highway), according to the plat of Knowles Court Addition, recorded in Plat Book 9, Page 82, Public Records of Palm Beach County, Florida; thence northerly along said high water line which makes an angle with the preceding course (measured from west to north) of 87° 40' 15", a distance of 181.15 feet to a point in a line parallel to and 181 feet northerly from (measured at right angles to) the south line of said Section 33; thence easterly along said parallel line a distance of 84.5 feet, more or less, to a point in said Bulkhead Line; thence southerly along said Bulkhead Line, a distance of 183.51 feet to the Point of Beginning;

containing 0.273 acres, more or less, and lying and being in the County of Palm Beach, in said State of Florida.

TO HAVE AND TO HOLD the above granted and described premises forever.

SAVING AND RESERVING unto the said Trustees of the Internal Improvement Fund of the State of Florida, and their successors, title to an undivided three-fourths of all phosphate, minerals and metals, and title to an undivided one-half of all petroleum that may be in, on or under the above described land, with the privilege to mine and develop the same.

OTHER RESERVATIONS: None

IN TESTIMONY WHEREOF, the said Trustees of the Internal Improvement Fund of the State of Florida have hereunto subscribed their names and have caused the official seal of said Trustees to be hereunto affixed, in the City of Tallahassee, Florida, on this the 16th day of February, A. D. 19 66

(SEAL)
TRUSTEES I. I. FUND

Governor

Comptroller

Treasurer

Attorney General

Commissioner of Agriculture

As and Constituting the
TRUSTEES OF THE INTERNAL IMPROVEMENT
FUND OF THE STATE OF FLORIDA

Form 100 (11-64)

LICENSE AGREEMENT

THIS AGREEMENT is entered into this 18th day of July, 1990, by and between Florida Power & Light Company, a Florida corporation, "Licensor," whose address is Post Office Box 029100, Miami, Florida 33102-9100, and City of Riviera Beach, Palm Beach County, Florida, a Florida municipality, "Licensee," whose address is 600 W. Blue Heron Blvd., Riviera Bch, Florida 33404.

WHEREAS Florida Power & Light Company is the owner in fee of the premises described in Paragraph 1 below; and

WHEREAS City of Riviera Beach wishes to use said premises and Florida Power & Light Company wishes to permit use of said premises for the location of a welcome sign only.

WITNESSETH:

NOW, THEREFORE, for and in consideration of One Dollar and No Cents ($1.00), receipt of which is hereby acknowledged, and the mutual covenants entered into by the parties hereto for themselves, their heirs, successors, legal representatives or assigns, Licensor and Licensee agree as follows:

1. DEMISED PREMISES: Licensor hereby grants to Licensee and Licensee hereby accepts a License, revocable and terminable as hereinafter provided, to occupy and use certain lands of the Licensor commonly known as Riviera Power Plant Site, which are more particularly described as:

SEE EXHIBIT A ATTACHED HERETO AND MADE A PART HEREOF.

other purposes.

3. TERM: This License is for a term of Ten (10) years, commencing on the 1st day of August, 1990, and ending on the 31st day of July, 2000. The Licensee shall have an option to extend this License for a period of Ten (10) years after the expiration of the original term, on the same terms and conditions of this License. Licensee shall give Licensor written notice of its intention to extend the License at least ninety (90) days prior to the expiration of this License.

4. RENTAL: No rent shall be paid under this License.

5. SIGN DESIGN: Licensee agrees to provide Licensor a conceptual sketch drawing of the proposed welcome sign for Licensor's written approval. The layout is attached hereto as Exhibit "B."

The Licensee agrees that should the sign, as described in Exhibit "B" be damaged or demolished by act of nature or other means, the replacement shall be solely by, and at the expense of, the Licensee.

On termination of this License for any purpose whatsoever, including but not limited to default, mutual agreement, end of term, or illegality, the ~~Licensee~~ LICENSOR shall have the right to remove Licensee's sign or any other property of Licensee. Licensee agrees to repair any damage or disfiguration to the demised premises caused by such removal. Licensee further agrees that any facilities or property of Licensee remaining on the demised premises after the termination of this License for any reason whatsoever shall become the property of the Licensor.

6. INDEMNIFICATION: Licensee hereby agrees that it shall indemnify, defend and hold harmless Florida Power & Light Company, its parent, subsidiaries or affiliates and their respective officers, directors and employees (hereinafter referred to as "FPL Entities") from and against any and all liability, loss, cost and

Entities, except for the sole or gross negligence of FPL Entities, for injury to or death of person(s), natural or artificial, or property damage, arising out of or resulting in connection with the herein described purposes by Licensee, its contractors, agents or employees under this agreement subject to the limitation set forth in Section 768.28(5) Florida Statutes (1987).

7. COMPLIANCE WITH LAW: If the demised premises are used for any purpose in violation of any federal, state or municipal statute or ordinance, or any regulation, order or directive of a governmental agency, such as statutes, ordinances, regulations, orders or directives, now or hereafter existing, concerning the use and safety of the premises, or any other federal or state agency or governmental body declares this License void or illegal, this License shall terminate forthwith and Licensor may re-enter and repossess the premises.

8. LICENSOR'S RIGHT TO TERMINATE: In the event of a breach of this Agreement by Licensee, Licensor shall have the right to terminate this Agreement upon ten (10) days notice to Licensee. Upon such termination, Licensee shall have the right, at its sole cost and expense and at no expense to Licensor, within said ten (10) day period, to remove Licensee's sign or any other property of Licensee.

Licensor and Licensee agree that should Licensor require the use of the demised premises for any reason, except to license the same to a third party to place a sign thereon, Licensee shall, upon ninety (90) days notice from Licensor, relocate the sign or any other property of Licensee's at its sole cost and expense and at no expense to Licensor, to a new location mutually agreed upon by both parties. For the purposes of this Agreement, the new location shall then be substituted for the demised premises and shall be used in accordance with the terms hereof.

In the event that Licensor and Licensee cannot mutually agree on a new location within the ninety (90) day period, Licensor shall have the right to terminate this Agreement as set forth above

9. CONDEMNATION: In the event that the whole or any part of the demised premises is taken or condemned for any public or quasi-public use or purpose, the Licensor may, at its option, terminate this License from the time title or right to possession shall vest in or be taken for such use or purpose. Licensor shall be entitled to all proceeds from such partial or total taking. Licensee shall have no claim against Licensor for the value of any unexpired term of this License.

10. ASSIGNMENT AND SUBLETTING: The Licensee shall not assign or sublet this License or any interest therein.

11. NOTICES: Written notices shall be given to the respective parties at the addresses set forth below or at such other place as one party may direct the other by written notice. Any notice to Licensee hereunder shall be sufficient if served on Licensee personally, or posted at the demised premises and if so posted shall be deemed served on the date of posting, or mailed to Licensee directed to its last known address and if so mailed shall be deemed served on the business day next following the day of mailing.

To Licensor: Florida Power & Light Company
Juno Land Management
P.O. Box 14000
Juno Beach, FL 33408

To Licensee: City of Riviera Beach
City Manager's Office
600 W. Blue Heron Blvd.
Riviera Beach, FL 33404

12. SURRENDER OF DEMISED PREMISES: Licensee agrees to surrender the demised premises on the termination of this License, in the same condition as they are received, reasonable use and wear thereof and damage by the act of God or elements excepted.

13. DEFAULT: If Licensee fails to perform any of the conditions, covenants, provisions and agreements contained herein, or if Licensee abandons the demised premises, Licensor shall have

confers upon a Licensor against a Licensee in default, including, but not limited to, the right to immediately retake and recover possession of the demised premises and property of Licensee located thereon and terminate the License.

14. WHOLE AGREEMENT: This License constitutes the whole agreement between parties and may not be altered, changed or amended, except by an instrument in writing signed by both parties hereto. It is expressly agreed that if any clause, paragraph, provision or portion shall be held or declared to be void or illegal for any reasons by a court of competent jurisdiction, such court holding shall not invalidate or affect the enforceability of the remainder of such clause, paragraph, provision or portion thereof, or any other clause, paragraph, provision or part of this License.

IN WITNESS WHEREOF, the parties herein to set their hands and seals the day and year first above written.

Signed, sealed and delivered in the presence of:

Sandra L. Hardy

Claudine L. Robinson

LICENSEE:

CITY OF RIVIERA BEACH

By: [signature]

Attest: [signature]

LICENSOR:

FLORIDA POWER & LIGHT COMPANY

Natalie A. Sears

Lynn C. Simpson

By: [signature]
Director of Land Management
and Assistant Secretary

Attest: [signature]
Assistant Secretary

DGE062190

Legal Description

PARCEL A:

All that part of the South 181 feet (measured at right angles between parallel lines) of Government Lot 4, Section 33, Township 42 South, Range 43 East, Palm Beach County, Florida, lying easterly of the right of way of State Road No. 4 (U.S. Highway no. One), LESS a strip being 2.5 feet wide at the South end and 2.8 feet wide at North end, more particularly described as follows:

Beginning at the intersection of the South line of said Section 33 with the easterly right of way line of the 80 foot wide right of way of State Road No. 5 (U.S. No. 1) as said right of way is shown on F.D.O.T. right of way map Section 9302 revised 2-2-49; thence on an assumed bearing of North 90°00'00" East along the South line of said Section 33, a distance of 1477.86 feet, more or less, to the southeast corner of that certain parcel described by Trustees of the Internal Improvement Fund Deed No. 24202 (1560-50) dated February 16, 1965; thence North 02°19'45" West along the West line of said Deed No. 24202, a distance of 181.15 feet to the North line of the said South 181 feet of Section 33; thence North 90°00'00" West along said North line a distance of 1474.38, more or less, to the said easterly right of way line of State Road No. 5; thence South 01°13'44" East along said right of way line, a distance of 181.04 feet to the Point of Beginning.

PARCEL B:

Part of Section 33, Township 42 South, Range 43 East, Palm Beach County, Florida, more particularly described as follows:

Beginning at the intersection of the South line of said Section 33 with the City of Riviera Beach Bulkhead Line along the westerly shore of Lake Worth as established by Ordinance No. 448 and Ordinance No. 579; thence westerly along the South line of said Section 33 a distance of 46.9 feet, more or less, to a point in the high water line on the westerly shore of Lake Worth, said point being 531.31 feet easterly from (measured along the South line of said Section 33) the easterly right of way line of North Dixie Highway (formerly Poinsettia Avenue) according to the plat of Knowles Court Addition recorded in Plat Book 9 Page 82, Public Records of Palm Beach County, Florida; thence Northerly along said water line, which makes an angle with the preceding course (measured from west to north) of 87°40'15" a distance of 181.15 feet to a point in a line parallel to and 181 feet northerly from (measured at right angles to) the South line of said Section 33; thence easterly along said parallel line a distance of 84.5 feet, more or less, to a point in said Bulkhead Line; thence southerly along said Bulkhead Line a distance of 183.51 feet to the Point of Beginning.

EXHIBIT A

RECORD VERIFIED
PALM BEACH COUNTY, FLA.
JOHN B. DUNKLE
CLERK CIRCUIT COURT

MAY-15-1997 2:44PM 97-172681
ORB 9795 Pg 1212

DECLARATION AND RESTRICTIVE COVENANT REGARDING ROAD IMPACT FEE

This Declaration and Restrictive Covenant (hereinafter referred to as "Declaration"), is executed this 19th day of February, 1997 by City of Riviera Beach, (hereinafter referred to as "Owner"), and by Palm Beach County, a political subdivision of the State of Florida (hereinafter referred to as "County"). The legal address of this property is City of Riviera Beach Bulkhead Line Plat Book 28, Pages 95 & 96 (See Exhibit "A" attached).

RECITALS

WHEREAS, County is empowered and authorized to adjust the amount of the Fair Share Contribution for Road Improvements fee (hereinafter "impact fee") pursuant to Article 10 of the Land Development Code and the laws of the State of Florida; and, both the County and the Owner have determined that it is in their best interests to execute this Declaration, and that this Declaration will further the aims of the Fair Share Contribution for Road Improvements Section, Article 10 of the Land Development Code (hereinafter referred to as "Article 10"); and

WHEREAS, Owner is developing a certain parcel of land (hereinafter referred to as "Parcel"), a legal description of which is contained in Exhibit "A", attached hereto and incorporated herein by reference. The land will be used as a Office-Retail.

NOW, THEREFORE, in consideration of the County's adjusting the impact fee amount and the promises made by the parties hereto and other good and valuable consideration, the

parties hereto do covenant and agree as follows:

1. The County computed the impact fee for the use of the Parcel based on the traffic generation data for a Office - Retail of 3100 square footage as provided by qualified engineers. This traffic generation data has been submitted to and accepted by the County Engineer and the Impact Fee Coordinator pursuant to Article 10, Section 10.8.E.1. The approved trip rate for this land use is 85.4 TPD.

2. The County and Owner agree that the use of the Parcel may at some future time be converted to a use which may generate more traffic than originally estimated, provided it is in compliance with all laws, ordinances, and regulations. If such a conversion does occur, and the future use generates additional traffic, then, at that time, the Owner, or its successors in interests or assigns, covenant and agree to pay additional Article 10 impact fees as necessary to proceed with the conversion under the terms of Article 10, as amended.

3. The County and Owner agree that no future building permits for additional square footage will be issued, and no change of use to a more intensive use will be permitted, until a statement by the County Engineer verifies that any such changes will comply with Article 10.

4. Upon receipt of the County Engineer's statement and upon payment of the additional fees required by the Ordinance, as amended, the Planning, Zoning and Building Department of Palm Beach County will issue the necessary permits. Any fees originally paid by Owner will be credited to Owner towards the payment of these additional fees.

5. This Declaration may be amended or canceled in a properly executed and recorded document, indicating mutual consent of the parties to this Declaration or by their successors in

6. If a provision of this Declaration is rendered void or unenforceable by a court of competent jurisdiction or by any act of the Legislature, the remaining provisions shall remain in effect to the degree they can be given effect.

7. This Declaration shall be and constitute an obligation on the property of the Owner, running with and binding on the Parcel, regardless of the title or ownership thereof, and regardless of any changes which may take place therein.

8. The terms of this Declaration shall be effective on the date of recording, and shall be binding upon and shall inure to all successors in interest to the parties to the Declaration, and shall run with the Owner's land.

9. Within fourteen (14) days after the parties have approved and executed this Declaration, the Developer shall record this Declaration with the Clerk of the Circuit Court, Palm Beach County, Florida. No permit shall be issued or use commenced on the Parcel until a certified recorded copy of this is delivered to the Palm Beach County Impact Fee Coordinator.

IN WITNESS WHEREOF, the Owner has executed this Declaration the day and year first above written.

WITNESSES	OWNER
Veronica Howard	By: Clara K. Williams
Veronica Howard Typed or Printed Name	Clara K. Williams Typed or Printed Name
Joan D. Pritts	
Joan D. Pritts Typed or Printed Name	(561) 845-4145 Telephone Number

STATE OF Florida

COUNTY OF Palm Beach

I HEREBY CERTIFY that on this day, before me, an officer

acknowledgment, personally appeared [illegible],

to me known to be the person described in and who executed the foregoing instrument and he acknowledged before me that he executed the same under authority duly vested in him.

WITNESS my hand and official seal in the State and County last aforesaid this 26 day of March, 1997.

OFFICIAL NOTARY SEAL
VERONICA HOWARD
COMMISSION NUMBER
CC561932
MY COMMISSION EXPIRES
MAY 10,2001
NOTARY PUBLIC STATE OF FLORIDA

Veronica Howard
NOTARY PUBLIC
My Commission Expires: 5.10.2001

The terms and conditions of the foregoing Declaration and Restrictive Covenant Regarding Road Impact Fee, to the extent the same are binding on Palm Beach County, are hereby accepted by the undersigned on behalf of Palm Beach County as its duly authorized representative this 16 day of April, 1997.

WITNESSES:

Keith W. Hurbs
Keith W. Hurbs
Typed or Printed Name

Beverly Davis
Beverly Davis
Typed or Printed Name

PALM BEACH COUNTY, FLORIDA

By: Willie M. Swoope
Impact Fee Coordinator

Willie M. Swoope
Typed or Printed Name

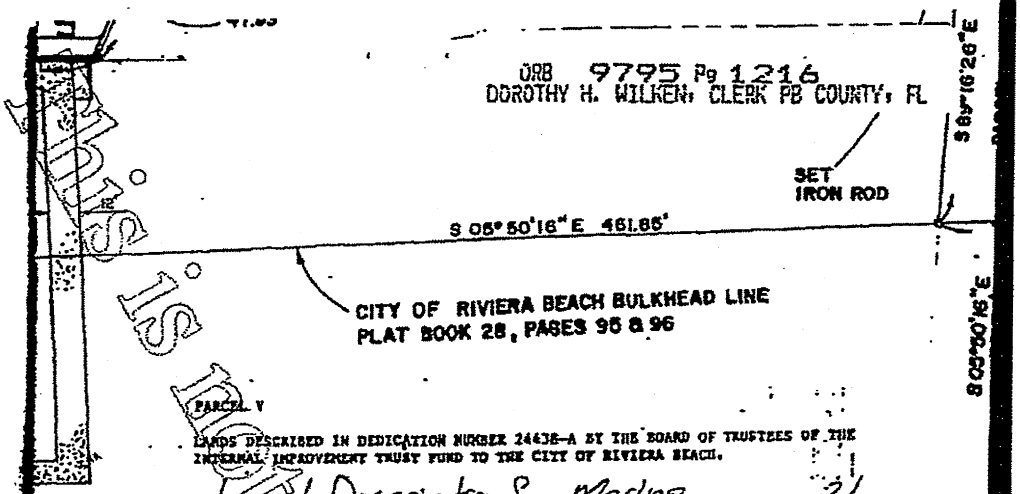
(561) 233-5014
Telephone Number

APPROVED AS TO FORM AND LEGAL SUFFICIENCY

County Attorney

Leonard Berger
Typed or Printed Name

restrctv.cov



PARCEL V

LANDS DESCRIBED IN DEDICATION NUMBER 24438-A BY THE BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND TO THE CITY OF RIVIERA BEACH.

Legal Description for Marina 2/97

DEDICATION 24438-A PARCEL V

A parcel of sovereignty land lying in Lake Worth in Sections 23 and 34, Township 42 South, Range 43 East, Palm Beach County, Florida, more particularly described as follows:

Commencing at the intersection of the centerline of Avenue "C" and the Westerly projection of the South line of Lot 8, Block 11, Inlet Grove, according to the plat thereof recorded in Plat Book 8, page 14, Public Records of Palm Beach County, Florida, and also according to the plat thereof titled "Bulkhead Line Riviera Beach, Florida", recorded in Plat Book 28, Pages 95 and 96, on November 4, 1965, Public Records of Palm Beach County, Florida, thence South 87°22'12" East along said Westerly projection and along said South line of Lot 8, Block 11, a distance of 180 feet to a point in the high water line on the Westerly shore of Lake Worth, said point also being the point of beginning of a submerged parcel of land described as "Parcel 2" in that certain Dedication No. 24438 by the Trustees of the Internal Improvement Fund of the State of Florida to the City of Riviera Beach, dated December 14, 1966, said point also being the Point of Beginning of the herein described parcel of submerged land; thence continue South 87°22'12" East, along the Easterly projection of said Lot 8, Block 11, a distance of 131.11 feet to a point in the City of Riviera Beach Bulkhead Line as shown on said aforementioned plat and as approved in that certain Certificate of Approval for Establishment of Bulkhead Line No. 50 (10-19-65), by the Trustees of the Internal Improvement Fund of the State of Florida, dated October 27, 1965; thence continue South 87°22'12" East, along the Easterly projection of the South line of said Lot 8, Block 11, a distance of 382.73 feet; thence South 1°12'47" East, a distance of 1292.03 feet; thence North 87°53'01" West, a distance of 264.32 feet to a point in the City of Riviera Beach Bulkhead Line as said line is shown on said aforementioned plat; thence continue North 87°53'02" West along a line, said line also being the Easterly extension of the South line of a certain tract of land, hereinafter called Tract 1, described in a deed dated June 4, 1946, recorded in Book 1467, pages 810, 811 and 917, Official Records of Palm Beach County, to a point on the high water line and the Easterly property line of said Tract 1; thence meandering Northerly along said East property line and the high water line to the North line of said Tract 1, said line also being the South line of a certain tract of land, hereinafter called Tract 2, described in a deed dated August 29, 1946, and recorded in Book 787, pages 235 and 236, and in a Quitclaim Deed dated November 13, 1946, recorded in Book 787, pages 249 and 250, all in the Official Records of Palm Beach County; thence Easterly along said South line and along said high water line to the Easterly property line of said Tract 2; thence Northerly along said Easterly property line of said Tract 2 and said high water line and, where existing, a concrete bulkhead, 329 feet, more or less, to the Easterly extension of the South line of 14th Avenue, and the North line of said Tract 2; thence continuing Northerly along the extension of the Easterly line of Tract 2, 30 feet, more or less, to the Easterly extension of the centerline of 14th Avenue, said line being the South line of a certain tract of land, hereinafter called Tract 3, described in a deed dated March 31, 1975, and recorded in Book 2424, page 743, Official Records of Palm Beach County; thence meandering along the high water line and said South line of Tract 3 and Northerly along the Easterly line of Tract 3 to the North line of Tract 3, said line also being the South line of a road 50 feet in width known as "Old City Road"; thence continue Northerly along the high water line to the Point of Beginning, containing 14 acres, more or less.

DATE: 8-31-89	SURVEY
DRN. BY:	
CKD. BY:	RIVIERA BEAC

RECORDER'S MEMO: Legibility of document unsatisfactory when received.

A G R E E M E N T

This Agreement made this 9th day of ~~April~~ May, 1945, by and between FLORIDA POWER & LIGHT COMPANY, a Florida corporation, party of the first part, and BISCAYNE PROPERTIES, INCORPORATED, a Delaware corporation duly authorized to transact business in the State of Florida, party of the second part,

W I T N E S S E T H:

That the party of the first part has acquired and is the owner in fee simple of the part lying east of the Federal Highway of the tract of land in Palm Beach County, Florida, conveyed by Edward A. Simon to Thomas H. Taylor by deed dated October 7, 1884, and recording of record in the public records of Palm Beach County, Florida, in Deed Book "E", at page 495; and the party of the second part has acquired and is the owner in fee simple of the part lying east of the Federal Highway of the tract of land conveyed by the said Thomas H. Taylor to David Simon, by deed of the 8 date 7, 1884, and recording of record in the public records of Palm Beach County, Florida, in Deed Book "E", at page 497, which tract adjoins the tract of the party of the first part on the south.

Descriptions herein given by reason of the nature of the descriptions contained in the instruments does not in the location of the boundary common to the said two tracts of land.

The parties hereto agree that the boundary common to their said two tracts is a line parallel to and 181 feet north of (measured at right angles) the north line of Section 33 Township 44 South, Range 43 East.

Attached hereto and made a part hereof is a plat showing the locations of the two tracts of land aforesaid. On said tract the lands of the party of the first part are marked "Helen L. Quinn", the name of the party from whom the party of the first part purchased the same, and the lands of the party of the second part are marked "M. C. Hartung", the name of the party to whom the party of the second part now proposes to convey the same.

Witness to

Witness to

Florida
Dade

H.F. Simpson
Vice-

M. B. McDonald

Miami

16th

of May

Notary Public, State of

My commission expires

STATE OF New York }
COUNTY OF New York }

I hereby certify, that on this day personally appeared before me, an officer duly authorized to administer oaths and take acknowledgments [illegible]

Howard Phipps [illegible] Dominican [illegible]

[illegible] Vice [illegible] Asst. [illegible]

respectively, [illegible]

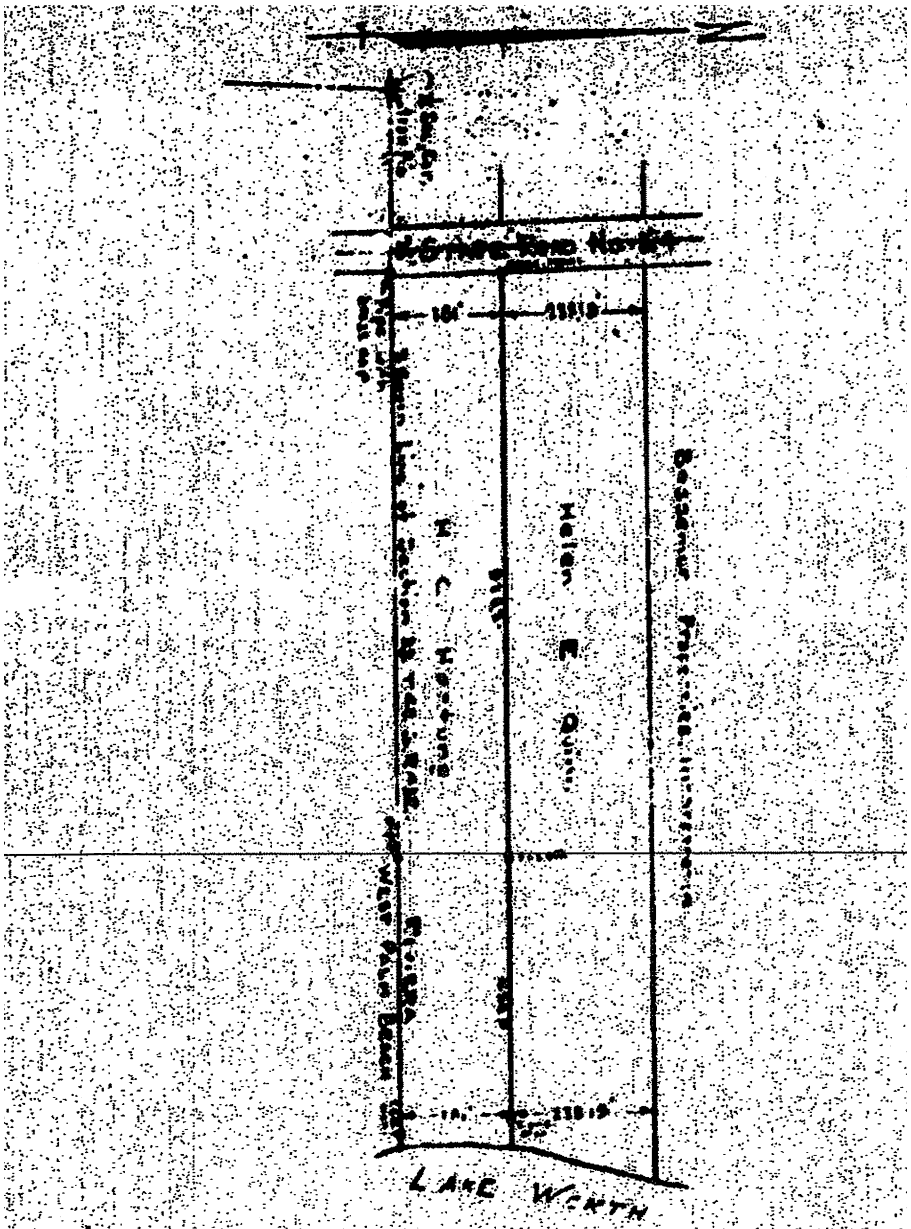
[illegible]

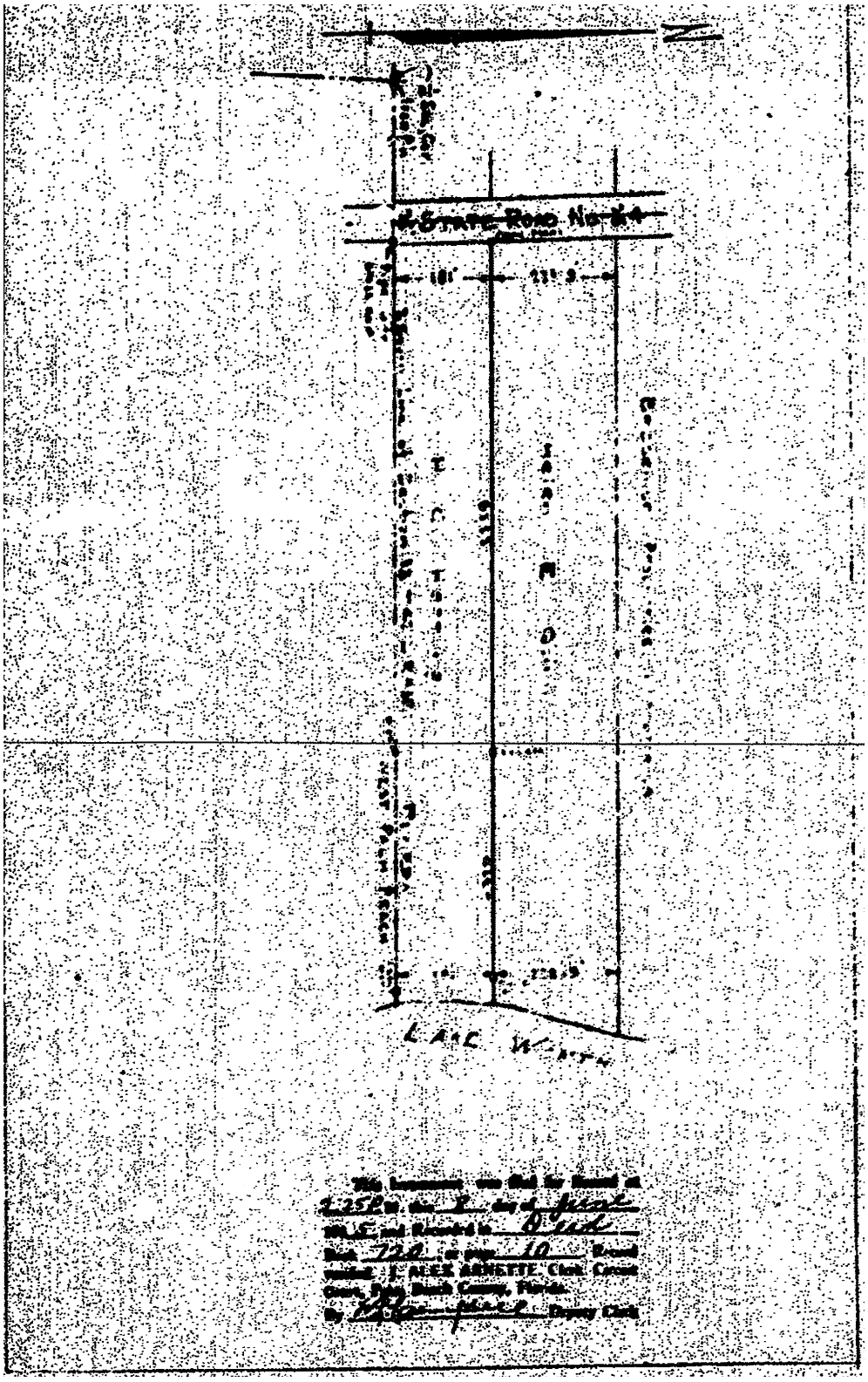
[illegible]

[illegible] 9th [illegible]

[illegible]

[illegible]


LAKE WORTH



This Instrument was filed for Record at 2:25 P.M. on the 2 day of June 1976 A.D. and Recorded in Book 720 on page 10 Record Verified J. ALEX ARNETTE, Clerk Circuit Court, Bay County, Florida.
By [illegible] Deputy Clerk

Southeast Guaranty & Title, Inc.

1645 Palm Beach Lakes Blvd. Suite 160
West Palm Beach, Florida 33401
(561) 712-0005 Fax: (561) 712-8662

File No.: **2806023**

OWNERSHIP AND ENCUMBRANCE REPORT

THIS CERTIFIES, that according to the records in the Office of the Clerk of the Circuit Court of **Palm Beach** County, Florida, as of **June 17, 2008 at 8:00 AM.**, LAND RESOURCES INVESTMENT COMPANY, A FLORIDA CORPORATION, (This corporation was merged into Florida Power & Light Company), is the apparent record owner(s) of the following described land (hereinafter referred to as the "Property"), situate, lying and being in the County of **Palm Beach**, State of Florida, to-wit:

LEGAL DESCRIPTION:

COMMENCING at the Southwest corner of Lot 3, Block 38, North Palm Beach Plat No. 3, as recorded in Plat Book 6, Page 39, Public Records, Palm Beach County, Florida, said corner being the Point of Beginning (P.O.B.); thence run Northerly along the Easterly Right-of-Way line of North Dixie Highway, a distance of 75.02 feet to the Northwest corner of Lot 1, Block 38, said North Palm Beach; thence continue Northerly along said Easterly Right-of-Way Line making a deflection to the East of 00 degrees 13' 30", a distance 253.39 feet to the North Line of Township 43, South, Range 43 East, thence run Easterly along said North line of Township 43 South, making an angle with the preceding course of 90 degrees 03' 00" as turned from South to East, a distance of 581.20 feet to the intersection with the City of West Palm Beach 1963 Bulkhead line as recorded in Plat Book 27, Pages 231-239; thence run Southerly along said Bulkhead line a distance of 328.13 feet, more or less to the intersection with the South Line of aforementioned Lot 3, Block 38; thence run Westerly along said South Line, a distance of 585.35 feet, more or less, to the Point of Beginning.

SUBJECT TO THE FOLLOWING:

1. Bulkhead line established by the City of West Palm Beach as recorded in Official Record Book 968, Page 49, and in Plat Book 27, Pages 231 and 239.

2. Easement as granted to the City of West Palm Beach by Deed dated January 27, 1955, and recorded in Deed Book 1080, Page 244.

3. Easement as granted to Southern Bell Telephone and Telegraph Co. by permit dated September 5, 1959, and recorded in Official Record Book 102, Page 251.

4. Easement granted to Florida Public Utilities Co. by Deed dated January 12, 1967, and recorded in Official Record Book 1474, Page 542.

5. Reservations as set-forth in Deed No. 2237 (52350) Corrective, dated December 14, 1962 from the Trustees of the Internal Improvement Fund of the State of Florida, Recorded in Official Record Book 855, Page 449.

6. Reservations as contained in deed dated April 5, 1940, from James Jorgensen and Florence L. Jorgensen, his wife, to J. Kirby Thompkins and Hazel Thompkins, his wife as recorded in Deed Book 603, Page 319.

7. Matters as shown on the plat of Knowles Court recorded in Plat Book 8, Page 46.

8. Matters as shown on the plat of Knowles Court Addition recorded in Plat Book 9, Page 82.

9. Matters as shown on the plat of North Palm Beach Plat No. Three recorded in Plat Book 6, Page 39.

10. Code Violation Lien recorded in Official Record Book 21096, Page 1481.

11. NOTE: All recording references contained herein are in the Public Records of Palm Beach County, Florida.

THIS COMPANY, in issuing the O & E Report (hereinafter referred to as the "Report"), assumes no liability on account of any instrument or proceedings, in the chain of title to the Property, which may contain defects that would render such instrument or proceedings null and void or defective. All instruments in the chain of title to the Property are assumed to be good and valid.

The Company's liability for this Report is limited to the amount paid and extends only to the Customer who placed the order with the Company. No one else may rely upon this Report. Customer, by accepting this

Report, agrees to indemnify and hold Company harmless from any claims or losses in excess of the limited amount stated above. This Report contains no expressed or implied opinion, warranty, guarantee, insurance or other similar assurance as to the status of title to real property. This report should only be relied upon for title information and, therefore, should be verified by a commitment for title insurance.

Dated at West Palm Beach, Florida, this June 20, 2008.

Southeast Guaranty & Title, Inc.

BY: _____
Authorized Signature

Property Appraiser's Public Access System

Property Appraiser

Home

Property Information

View Map

Calculate Portability

Location Address: N FLAGLER DR

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-01-000-0760

Subdivision: KNOWLES COURT ADD IN

Official Records Book: 07902 Page: 1247 Sale Date: Sep-1993

Legal Description: KNOWLES COURT ADD UNNUMBERED LT LYG E OF POINSETTIA AVE & PT OF TR OF SUBMURGED LAND ADJ THERETO LYG BET

Owner Information

All Owners

Name: LAND RESOURCES INV CO

Mailing Address: PROPERTY TAX DEPT
PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

Sales Date	Book/Page	Price	Sale Type	Owner
Sep-1993	07902/1247	$675,000	QUIT CLAIM	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$709,088	$709,088	$477,500
Total Market Value:	$709,088	$709,088	$477,500

Property Information
Number of Units: 0

Use Code: 0000 Description: VACANT

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$709,088	$709,088	$477,500
Exemption Amount:	$0	$0	$0
Taxable Value:	$709,088	$709,088	$477,500

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$14,860	$16,203	$11,295
Non Ad Valorem:	$0	$0	$0
Total Tax:	$14,860	$16,203	$11,295

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

Gary R. Nikolits, CFA Property Appraiser's Public Access System

Property Appraiser, Palm Beach County

Home

Property Information

View Map

Calculate Portability

Location Address: 5904 N FLAGLER DR

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-06-038-0010

Subdivision: NORTH PALM BCH PL 3 IN

Official Records Book: 07902 Page: 1247 Sale Date: Sep-1993

Legal Description: NORTH PALM BEACH PLAT 3 LT 1, (LESS NLY 3 FT OF W 250 FT IN DB1109P258) & LTS 2 & 3 & SUBMERGED LANDS IN TRS

Owner Information

All Owners

Name: LAND RESOURCES INV CO

Mailing Address: PROPERTY TAX DEPT
PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

Sales Date	Book/Page	Price	Sale Type	Owner
Sep-1993	07902/1247	$675,000	QUIT CLAIM	
Jan-1974	02294/0849	$202,500	WARRANTY DEED	
Jan-1972	02062/1085	$74,300	WARRANTY DEED	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$0	$0	$0
Land Value:	$959,050	$959,050	$645,825
Total Market Value:	$959,050	$959,050	$645,825

Property Information
Number of Units: 0

Use Code: 0000 Description: VACANT

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$959,050	$959,050	$645,825
Exemption Amount:	$0	$0	$0
Taxable Value:	$959,050	$959,050	$645,825

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$20,098	$21,914	$15,277
Non Ad Valorem:	$0	$0	$0
Total Tax:	$20,098	$21,914	$15,277

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

Gary R. Nikolits, C.F.A. Property Appraiser's Public Access System

Property Appraiser Palm Beach County

Home

Property Information

View Map

Calculate Portability

Location Address: N FLAGLER DR

Municipality: WEST PALM BEACH

Parcel Control Number: 74-43-43-04-02-000-0010

Subdivision: KNOWLES COURT IN

Official Records Book: 07902 Page: 1247 Sale Date: Sep-1993

Legal Description: KNOWLES COURT LT 1 & PT OF TR OF SUBMERGED LAND ADJ THERETO LYG BET HIGH WATER LINE & WPB BULKHEAD

Owner Information

All Owners

Name: LAND RESOURCES INV CO

Mailing Address: PROPERTY TAX DEPT
PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

Sales Date	Book/Page	Price	Sale Type	Owner
Sep-1993	07902/1247	$675,000	QUIT CLAIM	
Jan-1973	02226/0481	$350,000	WARRANTY DEED	
Jan-1971	01908/1944	$195,000	WARRANTY DEED	

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$15,207	$15,207	$15,207
Land Value:	$1,632,535	$1,632,535	$1,099,350
Total Market Value:	$1,647,742	$1,647,742	$1,114,557

Property Information
Number of Units: 0
*Total Square Feet: 0

Use Code: 0000 Description: VACANT

* in residential properties may indicate living area.

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$1,647,742	$1,647,742	$1,114,557
Exemption Amount:	$0	$0	$0
Taxable Value:	$1,647,742	$1,647,742	$1,114,557

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$34,531	$37,651	$26,365
Non Ad Valorem:	$0	$0	$0
Total Tax:	$34,531	$37,651	$26,365

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

(Return to: (enclose self-addressed stamped envelope)

Name

Address:

SEP-27-1993 3:06PM 93-307536
ORB 7902 Pg 1247
Con 675,000.00 Doc 4,725.00

Property Appraisers Parcel Identification (Folio) Number(s):

Grantees Address Furnished

Return to:
Jay W. Molyneaux
Land Resources Investment Co.
11770 U.S. Highway 1 or P.O. Box 088801
North Palm Beach, FL 33408-8801

Prepared by:
George H. Lane
General Services Administration
Office of Regional Counsel
GSA, Region IV, Atlanta, GA
4-U-FL-922

QUITCLAIM DEED

THIS INDENTURE, made this 21st day of September 1993, between the UNITED STATES OF AMERICA, acting by and through the Administrator of General Services, under and pursuant to the powers and authority contained in the provisions of the Federal Property and Administrative Services Act of 1949, approved June 30, 1949 (P.L. 81-152), as amended (40 U.S.C. 484), and regulations and orders promulgated thereunder, Grantor, and LAND RESOURCES INVESTMENT CO. of North Palm Beach, Florida, Grantee.

WITNESSETH:

That the Grantor, for and in consideration of the sum of SIX HUNDRED SEVENTY FIVE THOUSAND AND NO/100 DOLLARS ($675,000.00), cash in hand paid and receipt of which is hereby acknowledged, has remised, released, and forever quitclaimed and by these presents does remise, release and forever quitclaim unto the Grantee its successors and assigns, all right, title, interest, claim and demand which the said Grantor has or may have had in and to that certain parcel of land in Section 3 and 4, Township 43 South, Range 43 East, City of West Palm Beach, Palm Beach County, Florida, and being more particularly described as follows:

COMMENCING at the Southwest corner of Lot 3, Block 38, North Palm Beach Plat No. 3, as recorded in Plat Book 6, Page 39, Public Records, Palm Beach County, Florida, said corner being the Point of Beginning (P.O.B.); thence run Northerly along the Easterly Right-of-Way Line of North Dixie Highway, a distance of 75.02 feet to the Northwest corner of Lot 1, Block 38, said North Palm Beach; thence continue Northerly along said Easterly Right-of-Way Line making a deflection to the East of 00° 13' 30", a distance of 253.39 feet to the North Line of Township 43, South Range 43 East, thence run Easterly along said North Line of Township 43 South, making an angle with the preceding course of 90° 03' 00" as turned from South to East, a distance of 581.20 feet to the intersection with the City of West Palm Beach 1963 Bulkhead line as recorded in Plat Book 27, Pages 231-239; thence run Southerly along said Bulkhead line a distance of 328.13 feet, more or less, to the intersection with the South Line of aforementioned Lot 3, Block 38; thence run Westerly along said South Line, a distance of 585.35 feet, more or less, to the Point of Beginning.

CONTAINING 4.396 acres, more or less.

TOGETHER with all the improvements located on the above described lands and together with all rights, hereditaments, and appurtenances thereto belonging, including the riparian and littoral rights appurtenant thereto, and including all rights, title or interest of the Grantor in and to any alleys, streets, ways, strips or gores abutting or adjoining said lands.

SUBJECT, HOWEVER, to all existing easements, including but not limited to, rights-of-way for highways, pipelines, and public utilities, if any, whether of public record or not.

FURTHER SUBJECT to the following:

a.) Bulkhead line established by the City of West Palm Beach as recorded in Official Record Book 968, at Page 49, and in Plat Book 27, Pages 231 and 239.

b.) Easement as granted to the City of West Palm Beach by Deed dated January 27, 1955, and recorded in Deed Book 1080, at Page 244.

c.) Easement as granted to Southern Bell Telephone and Telegraph Co. by permit dated September 5, 1959, and recorded in Official Record book 102 at Page 251.

d.) Easement as granted to Florida Public Utilities Co., by Deed dated January 12, 1967, and recorded in Official Record Book 1474, at Page 522.

e.) Easement as granted to Florida Power and Light Company, by instrument dated April 5, 1979.

f.) Reservations as set forth in Deed No. 2237 (52350) Corrective, dated December 14, 1962, from the Trustees of the Internal Improvement Fund of the State of Florida, Recorded in Official Record Book 855, page 449, Public Records of Palm Beach County, Florida.

g.) Reservations as contained in Deed dated April 5, 1940, from James Jorgensen and Florence B. Jorgensen, his wife, to J. Kirby Thompkins and Hazel Thompkins, his wife, as recorded in Deed Book 603, page 319, Palm Beach County Records.

TO HAVE AND TO HOLD the same, together with all and singular the appurtenances thereunto belonging or in anywise appertaining, and all the estate, right, title, interest or claim whatsoever of the said Grantor, either in law or in equity.

The property hereby conveyed has heretofore been declared surplus to the needs of the UNITED STATES OF AMERICA, is presently under the jurisdiction of the General Services

ORB 7902 Pg 1250
RECORD VERIFIED DOROTHY H WILKEN
CLERK OF THE COURT - PB COUNTY, FL

Administration is available for disposal and its disposal has been heretofore authorized by the Administrator of General Services acting pursuant to the above referred to laws, regulations and orders.

IN WITNESS WHEREOF, the UNITED STATES OF AMERICA has caused these presents to be executed in its name and on its behalf the day and year first above written.

UNITED STATES OF AMERICA
Acting by and through
Administrator of General Services

WITNESSES:

W. N. Holcombe Jr.
Katherine D. Nichols

By: Betty E. Lemmon
BETTY E. LEMMON
Contracting Officer
Office of Real Estate Sales
General Services Administration
Region IV, Atlanta, Georgia

STATE OF GEORGIA)
)
COUNTY OF FULTON)

This day, before the undersigned, personally appeared BETTY E. LEMMON, to me well known and known to be the person described in and who executed the foregoing instrument of conveyance on behalf of the UNITED STATES OF AMERICA, and acknowledged that she, being thereunto duly authorized as Contracting Officer, Office of Real Estate Sales, General Services Administration, Region 4, Atlanta, Georgia, executed the same for the purposes therein mentioned as the free act and deed of the UNITED STATES OF AMERICA and General Services Administration.

IN WITNESS WHEREOF, I have hereunto affixed my official seal of office in Atlanta, Georgia, this the 21st day of September, 1993.

NANCY L. SELLERS NOTARY PUBLIC DEKALB COUNTY, GEORGIA

Notary Public, DeKalb County, Georgia
My Commission Expires February 27, 1996

Nancy L. Sellers
Nancy L. Sellers
Notary Public
State of Georgia

CFN 20060645311
OR BK 21096 PG 1481
RECORDED 11/17/2006 12:15:53
Palm Beach County, Florida
Sharon R. Bock, CLERK & COMPTROLLER
Pg 1481; (1pg)

Record and Return to:
Secretary to the Special Magistrate
City of West Palm Beach/Attorney's Office
200 2nd Street, 4th Floor
West Palm Beach, FL 33402

CITY OF WEST PALM BEACH, FLORIDA
CODE COMPLIANCE SPECIAL MAGISTRATE
100 South Dixie Highway
West Palm Beach, Florida 33401

CASE NO.:	CE06070522
VIOLATION ADDRESS:	5904 N FLAGLER DRIVE
LEGAL DESCRIPTION:	NORTH PALM BEACH PLAT 3 LT 1, (LESS NLY 3 FT OF W 250 FT IN DB1109P258) & LTS 2 & 3 & SUBMERGED LANDS IN TRS
PCN:	74434304060380010
RESPONDENT(S):	LAND RESOURCES INV CO PO BOX 14000 NORTH PALM BEACH FL 33408 0420

ORDER IMPOSING FINE/LIEN

NOTICE: THIS IS A LIEN AGAINST YOUR PROPERTY!
THIS LIEN CAN BE FORECLOSED BY THE CITY.

THIS CASE was heard by the Special Magistrate on August 25, 2006. Upon review of the entire record in this case, it is

ORDERED:

1. Owner(s)/Respondent(s) have failed to comply with the Special Magistrate's Order dated October 13, 2006 within the time set.
2. A fine is hereby assessed in the amount of $150.00 per day for each day the violation continues to exist. **This fine will accrue until all violations are repaired.**
3. This Order shall be recorded in the Public Records of Palm Beach County, Florida, and shall constitute a lien against all real property, and all personal property, owned by the Owner(s)/Respondent(s) within Palm Beach County, Florida, pursuant to Fla. Stat. 162.09.

DONE and ORDERED this 13 day of Nov, 2006.

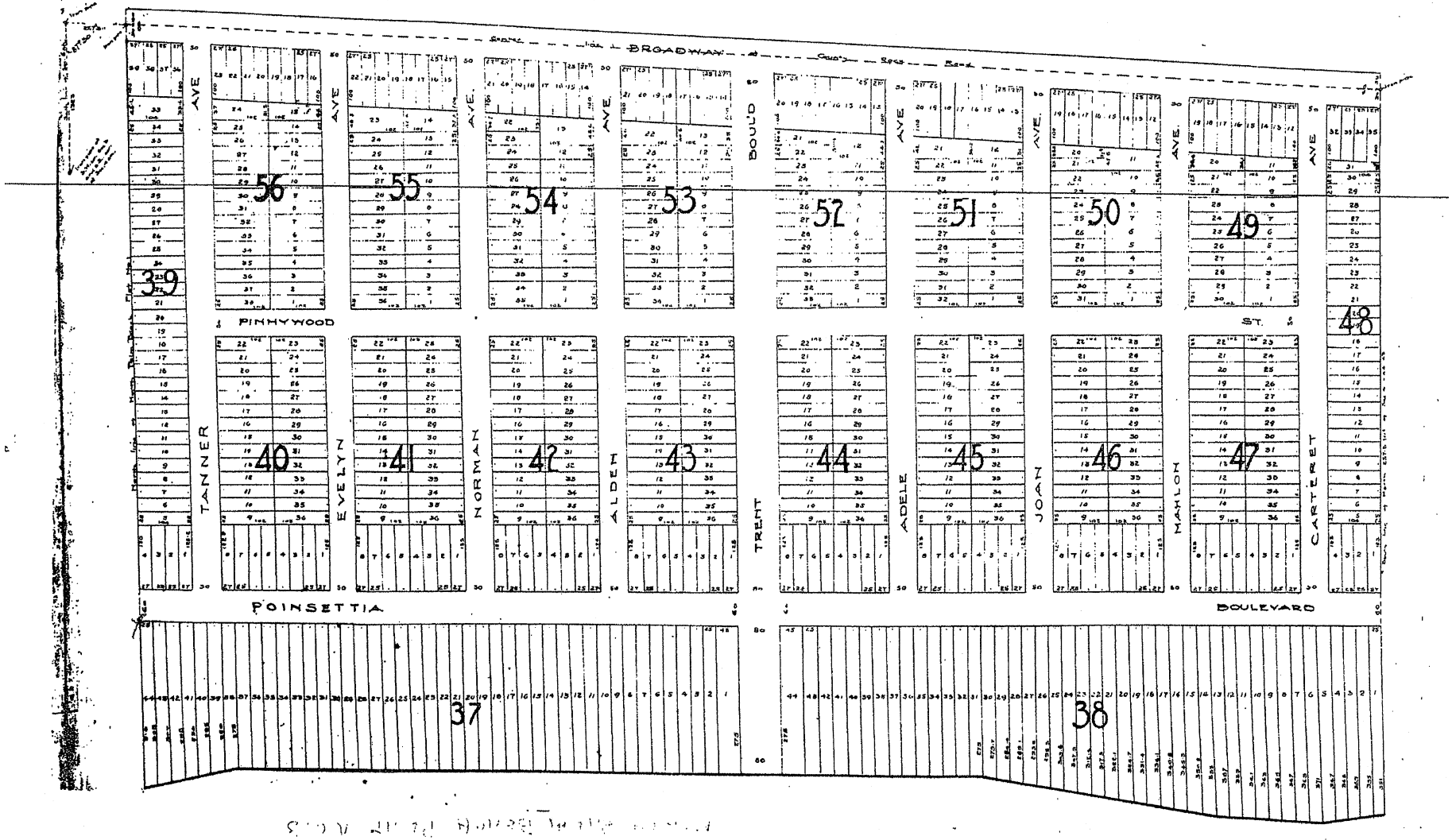
Gary Brandenburg
Code Compliance Special Magistrate
STATE OF FLORIDA }
COUNTY OF PALM BEACH } SS:

SWORN AND SUBSCRIBED before me this 13th day of November, 2006 by Gary Brandenburg, Special Magistrate, who is personally known to me.

Sandra Lynn Malloy
Notary Public – State of Florida

SANDRA LYNN MALLOY
MY COMMISSION # DD 173739
EXPIRES: March 31, 2007
Bonded Thru Notary Public Underwriters

6-39


BROADWAY
PINNYWOOD
POINSETTIA
BOULEVARD
ST.
TANNER
AVE
EVELYN
AVE.
NORMAN
AVE.
ALDEN
AVE.
BOULD
TRENT
AVE
ADELE
AVE.
JOY
AVE.
MAHLON
CARTERET
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KNOWLES COURT ADDITION

SITUATED IN SECTION 4 T43S. R43E.
PALM BEACH COUNTY FLORIDA
JAN. 1924 SCALE 1" = 100
SURVEYED & PLATTED
BY
CARR & McFADDEN

Dedication

State of Florida
County of Palm Beach } ss

KNOW ALL MEN BY THESE PRESENTS, That H W DOBBINS, Jr and GEORGIANA DOBBINS, his wife, the owners in fee simple of the land known as KNOWLES COURT ADDITION and more particularly described as follows: [illegible] of Lot 8, Palm Beach Farms Co. Plat No. 3, [illegible] as South Range 43 East, lying between the East and West [illegible] of the North 375 feet of the above described tract or lot [illegible] have caused the same to be surveyed and platted as shown hereon and do hereby dedicate to the perpetual use of the public, as public highways, the avenues, highway and court as shown hereon, reserving unto themselves, their heirs, successors, assigns or legal representatives, the reversion or reversions of same whenever abandoned by the public or discontinued by law.

Witness:
Victor J. Kuhn
Mabel L. Zielinski } as to both
H W Dobbins Jr. (Seal)
Georgiana Dobbins (Seal)

Acknowledgement

State of Florida
County of Palm Beach } ss

I, THE UNDERSIGNED OFFICER, DO HEREBY CERTIFY, That on this day personally appeared before me H W DOBBINS, Jr. and GEORGIANA DOBBINS, husband and wife, to me well-known and by me well-known to be the persons described in and who executed the foregoing instrument, and severally acknowledged to and before me that they executed the same for the uses and purposes therein expressed.

I FURTHER CERTIFY, That the said GEORGIANA DOBBINS, known by me to be the wife of the said H W DOBBINS, Jr., on a separate and private examination, taken and made by and before me, separate and apart from her said husband, did acknowledge that she executed the same freely and voluntarily and without compulsion, fear, apprehension, or constraint of or from her said husband.

WITNESS, my hand and official seal at West Palm Beach this 4th day of March A D 1924.

Victor J. Kuhn Notary Public
My commission expires Jan 21st 1928

Affidavit

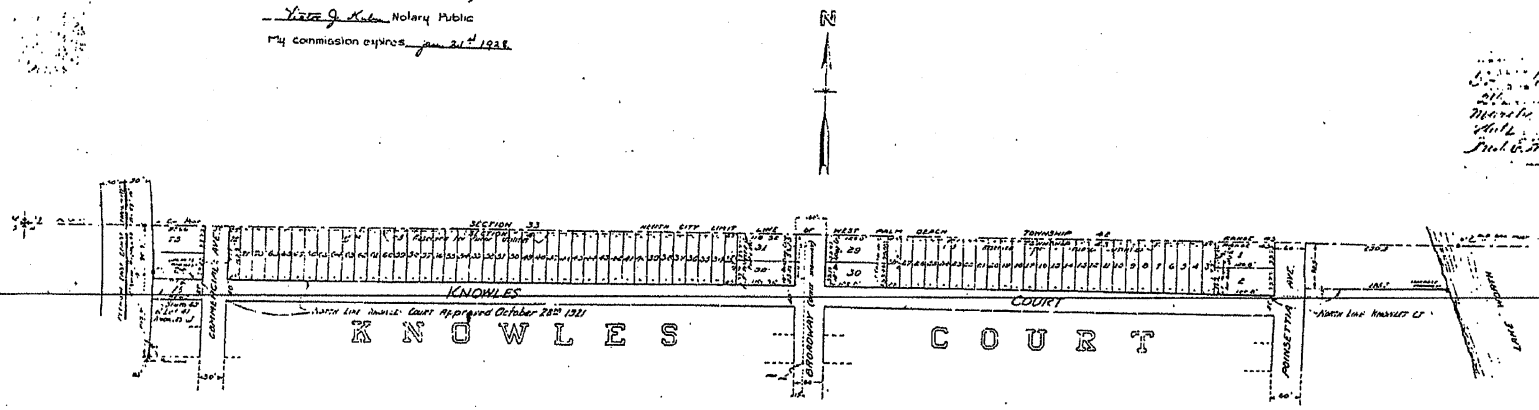
State of Florida
County of Palm Beach } ss

WE HEREBY CERTIFY, That the plat upon which this dedication appears, was made under our direction after an actual survey upon the ground, and that, to the best of our knowledge, the angles and distances shown hereon are correct.
This, the 1st day of March A D 1924

Carr & McFadden, Inc
Civil Engineers
By [illegible]
Pres. Carr & McFadden

Subscribed and sworn to before me this 4th day of March A D 1924

Victor J. Kuhn Notary Public
My commission expires Jan 21st 1928



Approved: City Planning Board
Chairman

Approved:
City Manager

DRAWING NO. 2050

KNOWLES COURT

SITUATED IN SECTION 4 T43S.R43E.
PALM BEACH COUNTY FLORIDA
OCT. 1921 SCALE 1"=100'
SURVEYED & PLATTED
BY
CARR & McFADDEN
FLA STATE ENG. CERT. NOS 1736 & 180.

A.D. 1921
ATTEST:
in the presence of

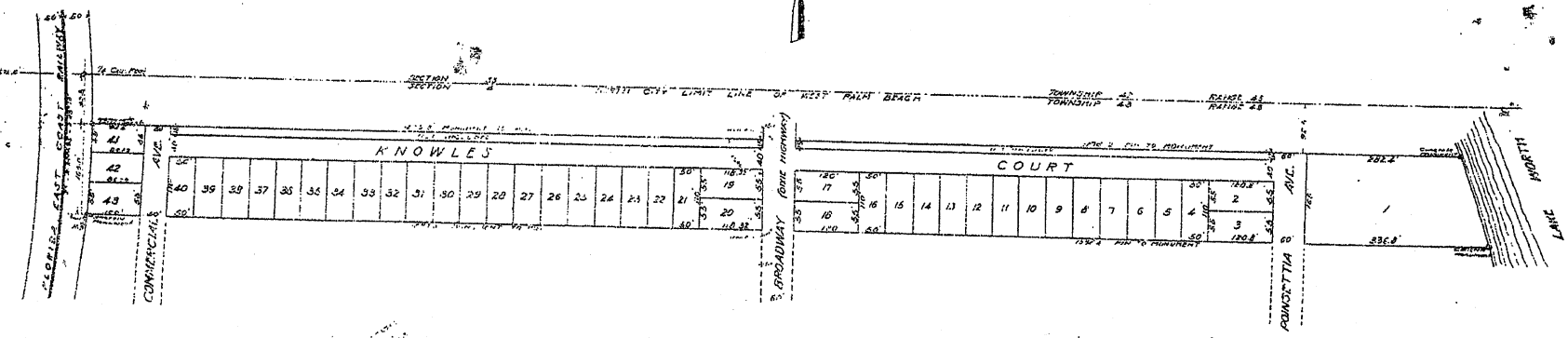
ATLANTIC FISH COMPANY
By Pres

Acknowledgement

State of Florida
County of Palm Beach ss.
Before me this day personally appeared CHARLES KENNEDY and CARRIE N. KENNEDY President and Secretary respectively of the ATLANTIC FISH COMPANY, a Florida corporation, and acknowledged that they executed the dedication hereon shown for the uses and purposes therein intended, on behalf of the said corporation.
Witness my hand and official seal this 5th day of November A.D. 1921
NOTARY PUBLIC
My commission expires:

Affidavit

State of Florida
County of Palm Beach ss.
I hereby certify that the angles and measurements shown hereon are taken from actual data found on the ground by a survey under our direction, of that certain tract of land as shown hereon and more particularly described as follows:
Beginning at a point 5 rods and 10 feet south of the N.W. Cor of the N.E. quarter of section 4, T43S, R43E, and running thence south 10 rods; thence east parallel to the Township Line 160 rods more or less to the shore of Lake Worth; thence north along the shore of Lake Worth 10 rods to the land formally sold to R.K. Brown; thence west along the south line of R.K. Brown's land to the place of begin
NE quarter of section 4 T43S, R43E and known as the homestead of E. Hayden, now deceased, together with all riparian rights thereunto belonging
The same being true and accurate to the best of our knowledge and belief.
CARR & McFADDEN C.E.S
By
State Eng Cert No.
Sworn and subscribed before me this 5th day of November 1921.
NOTARY PUBLIC
My commission expires:



Sec. 8 November 21
November 21 8
Plat 46
Fred E. Brown

PLAN APPROVED:
October 28th 1921
CITY MANAGER.

Southeast Guaranty & Title, Inc.

1645 Palm Beach Lakes Blvd. Suite 160
West Palm Beach, Florida 33401
(561) 712-0005 Fax: (561) 712-8662

File No.: **2806024**

OWNERSHIP AND ENCUMBRANCE REPORT

THIS CERTIFIES, that according to the records in the Office of the Clerk of the Circuit Court of **Palm Beach** County, Florida, as of **June 17, 2008 at 8:00 AM.**, FLORIDA POWER & LIGHT COMPANY, A FLORIDA CORPORATION, is the apparent record owner(s) of the following described land (hereinafter referred to as the "Property"), situate, lying and being in the County of **Palm Beach**, State of Florida, to-wit:

LEGAL DESCRIPTION:

A parcel of land lying in Section 33, Township 42 South, Range 43 East, Palm Beach County, Florida, being more particularly described as the North 663.19 feet of the South 844.19 feet of Government Lot 4, LESS and EXCEPT those lands described in the Order of Taking recorded in Official Record Book 10388, Page 799.

SUBJECT TO THE FOLLOWING:

1. Right of Way for U.S. Highway No. 1 as laid out and in use.
2. Meter Site Lease recorded in Official Record Book 378, Page 141.
3. Easement Agreement recorded in Official Record Book 388, Page 405.
4. Easement Grant recorded in Official Record Book 1651, Page 1505.
5. Meter Site Lease recorded in Official Record Book 1651, Page 1507.
6. Right of Way Easement recorded in Official Record Book 3930, Page 1596.
7. Bulkhead Line Plat of Riviera Beach recorded in Plat Book 27, Page 142.
8. Note: All recording references contained herein are in the Public Records of Palm Beach County, Florida.

THIS COMPANY, in issuing the O & E Report (hereinafter referred to as the "Report"), assumes no liability on account of any instrument or proceedings, in the chain of title to the Property, which may contain defects that would render such instrument or proceedings null and void or defective. All instruments in the chain of title to the Property are assumed to be good and valid.

The Company's liability for this Report is limited to the amount paid and extends only to the Customer who placed the order with the Company. No one else may rely upon this Report. Customer, by accepting this Report, agrees to indemnify and hold Company harmless from any claims or losses in excess of the limited amount stated above. This Report contains no expressed or implied opinion, warranty, guarantee, insurance or other similar assurance as to the status of title to real property. This report should only be relied upon for title information and, therefore, should be verified by a commitment for title insurance.

Dated at West Palm Beach, Florida, this June 20, 2008.

Southeast Guaranty & Title, Inc.

BY: Kevin Torrence
Authorized Signature

Gary R. Nikolits, CFA Property Appraiser's Public Access System

Property Appraiser Palm Beach County

Home

Property Information

View Map

Calculate Portability

Location Address: 300 BROADWAY

Municipality: RIVIERA BEACH

Parcel Control Number: 56-43-42-33-00-000-5180

Subdivision:

Official Records Book: Page: Sale Date:

Legal Description: 33-42-43, N 663.19 FT OF S 844.19 FT OF GOV LT 4(LESS IRREG SHAPED PAR ADDL SR 5 R/WAS IN OR10388P799)

Owner Information

All Owners

Name: FLORIDA POWER & LIGHT CO

Mailing Address: PO BOX 14000
NORTH PALM BEACH FL 33408 0420

Sales Information

Sales Information Unavailable.

Exemptions

Exemption Information Unavailable.

Appraisals

Tax Year:	2007	2006	2005
Improvement Value:	$1,704,690	$1,753,390	$1,296,462
Land Value:	$7,404,103	$7,404,103	$6,731,003
Total Market Value:	$9,108,793	$9,157,493	$8,027,465

Property Information
Number of Units: 0
*Total Square Feet: 63812
Acres: 20.60

Use Code: 9100 Description: UTILITY

* in residential properties may indicate living area.

Assessed and Taxable Values

Tax Year:	2007	2006	2005
Assessed Value:	$9,108,793	$9,157,493	$8,027,465
Exemption Amount:	$0	$0	$0
Taxable Value:	$9,108,793	$9,157,493	$8,027,465

Structure Detail

Tax Values

Tax Calculator

Details

Calculate Additional Homestead

Tax Year:	2007	2006	2005
Ad Valorem:	$199,429	$214,513	$195,303
Non Ad Valorem:	$8,147	$7,594	$5,435
Total Tax:	$207,576	$222,107	$200,738

Tax Collector WebSite

NOTE: Lower the top and bottom margins to 0.25 on File->Page Setup menu option in the browser to print the detail on one page.

Legal Description

Owner Name: FLORIDA POWER

PCN Number: 56-43-42-33-00-000-5180

Legal Description

33-42-43, N 663.19 FT OF S 844.19 FT OF GOV LT 4(LESS IRREG SHAPED PAR ADDL SR 5 R/WAS IN OR10388P799)

Print Close

ANNE M. GANNON
TAX COLLECTOR, PALM BEACH COUNTY

Collector # 4-172-821-10 Property Control Number 56-43-42-33-00-000-5180 Tax Year 200

Real Estate Property Details

Cross Ref PCN		Mortgage	NONE
Suit Code	NONE	Record Status	PAID
Acres	20.60	Total Tax	207,575.76
Petition #		Good Faith #	0
Buyer Interest Rate	0.00	Buyer #	0
Advertise #	0	Installment #	0
Owner	FLORIDA POWER & LIGHT CO		
Owner2	PROPERTY TAX DEPT C/O		

Legal Description: 33-42-43, N 663.19 FT OF S 844.19 FT OF GOV LT 4(LESS IRREG SHAPED PAR ADDL SR 5 R/WAS IN OR10388P799)

Situs Address

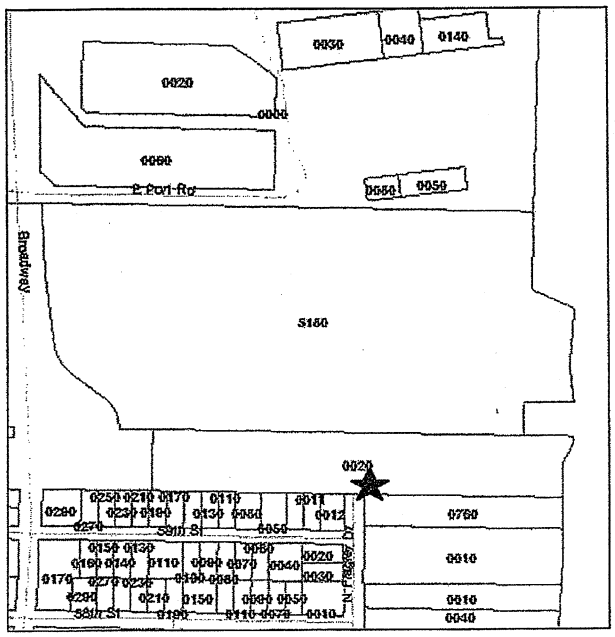
Address1	300 BROADWAY	Address2	
City		State	Zipcode

Mailing Address

Address1	PO BOX 14000	Address2	
City	NORTH PALM BEACH	State	FL Zipcode 33408-0420

Print Receipt Property Appraiser Website - PAPA

Gary R. Nikolits,CFA
Palm Beach County Property Appraiser
Property Mapping System



Search Parcel Details

Owner Information

PCN: 56434233000040020

Return to PAPA

Name: FLORIDA POWER & LIGHT CO

Location: 100 BROADWAY

Mailing: PO BOX 14000 - JLM
NORTH PALM BEACH, FL
33408 0420

Appraisal Value

Market Value:	$2,051,493
Assessed Value:	$2,051,493
Exempt Amnt:	$0
Taxable:	$2,051,493

Tax Value

Ad Valorem:	$44,915.59
Non ad valorem:	$588.98
Total:	$45,504.57

Sales Information

Sales Date	Price
Nov-1989	$2,200,000

Legend

Parcel Boundary

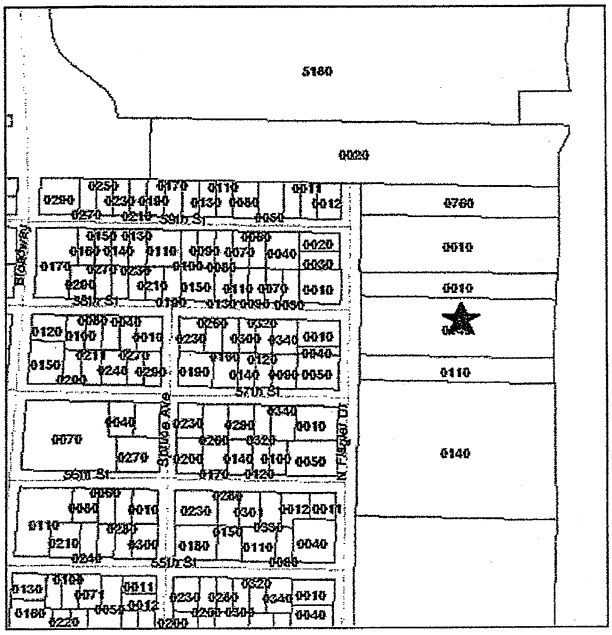
0120 Lot number

Palm Beach County Property Map

Map Scale 1:5157

Map produced on 6/20/2008 from PAPA
http://www.pbcgov.com/papa

Gary R. Nikolits,CFA
Palm Beach County Property Appraiser
Property Mapping System



Search Parcel Details

Owner Information

PCN: 74434304060380010

Return to PAPA

Name: LAND RESOURCES INV CO

Location: 5904 N FLAGLER DR

Mailing: PROPERTY TAX DEPT
PO BOX 14000
NORTH PALM BEACH, FL
33408 0420

Appraisal Value

Market Value:	$959,050
Assessed Value:	$959,050
Exempt Amnt:	$0
Taxable:	$959,050

Tax Value

Ad Valorem:	$20,098.22
Non ad valorem:	$0.00
Total:	$20,098.22

Sales Information

Sales Date	Price
Sep-1993	$675,000
Jan-1978	$350,000
Jan-1974	$202,500
Jan-1972	$74,300

Legend

Parcel Boundary

0120 Lot number

Palm Beach County Property Map

Map Scale 1:5157

Map produced on 6/20/2008 from PAPA
http://www.pbcgov.com/papa

Deed

This Deed, dated this 17th day of April A.D. 1945,
between BESSEMER PROPERTIES, INCORPORATED, a Delaware corporation,
authorized to transact business in the State of Florida,

hereinafter called the Grantor, which term shall include when used herein, wherever the context so requires or admits, its successors and assigns,

and FLORIDA POWER & LIGHT COMPANY, a Florida corporation,

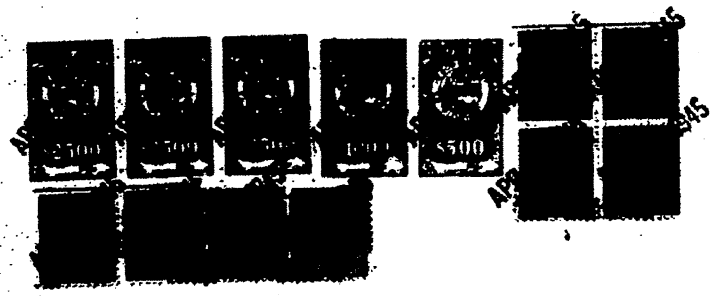
hereinafter called the Grantee, which term shall include when used herein, wherever the context so requires or admits. its successors and assigns,

WITNESSETH: That for the sum of Ten Dollars ($10.00) and other good and valuable considerations, said Grantor does hereby grant, bargain, sell, alien, remise, release, convey and confirm unto the said Grantee all that certain piece of property and tract of land situate in the County of Palm Beach and State of Florida, described as follows:

All that part of the North 425 feet of the south 844.15 feet (measured at right angles between parallel lines) of Government Lot 4, and of the Southwest quarter of the southeast quarter of Section 20, Township 42 South, Range 43 East, Palm Beach County, Florida, lying easterly of the right of way of State Road No. 4 (U.S. Highway No. 1).

Subject to taxes for the year 1945.

TO HAVE AND TO HOLD the same in fee simple forever.



And the said Grantor does hereby covenant that it will warrant and defend the title to said land against the lawful claims of all persons claiming under, by or through it.

IN WITNESS WHEREOF, the said Grantor has caused these presents to be executed by its President, and its corporate seal to be affixed, attested by its Assistant Secretary, the day and year aforesaid.

BESSEMER PROPERTIES, INCORPORATED

(CORPORATE SEAL)

By Henry C. Phipps
President.

Attest:

R. C. Alley
Assistant Secretary.

Signed, sealed and delivered
in the presence of:

Bess H. McDougall
E. Jameson

STATE OF Florida
COUNTY OF Palm Beach } ss.

Before me personally appeared Henry C. Phipps
and R. C. Alley
respectively, President and Assistant Secretary of Bessemer Properties, Incorporated,
to me well known, and they acknowledged before me that they executed the foregoing instrument as such officers of said corporation, and that they affixed thereto the official seal of said corporation; and I FURTHER CERTIFY that I know the said persons making said acknowledgment to be the individuals described in and who executed the said instrument.

WITNESS my hand and official seal this 17th day of April, A.D. 1945

Bess H. McDougall
Notary Public in and for the County and State aforesaid.

My Commission expires 12-14-47

This instrument was filed for Record at 9:15 A.M. this 21 day of April 1945, and Recorded in Deed Book 714, at page 461. Record verified. J. ALEX ARNETTE, Clerk Circuit Court, Palm Beach County, Florida.
By [illegible] Deputy Clerk

725/90

[illegible] 733 [illegible]

This Indenture, Made this [illegible] day of [illegible] A. D. 19[illegible], between [illegible] T. [illegible] and [illegible] [illegible], his wife,

of the County of Dade and State of Florida

part ies of the first part, and Florida Power & Light Company, a corporation existing under the laws of the State of Florida, having its principal place of business at 25 S. E. 2nd Avenue, in the City of Miami, County of Dade and State of Florida

and lawfully authorized to transact business in the State of Florida, party of the second part,

WITNESSETH, That the said part ies of the first part, for and in consideration of the sum of Ten Dollars and other valuable considerations to them [illegible] ////// in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, have granted, bargained and sold to the said party of the second part, its successors and assigns forever, the following described land, situate, lying and being in the County of Palm Beach and State of Florida, to-wit:

The North 10 acres of the South [illegible] of Government Lot 4 [illegible] of the [illegible] quarter of Section [illegible], Township [illegible], Range [illegible] East, more particularly described [illegible] [illegible] by Edward [illegible] to Thomas [illegible] Taylor by deed dated October 7, 19[illegible], [illegible] recorded in [illegible] County records, more particularly described as bounded on the [illegible] by [illegible], on the South by [illegible], on the [illegible] by [illegible], on the North by lands of [illegible], being and lying in the East half of the Government quarter and [illegible] of Section [illegible], Township [illegible] South, Range [illegible] East, containing 10 acres, more or less.

This conveyance is made subject to taxes for year [illegible] and that portion of this property [illegible], being a [illegible] feet in width and [illegible] feet in depth, is subject to [illegible] dated October [illegible], 19[illegible], [illegible] the [illegible]

[redacted]

And the said part ies of the first part do hereby fully warrant the title to said land, and will defend the same against the lawful claims of all persons whomsoever.

In Witness Whereof, the said part ies of the first part ha ve hereunto set their hand s and seal s the day and year first above written.

Signed, sealed and delivered in our presence:

STATE OF FLORIDA,
County of Dade

I HEREBY CERTIFY, That on this day personally appeared before me, an officer duly authorized to administer oaths and take acknowledgments, Harry V. Street and Helen A. Street

to me well known to be the person s described in and who executed the foregoing deed, and acknowledged before me that they executed the same freely and voluntarily for the purposes therein expressed.

AND I FURTHER CERTIFY, That the said Helen A. Street known to me to be the wife of the said Harry V. Street on a separate and private examination taken and made by and before me, separately and apart from her said husband, did acknowledge that she made herself a party to said deed for the purpose of renouncing, relinquishing and conveying all her right, title and interest, whether dower, homestead or of separate property, statutory or equitable, in and to the lands described therein, and that she executed the said deed freely and voluntarily and without any compulsion, constraint, apprehension or fear of or from her said husband.

WITNESS my hand and official seal at Miami County of [illegible] and State of Florida, this 1st day of [illegible]

[illegible]
Notary Public, State of [illegible]
My commission expires [illegible]

STATE OF FLORIDA,
County of [illegible]

I HEREBY CERTIFY, That on this day personally appeared before me, an officer duly authorized to administer oaths and take acknowledgments, ______

to me well known to be the person ___ described in and who executed the foregoing deed, and acknowledged before me that ______ executed the same freely and voluntarily for the purposes therein expressed.

WITNESS my hand and official seal at ______, County of ______ and State of Florida, this ______ day of ______ A. D. 19__

______

Warranty Deed
(TO CORPORATION)

______

To

______

Date ______ 19__

ABSTRACT OF DESCRIPTION

______

STATE OF FLORIDA,
COUNTY OF [illegible]

On this [illegible] day of [illegible]
A. D. 19__ at ___ o'clock ___ M. this instrument was filed for record, and being duly acknowledged and proven, I have recorded the same on Page [illegible] of Book [illegible] in the Public Records of said County.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Circuit Court of the [illegible] Judicial Circuit of said State, in and for said County.

[illegible] Clerk
By [illegible] D. C.

803
25T

SRR No. 138
Section 9302
State Road 5 (4)
Palm Beach County.

THIS INDENTURE, made and entered into this 18th day of February, 1947, by and between FLORIDA POWER & LIGHT COMPANY, a corporation organized and existing under the laws of the State of Florida, with its principal place of business in the County of Dade and State of Florida, party of the first part, and the STATE OF FLORIDA, party of the second part:

WHEREAS, it is proposed by the party of the second part, through its component agency, the State Road Department of Florida, to widen State Road 5 (4) upon and through certain lands owned by the party of the first part in Palm Beach County, Florida; and

WHEREAS, the party of the first part has consented to such proposal in order that the said State Road Department may carry out its proposed plans;

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That the said party of the first part for and in consideration of the sum of One Dollar ($1.00) to it paid by the party of the second part, the receipt thereof is hereby acknowledged, does hereby grant, bargain, sell and convey to the party of the second part, for the sole and exclusive purpose of permitting the State Road Department to widen State Road 5 (4) upon and through the following described tract, piece or parcel of land, situated in the County of Palm Beach, State of Florida, to-wit:

That portion of the North 425 feet of South 844.19 feet of Government Lot 4 and of SW¼ of SW¼, Section 33, Township 42 South, Range 43 East, lying East of State Road 5 (formerly State Road No. 4) and the North 10 acres of the South 30 acres of Government Lot 4 and of the W½ of the SW¼ of Section 33, Township 42 South, Range 43 East, less the existing right of way of State Road 5 (formerly State Road No. 4)

lying West of and within 50 feet of the Survey Line of State Road 5 (4), Section 9302, and East of and within 30 feet of said survey line, (1) being a strip of land West of and abutting the existing right of way of said State Road 5 (4), said strip being 4.40 feet in width at the South end and 3.8 feet in width at the Nor[illegible] end; and (2) a strip of land East of and abutting the said existing right of way, said strip being 0.51 feet in width at the South end and 2.4 feet in width at the North end,

the land herein described aggregating 0.045 acre, more or less, as shown on sketch hereto attached, marked "Exhibit A", and made a part hereof.

TO HAVE AND TO HOLD the above described premises, together with all and singular the appurtenances thereunto belonging or in anywise appertaining, and all the estate, right, title, interest and claim whatever of the said party of the first part, either in law or equity to the only proper use, benefit and behoof of the said party of the second part forever, subject to existing liens and encumbrances; provided, however, and this Indenture is executed in consideration thereof, anything herein contained to the contrary notwithstanding.

That the above tract, piece or parcel of land is to be used by the said party of the second part or by the said State Road Department, for the sole and exclusive purpose of widening State Road 5 (4) upon and through said lands, and in the event such

tract, piece or parcel of land shall cease to be used for the sole and exclusive purpose above mentioned, the same, and all rights and privileges and title thereto, shall immediately revert fully and unimpaired to the said party of the first part, its successors and assigns.

IN WITNESS WHEREOF, the said party of the first part has caused this instrument to be executed by its duly authorized officers and its corporate seal to be hereunto affixed the day and year first above written.

Signed, sealed and delivered in the presence of:

Evelle A. Sullivan

Lillian Blackburn

FLORIDA POWER & LIGHT COMPANY

By _____ Vice President

ATTEST:

M. B. McDonald
Secretary

STATE OF FLORIDA }
COUNTY OF DADE } SS.

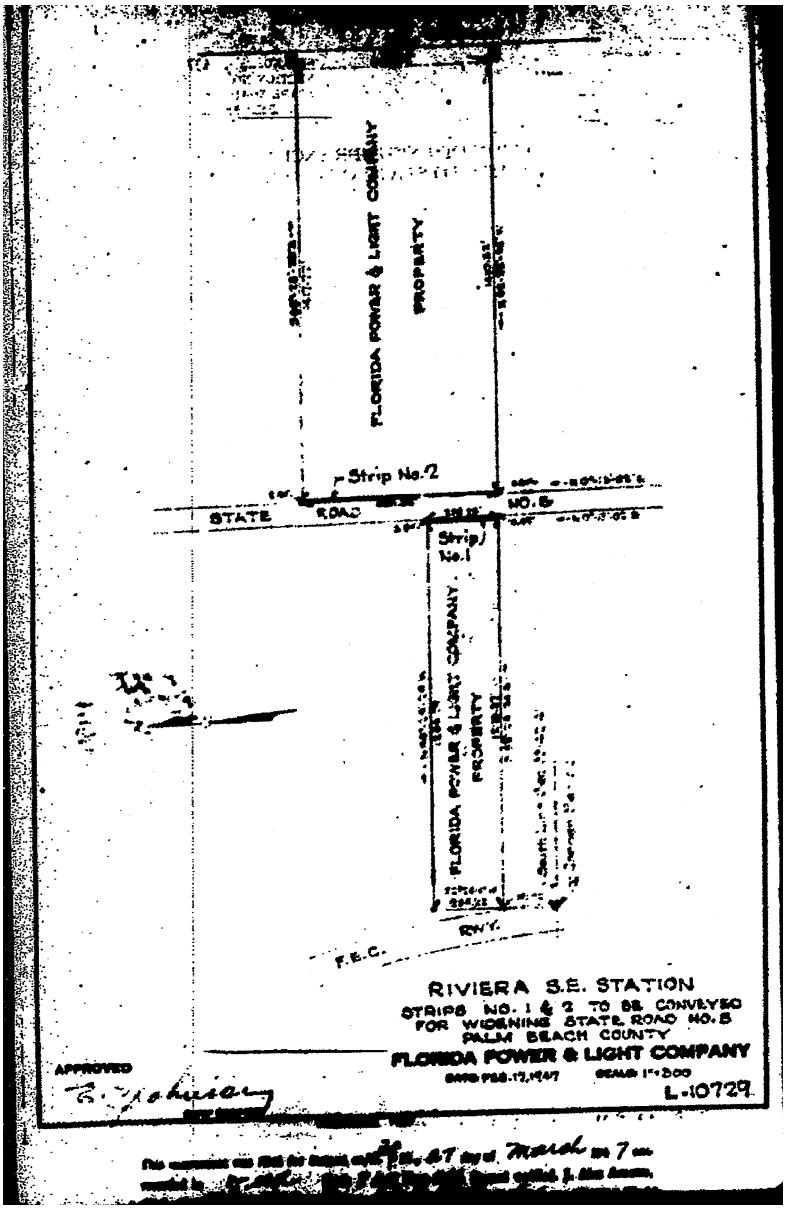
I HEREBY CERTIFY that on this day before me personally appeared O. H. Wise and M. B. McDonald, respectively Vice President and _____ Secretary of Florida Power & Light Company, a corporation organized under the laws of the State of Florida, to me known to be the persons described in and who executed the foregoing instrument, and severally acknowledged the execution thereof to be their free act and deed as such officers, for the uses and purposes therein mentioned; and that they affixed thereto the official seal of said corporation and that said instrument is the act and deed of said corporation.

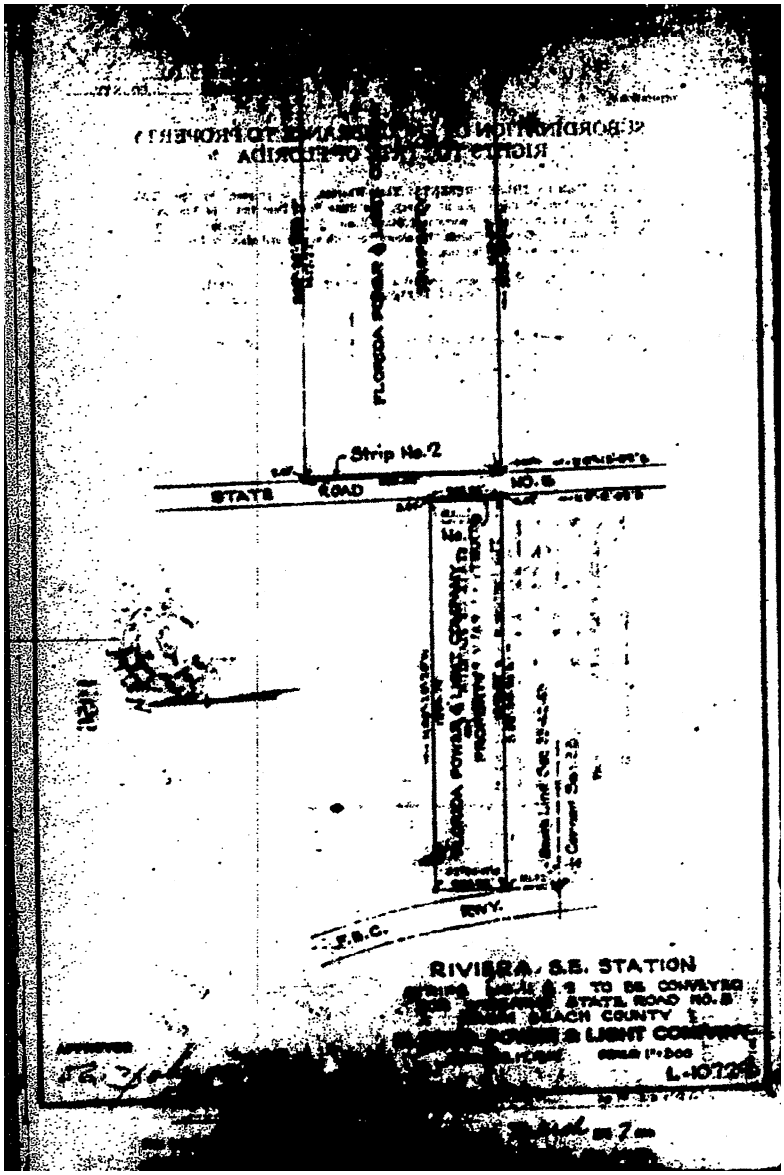
IN WITNESS WHEREOF, I have hereunto set my hand and official seal at Miami, in the County of Dade and State of Florida, this 14th day of February, 1947.

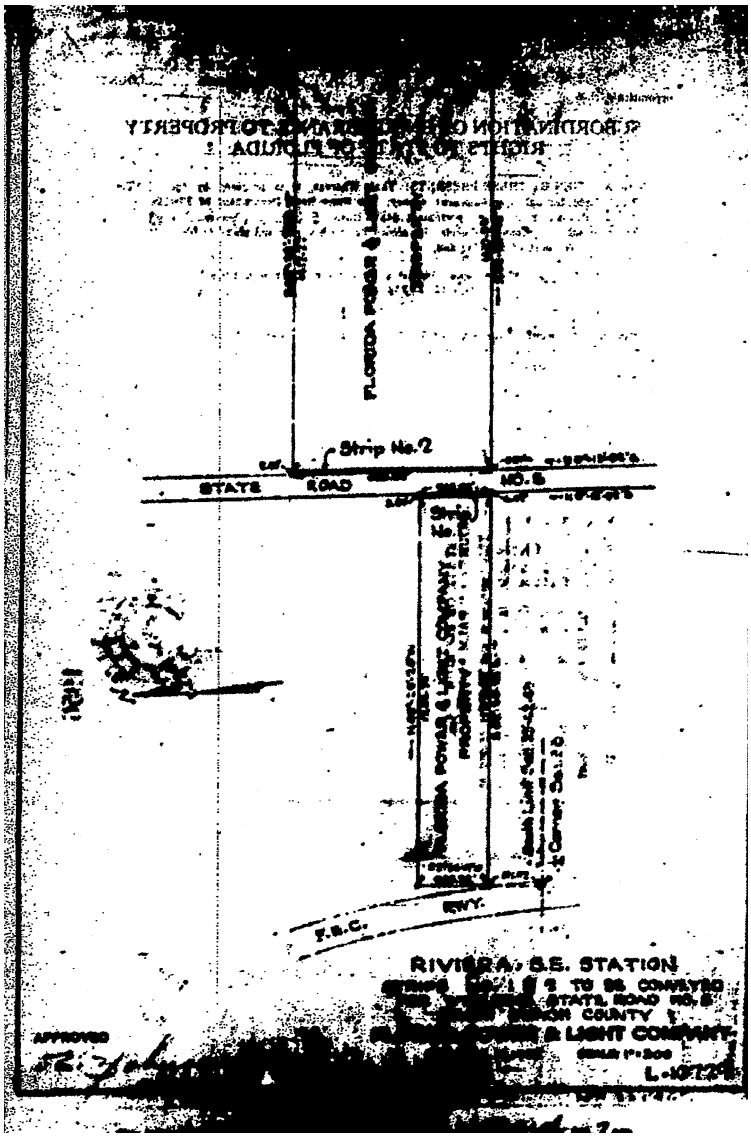
Lillian Blackburn
Notary Public,
State of Florida at Large.

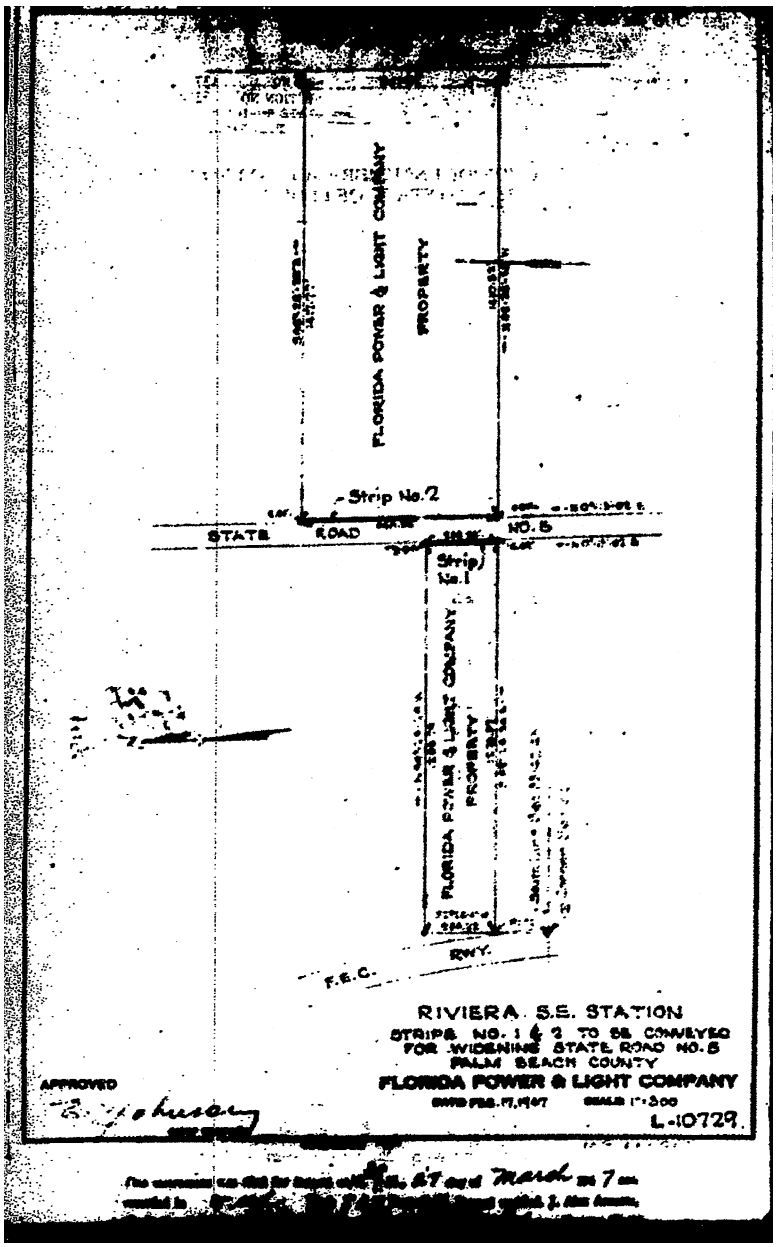
My Commission Expires:

September 15, 1949


FLORIDA POWER & LIGHT COMPANY
PROPERTY
Strip No. 2
STATE ROAD NO. 5
Strip No. 1
FLORIDA POWER & LIGHT COMPANY
PROPERTY
RW'Y.
F.E.C.
RIVIERA S.E. STATION
STRIPS NO. 1 & 2 TO BE CONVEYED
FOR WIDENING STATE ROAD NO. 5
PALM BEACH COUNTY
FLORIDA POWER & LIGHT COMPANY
APPROVED
L-10729


Strip No. 2
STATE ROAD NO. 5
RIVIERA S.S. STATION
TO BE CONVEYED
STATE ROAD NO. 5
PALM BEACH COUNTY
L-10126


Strip No. 2
STATE
ROAD
NO. 5
F.S.C.
RIVIERA, S.E. STATION
APPROVED


FLORIDA POWER & LIGHT COMPANY
PROPERTY
Strip No.2
STATE ROAD NO. 5
Strip No.1
FLORIDA POWER & LIGHT COMPANY
PROPERTY
RWY.
F.E.C.
RIVIERA S.S. STATION
STRIPS NO. 1 & 2 TO BE CONVEYED
FOR WIDENING STATE ROAD NO. 5
PALM BEACH COUNTY
FLORIDA POWER & LIGHT COMPANY
APPROVED
L-10729.

SRD No. 198 Rev.
Section 9302
State Road 5 (4)

THIS INDENTURE made and entered into this 29 day of April, 1949, by and between FLORIDA POWER & LIGHT COMPANY, a corporation organized and existing under the laws of the State of Florida, with its principal place of business in the County of Dade and State of Florida, party of the first part, and the STATE OF FLORIDA, party of the second part:

WHEREAS, it is proposed by the party of the second part, through its component agency, the State Road Department of Florida, to widen State Road 5 (4) upon and through certain lands owned by the party of the first part in Palm Beach County, Florida; and

WHEREAS, the party of the first part has consented to such proposal in order that the said State Road Department may carry out its proposed plans;

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That the said party of the first part for and in consideration of the sum of One Dollar ($1.00) to it paid by the party of the second part, the receipt thereof is hereby acknowledged, does hereby grant, bargain, sell and convey to the party of the second part, for the sole and exclusive purpose of permitting the State Road Department to widen State Road 5 (4) upon and through the following described tract, piece or parcel of land, situated in the County of Palm Beach, State of Florida, to-wit:

A strip of land across the West end of:

That portion of the North 425 feet of the South 844.19 feet of Government Lot 4 and NW¼ of SW¼; and the North 10 acres of the South 20 acres of Government Lot 4 and W½ of SW¼ of Section 33, Township 42 South, Range 43 East lying East of the existing right of way for State Road 5 (formerly State Road 4)

said strip being 2.29 feet wide at the South end and 1.48 feet wide at the North end, said strip lying East of and adjacent to a parcel of land identified as strip No. 2 in deed of Florida Power and Light Company to State of Florida dated Feb. 18, 1947 and recorded in Deed Book 803, at page 251, Public Records of Palm Beach County, Florida; Containing 1250 square feet, more or less.

TO HAVE AND TO HOLD the above described premises, together with all and singular the appurtenances thereunto belonging or in anywise appertaining, and all the estate, right, title, interest and claim whatever of the said party of the first part, either in law or equity to the only proper use, benefit and behoof of the said party of the second part forever, subject to existing liens and encumbrances; provided, however, and this Indenture is executed in consideration thereof, anything herein contained to the contrary notwithstanding:

That the above tract, piece or parcel of land is to be used by the said party of the second part or by the said State Road Department for the sole and exclusive purpose of widening State Road 5 (4) upon and through said lands, and in the event such tract, piece or parcel of land shall cease to be used for the sole and exclusive purpose above mentioned, the same, and all rights and privileges and title thereto, shall immediately revert fully and unimpaired to the said party of the first part, its successors and assigns.

IN WITNESS WHEREOF, the said party of the first part has caused this instrument to be executed by its duly authorized officers and its corporate seal to be hereunto affixed the day and year first above written.

Signed, sealed and delivered in the presence of:

Janie M. Tuppard

Lillian Gladburn

FLORIDA POWER & LIGHT COMPANY

By [signature] Vice President

ATTEST: [signature] Secretary

STATE OF FLORIDA)
)
COUNTY OF DADE)

I HEREBY CERTIFY that on this day before me personally appeared [signature] and [signature] respectively Vice President and Secretary of Florida Power & Light Company, a corporation organized under the laws of the State of Florida, to me known to be the persons described in and who executed the foregoing instrument, and severally acknowledged the execution thereof to be their free act and deed as such officers, for the uses and purposes therein mentioned; and that they affixed thereto the official seal of said corporation and that said instrument is the act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal at Miami, in the County of Dade and State of Florida, this 29th day of April, 1949.

Lillian Gladburn
NOTARY PUBLIC
State of Florida at Large

My Commission expires: Sept. 15, 1949

This instrument was filed for Record at 4:00 P.M. this 29 day of June 1949 and Recorded in Deed Book 881 at page 319 Record verified. J. ALEX ARNE, JR. Clerk Circuit Court, Palm Beach County, Florida.
By [signature] Deputy Clerk

LEPPER ABERNETHY GRAY MARTIN & PERRINE, MIAMI, FLORIDA

Form 24 Fla. WARRANTY DEED. (Corporation.)

DEED 891 PAGE 610

TUTTLE'S REGISTERED U.S. PAT. OFFICE Jacksonville, Florida

This Indenture,

Made this 8th *day of* February *A. D. 1946*

Between GEORGE CHARLES and AGNES CHARLES, his wife,

* *

of the County of Palm Beach *and State of* Florida *parties of the first part, and* FLORIDA POWER & LIGHT COMPANY, whose mailing address is Post Office Box 3100, Miami, Florida, *a corporation existing under the laws of the State of* Florida *having its principal place of business in the County of* Dade *and State of* Florida *party of the second part,*

Witnesseth, *that the said parties of the first part, for and in consideration of the sum of* $10.00 and other valuable considerations *Dollars, to them in hand paid, the receipt whereof is hereby acknowledged, have granted, bargained, sold, aliened, remised, released, enfeoffed, conveyed and confirmed and by these presents do grant, bargain, sell, alien, remise, release, enfeoff, convey and confirm unto the said party of the second part and its successors and assigns forever, all that certain parcel of land lying and being in the County of* Palm Beach *and State of Florida, more particularly described as follows:*

The East 225 feet of the South 419.24 feet of the Southwest Quarter (SW¼) of Section 33, Township 42 South, Range 43 East, less the existing right of way of the Florida East Coast Railway.

The South 150 feet of the Southwest Quarter (SW¼) of Section 33, Township 42 South, Range 43 East, less the east 225 feet of the South 150 feet of said Southwest Quarter (SW¼).

The South 150 feet of the Southeast Quarter (SE¼) of Section 32, Township 42 South, Range 43 East.

Together *with all the tenements, hereditaments and appurtenances, with every privilege, right, title, interest and estate, dower and right of dower, reversion, remainder and easement thereto belonging or in anywise appertaining:*

To Have and to Hold *the same in fee simple forever.*

And the said parties of the first part do covenant with the said party of the second part that they are *lawfully seized of the said premises, that they are free of all incumbrance, and that* they have *good right and lawful authority to sell the same; and that said parties of the first part doth hereby fully warrant the title to said land, and will defend the same against the lawful claims of all persons whomsoever.*

In Witness Whereof, *the said parties of the first part have hereunto set* their *hands and seals the day and year above written.*

Signed, Sealed and Delivered in Our Presence:

Shirley Crosby
Louise Miller

George Charles
Agnes M. Charles

DEED 891 PAGE 611

State of Florida,

County of PALM BEACH

I HEREBY CERTIFY, *That on this* 7th *day of* February *A. D.* 1946, *before me personally appeared*

- - - - GEORGE CHARLES and AGNES CHARLES, his wife, - - - - - - - -

to me known to be the person described in and who executed the foregoing conveyance to FLORIDA POWER & LIGHT COMPANY - - - - - - - - - - - -

and severally acknowledged the execution thereof to be their *free act and deed for the uses and purposes therein mentioned; and the said* - - - - - - - - - - - AGNES CHARLES - - - - - - - - *the wife of the said* GEORGE CHARLES -y, *on a separate and private examination taken and made by and before me, and separately and apart from her said husband, did acknowledge that she made herself a party to the said Deed of Conveyance for the purpose of renouncing, relinquishing and conveying all her right, title and interest, whether of dower or of separate property, statutory or equitable, in and to the lands therein described, and that she executed said deed freely and voluntarily, and without any constraint, fear, apprehension or compulsion of or from her said husband.*

WITNESS *my signature and official seal at in the County of* Palm Beach *and State of Florida, the day and year last aforesaid.*

My Commission Expires Feb. 3-1947

Notary Public

Notary Public, State of Florida at large.
My commission expires Feb. 3, 1947.
Bonded by [illegible] Bonding & Ins. Co.

Warranty Deed

TO CORPORATION

GEORGE CHARLES and AGNES CHARLES,
his wife,
TO
FLORIDA POWER & LIGHT COMPANY

Date

ABSTRACT OF DESCRIPTION

STATE OF FLORIDA,
County of

On this day of A. D. 19 , at o'clock m., this instrument was filed for record, and being duly acknowledged and proven, I have recorded the same on pages of Book in the public records of said County.

In Witness Whereof, *I have hereunto set my hand and affixed the seal of the Circuit Court of the Judicial Circuit of said State, in and for said County.*

Clerk.

, D. C.

FOR RECORD

610 891 Deeds

[illegible] CLERK

By [illegible] D.C.

DEED 1037 PAGE 303

WARRANTY DEED
TO CORPORATION

PAPCO'S FORM 24

PAPCO PUBLISHING CORPORATION
MIAMI 38, FLORIDA

SPECIAL

Warranty Deed

This Indenture, *Made, this* 20th *day of* October *A. D. 19*53.

BETWEEN HARRY V. STREET and HELEN M. STREET, his wife,

of the County of Dade *and State of* Florida

parties of the first part, and FLORIDA POWER & LIGHT COMPANY, P. O. Box 3100, Miami, *a corporation existing under the laws of the State of* Florida *having its principal place of business in the County of* Dade *and State of* Florida *and lawfully authorized to transact business in the State of Florida, party of the second part.*

WITNESSETH: That the said parties of the first part, for and in consideration of the sum of TEN DOLLARS ($10.00) and other good and valuable considerations - - - - - ~~Dollars~~ *to them in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged,* have *granted, bargained and sold to the said party of the second part, its successors and assigns, forever, the following described land situate, lying and being in the County of* Palm Beach *and State of Florida, to-wit:*

A parcel of land in the East Half of Section 33, Township 44 South, Range 43 East, Palm Beach County, Florida, more particularly described as follows, to wit:

Beginning at the intersection of the South line of Section 33 aforesaid with the easterly right-of-way line of the Florida East Coast Railway; thence easterly along the said South line of Section 33, a distance of 100 feet; thence northerly making an angle with the preceding course of 93° 23' 30", measured from West to North, a distance of 181.33 feet to a point on a line which is 181 feet North of and parallel with the said South line of Section 33; thence westerly parallel with the said South line of Section 33, a distance of 120 feet to a point in the West line of the East Half of said Section 33; thence southerly along the said West line of the East Half of Section 33 to its intersection with the easterly right-of-way line of the Florida East Coast Railway; thence continue southerly along the easterly right-of-way line aforesaid to the point of beginning. Containing 0.5 acres, more or less.

And the said parties of the first part do hereby fully warrant the title to said land, and will defend the same against the lawful claims of all persons whomsoever, claiming by, through or under Grantors but not other wise.

IN WITNESS WHEREOF, the said parties of the first part have *hereunto set* their *hands* ~~and seals~~ *the day and year above written.*

Signed, sealed and delivered in presence of us:

Harry V. Street (Seal)

Helen M. Street (Seal)

STATE OF FLORIDA,
COUNTY OF

FILED 1037 PAGE 304

I Hereby Certify, *That on this day personally appeared before me, an officer duly authorized to administer oaths and take acknowledgments,*

to me well known to be the person *described in and who executed the foregoing deed, and acknowledged before me that* *executed the same freely and voluntarily for the purposes therein expressed.*

And I Further Certify. *That the said* *, known to me to be the wife of the said* *, on a separate and private examination taken and made by and before me, separately and apart from her said husband, did acknowledge that she made herself a party to said deed for the purpose of renouncing, relinquishing and conveying all her right, title and interest, whether dower, homestead or of separate property, statutory or equitable, in and to the lands described therein, and that she executed the said deed freely and voluntarily and without any compulsion, constraint, apprehension, or fear of or from her said husband.*

Witness *my hand and official seal at* *, County of* *and State of Florida, this* *day of* *, A. D. 19* *.*

Notary Public, State of
My commission expires

STATE OF FLORIDA,
County of DADE

I Hereby Certify *That on this day personally appeared before me, an officer duly authorized to administer oaths and take acknowledgments,* HARRY V. STREET and HELEN M. STREET, his wife,

to me well known to be the persons *described in and who executed the foregoing deed, and acknowledged before me that* they *executed the same freely and voluntarily for the purposes therein expressed*

Witness *my hand and official seal at* MIAMI *, County of* DADE *and State of Florida, this* 20th *day of* OCTOBER *A. D. 1953.*

Mary L. Weiss
Notary Public, State of Florida at Large
My Commission Expires July 30, 1956

Warranty Deed
(TO CORPORATION)
PARCO FORM 15

FROM

TO

Dated

ABSTRACT OF DESCRIPTION

State of Florida,
County of Dade, Ss.
On this 20 day of Oct. A. D. 1953 at 1 o'clock P. M. this instrument was filed for record and duly recorded and examined and proven as shown by the above on Page 300 of Book 1037 in the Public Records of said County.
IN WITNESS WHEREOF I have hereunto set my hand and affixed the seal of the Circuit Court of said County, on said day and year aforesaid.
Dade County, Florida
Clerk
D. C.

Recorded Verified

SPECIAL

WARRANTY DEED (TO CORPORATION)

DEED 1069 PAGE 617

PAPCO'S FORM 54

PAPCO PUBLISHING CORPO. MIAMI 38, FLORIDA

SPECIAL Warranty Deed

This Indenture, *Made, this* 30th *day of* April *, A. D. 19* 54 *,*

BETWEEN H. V. STREET and HELEN M. STREET, his wife,

of the County of Dade *and State of* Florida

party ies *of the first part, and* FLORIDA POWER & LIGHT COMPANY *, a corporation existing under the laws of the State of* Florida P. O. Box 3100, Miami *, having its principal place of business in the County of* Dade *and State of* Florida

and lawfully authorized to transact business in the State of Florida, party of the second part.

WITNESSETH: That the said party ies *of the first part, for and in consideration of the sum of* TEN DOLLARS ($10.00) and other good and valuable considerations - - - - HERETO

to them *in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged,* have *granted, bargained and sold to the said party of the second part, its successors and assigns, forever, the following described land situate, lying and being in the County of* PALM BEACH *and State of Florida, to-wit:*

PARCEL #1: The North 50 feet of the South 200 feet of the South Half of the Southeast Quarter (SE¼) of Section 32, Township 42 South, Range 43 East, Palm Beach County, Florida. Containing 3 Acres, more or less.

PARCEL #2: Beginning at a point in the West line of Section 33, Township 42 South, Range 43 East, said point being 150 feet North of the Southwest Corner of said Section 33; thence continue northerly along the West line of said Section 33, a distance of 31.11 feet to the point of intersection with the westerly extension of the South line of RIVIERA BEACH HEIGHTS ADDITION NO. 4, a subdivision in the Town of Riviera Beach, according to plat thereof recorded in Plat Book 23, Page 74, Palm Beach County Public Records; thence easterly along the westerly extension of the South line of said RIVIERA BEACH HEIGHTS ADDITION NO. 4, a distance of 19.31 ft., more or less, to the Southwest corner of said plat; thence continue easterly along the South line of said RIVIERA BEACH HEIGHTS ADDITION NO. 4, a distance of 2383.23 ft. to the Southeast corner of said plat; thence southerly along the westerly right of way line of the Old Dixie Highway (County Road), a distance of 7.98 ft., more or less, to the intersection with a line 150 ft. North of and parallel with the South line of said Section 33; thence westerly along the said line 150 ft. North of and parallel with the South line of said Section 33, a distance of 2412.2 ft. more or less, to the West line of said Section 33 and the point of beginning. Containing 1 Acre, more or less.

And the said party ies *of the first part do hereby fully warrant the title to said land, and will defend the same against the lawful claims of all persons whomsoever.,* claiming by, through or under Grantor, but not otherwise.

IN WITNESS WHEREOF, the said parties of the first part have *hereunto set* their *hand* s *and seal* s *the day and year above written.*

Signed, sealed and delivered in presence of us:

Emma M. Russ — H. V. Street (Seal)

M. B. Winn — Helen M. Street (Seal)

STATE OF FLORIDA,
COUNTY OF

I Hereby Certify. That on this day personally appeared before me, an officer duly authorized to administer oaths and take acknowledgments,

to me well known to be the person described in and who executed the foregoing deed, and acknowledged before me that executed the same freely and voluntarily for the purposes therein expressed.

And I Further Certify. That the said , known to me to be the wife of the said , on a separate and private examination taken and made by and before me, separately and apart from her said husband, did acknowledge that she made herself a party to said deed for the purpose of renouncing, relinquishing and conveying all her right, title and interest, whether dower, homestead or of separate property, statutory or equitable, in and to the lands described therein, and that she executed the said deed freely and voluntarily and without any compulsion, constraint, apprehension, or fear of or from her said husband.

Witness my hand and official seal at , County of and State of Florida, this day of , A. D. 19

Notary Public, State of
My commission expires

STATE OF FLORIDA,
County of DADE

I Hereby Certify That on this day personally appeared before me, an officer duly authorized to administer oaths and take acknowledgments, H. V. STUBBS and HELEN H. STUBBS, his wife,

to me well known to be the persons described in and who executed the foregoing deed, and acknowledged before me that they executed the same freely and voluntarily for the purposes therein expressed.

Witness my hand and official seal at Miami, County of Dade and State of Florida, this 30th day of April, A.D. 1964

Mary D. [illegible]
Notary Public, State of Florida at Large
My Commission Expires July 14, 1964

Warranty Deed
(TO CORPORATION)

FROM

TO

ABSTRACT OF DESCRIPTION

Entered

State of Florida,
County of

On this day of A. D. 19 , at o'clock M., this instrument was filed for record, and being duly acknowledged and proven, I have recorded the same on Page of Book in the Public Records of said County.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Circuit Court of the Judicial Circuit of said State, in and for said County.

Clerk

D.C.

FILED FOR RECORD
STATE OF FLORIDA
COUNTY OF PALM BEACH
CLERK CIRCUIT COURT

1964 NOV 1 PM 3 31

RECORDED IN BOOK
AND PAGE NOTED ABOVE
AND RECORD VERIFIED
A. REX GRAHAM, CLERK
By Alice Wilson, D.C.

84

2973

OFFICIAL RECORD 378 PAGE 141

METER SITE LEASE

1959 JUL 21 AM 11 53

KNOW ALL MEN BY THESE PRESENTS:

THAT, for and in consideration of the sum of One Dollar ($1.00) and other good and valuable considerations in hand paid, the receipt and sufficiency of which is hereby acknowledged, the undersigned, FLORIDA POWER & LIGHT COMPANY, a corporation, sometimes hereinafter referred to as "Grantor", by BEN H. FUQUA, who declared that he is a Vice President and that he appears and acts herein and on behalf of said Corporation, being duly authorized hereto under and by virtue of a By-Law of the Corporation, said appearer, acting in his capacity aforesaid, declared that the Grantor does, by these presents, hereby lease and let unto HOUSTON TEXAS GAS AND OIL CORPORATION, a Delaware Corporation, its successors and assigns, sometimes hereinafter referred to as "Grantee", for the sole and exclusive use as a meter and regulator site in connection with the performance of that certain Contract dated September 8, 1956, providing for the furnishing by Grantee to Grantor of certain quantities of natural gas, the property located in Palm Beach County, State of Florida, and described as meter station site on print dated April 15, 1959, and attached hereto and made a part hereof and marked Exhibit A, which property is subject to liens and encumbrances of record.

TO HAVE AND TO HOLD the foregoing surface thereof unto said Grantee, its successors and assigns, for the term or any extension thereof of that said certain Contract referred to above and subject to all the terms and conditions therein agreed to by the parties.

Grantee, by the acceptance of this Meter Site Lease and the use of the said premises as aforesaid, agrees for itself and its successors, trustees and assigns, with the Grantor, its successors and assigns, as follows:

precaution so as to prevent damage or injury to property or persons in the vicinity of such lines; and that Grantee shall notify its employees, agents, contractors, invitees and licensees of the existence of said high voltage lines.

SEVENTH: That Grantee's meter and regulator station and its appurtenances shall be operated in accordance with recognized standards; that in installing its metering and regulating equipment on the leased premises, Grantee shall employ such acoustical treatment as may be necessary to prevent the noise from its equipment rising above the level which is acceptable to Grantor; that any buildings constructed under authority of this meter site lease on the leased premises shall be of masonry construction acceptable to the Grantor and that such facilities shall be painted, landscaped and maintained by Grantee in keeping with Grantor's facilities in the immediate area; that any of Grantee's operations on the leased premises, including installation, construction or otherwise, shall be conducted in such a manner as not to interfere with Grantor's electric operations and so as not to cause the premiums on any of Grantor's insurance to be increased; and that in the event such operation results in such noise and other conditions which constitute a nuisance to or results in objections from persons working on Grantor's property or working or living on properties adjacent to Grantor's property, Grantee shall take such corrective steps and action at its sole cost and expense as will eliminate such noise or other conditions producing the nuisance.

EIGHTH: That Grantee shall forthwith pay to Grantor upon its demand all loss, or damage, to Grantor's properties and facilities that may arise from the use by Grantee of the exercise of the rights granted in this Meter Site Lease.

NINTH: That Grantor may dedicate the leased premises or any part thereof to a governmental body for public use without obtaining the consent of the Grantee and subject to this Meter Site Lease and the rights herein.

TENTH: That all work done by the Grantee in connection with the right under this Lease shall be done in such a manner so as not to

interfere with the use and operation by the Grantor of its facilities now or hereafter located on or in the vicinity of the leased premises herein described; that the Grantee agrees to refrain from the use on or adjacent to the leased premises of any movable equipment which is capable of extending more than 16 feet above ground level; that Grantee will notify the Grantor in writing at least five (5) days prior to performing any work in connection with the construction, operation and maintenance of its meter and regulator station, however, in the event of an emergency such five (5) day period shall not apply and such work may be carried on at any time after written notice of the emergency is actually delivered in person to Grantor's Plant Superintendent; that such notice shall state the time of commencement and the nature of the work to be performed; that as soon as practical after the completion of any work in connection with the construction, operation or maintenance of its said station on said leased premises, the Grantee shall restore the leased premises on which its facilities are not located to the condition in which the same existed prior to such commencement and will otherwise comply with the agreements of Grantee in SEVENTH hereof; and that all work in connection with the relocation or reconstruction of Grantor's facilities necessary for the construction, operation or maintenance of said station shall be at the sole expense of the Grantee.

ELEVENTH: That all undertakings on the part of the Grantee to be performed shall constitute conditions to this Meter Site Lease; that any violation of any such condition shall at the option of the Grantor constitute a revocation and cancellation of the right herein granted if said violation is not remedied within ten (10) days after written notice from the Grantor to the Grantee; and that in the event the Grantee abandons the use of said station, then in that event this Meter Site Lease shall terminate and the Grantee upon the request of the Grantor shall execute any instrument necessary to release and reconvey this Meter Site Lease of record.

TWELFTH: That the word "Grantor" as used in this Meter Site Lease shall not only include Florida Power & Light Company but also its successors, trustees and assigns.

All of the rights of the Grantee hereunder may be assigned to a Trustee or Trustees under a deed of trust and mortgage as security for indebtedness of the Grantee and such rights may be further assigned in connection with the enforcement of any such deed of trust and mortgage; the obligations hereunder of Grantee may be performed by such Trustee or Trustees or any further assignee without releasing Grantee therefrom but neither such assignment, the acceptance thereof nor any performance hereunder by such Trustee or Trustees or further assignee shall obligate such Trustee or Trustees or assignee to perform such obligation.

The terms and conditions hereof shall be binding upon and inure to the benefit of the successors, trustees and assigns of the parties hereto.

WITNESS the signature and seal of Grantor, by its proper officers, this 5th day of May, 1959.

FLORIDA POWER & LIGHT COMPANY

By Ben H. Fuqua
Vice President

WITNESSES:

ATTEST: W. F. Blaylock
Secretary

CORPORATION ACKNOWLEDGMENT

STATE OF FLORIDA }
COUNTY OF DADE } ss:

I hereby certify that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid to take acknowledgments, personally appeared BEN H. FUQUA and W. F. BLAYLOCK, to me known and known to be the persons described in and who executed the foregoing instrument as its Vice President, and Secretary, respectively, of the corporation named therein, and severally acknowledged before me that they executed the same as such officers in the name and on behalf of said corporation.

Witness my hand and official seal in the County and State last aforesaid this 5th day of May, 1959.

Fred L. McQuaig
Notary Public, State of Florida at Large

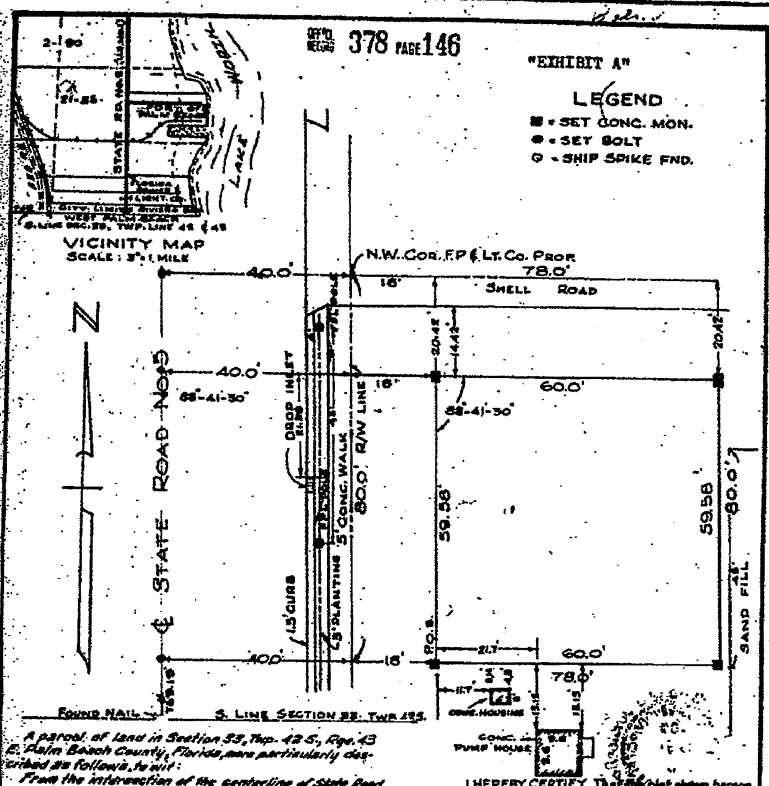
My Commission Expires:
Notary Public, State of Florida at Large
My Commission Expires Sept. 29, 1961

OFF. REC. BK. 378 PAGE 146

"EXHIBIT A"

LEGEND

■ = SET CONC. MON.
● = SET BOLT
⊙ = SHIP SPIKE FND.



A parcel of land in Section 33, Twp. 42 S., Rge. 43 E. Palm Beach County, Florida, more particularly described as follows, to wit:

From the intersection of the centerline of State Road No. 5 (U.S. #1) as now in use, and the South line of the said Section, go northerly along the said centerline a distance of 759.19 feet to a point; thence easterly, parallel to the South line of said Section a distance of 38 feet to a point and the point of beginning; thence continue along the same course a distance of 60 feet to a point; thence northerly and parallel to the said Centerline a distance of 59.58 feet to a point; thence westerly and parallel to the South line of the said Section a distance of 60 feet to a point; thence southerly and parallel to the said centerline a distance of 59.58 feet to a point and the point of beginning.

Recorded in Official Record Book of Palm Beach County, Florida
J. ALEX ARNETTE
CLERK OF CIRCUIT COURT

I HEREBY CERTIFY That the plat shown hereon is a true and correct representation of a survey of the property described in the caption thereof, made under my direction, and is accurate to the best of my knowledge and belief. Encroachments as shown, None.

Registered Land Surveyor
Florida Certificate No. 913 William G. Wallace

HOUSTON TEXAS GAS & OIL CORP.
ST. PETERSBURG, FLORIDA

BARNARD AND BURK PIPELINE ENGINEERING, INC.
ST. PETERSBURG, FLORIDA

METER STATION SITE
FLORIDA POWER & LIGHT COMPANY
RIVIERA BEACH, FLORIDA

DR. BY: M.H.W.	SCALE: 1" = 20'	DWG. NO. E-214
OFFICE W.G.W.	DATE: 4/10/59	JOB NO. R59-165

SURVEY BY: W.C. MOCK & ASSOCIATES, RIVIERA BEACH, FLA.

1554

388 PAGE 405

1959 AUG 12 AM 10 14

EASEMENT AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

THAT, for and in consideration of the sum of One Dollar ($1.00) and other good and valuable considerations in hand paid, the receipt and sufficiency of which is hereby acknowledged, the undersigned, a corporation, sometimes hereinafter referred to as "Grantor", by BEN H. FUQUA, who declared that he is a Vice President and that he appears and acts herein and on behalf of said Corporation, being duly authorized hereto under and by virtue of a By-Law of the Corporation, said appearer, acting in his capacity aforesaid, declared that Grantor does by these presents hereby grant and convey unto HOUSTON TEXAS GAS AND OIL CORPORATION, a Delaware corporation, its successors and assigns, sometimes hereinafter referred to as "Grantee", the right to construct, maintain, inspect, operate, protect, repair, replace, change the size of, or remove a pipeline and appurtenances, for the transportation of natural gas, gases or substances which can be transported through a pipeline, together with the right of ingress and egress to and from the same for the purposes aforesaid, over, under, through and across the following described lands, of which the Grantor warrants it is the owner in fee simple subject to liens and encumbrances of record situated in Palm Beach County, State of Florida. Said pipeline to be located on said lands as shown on attached print, dated July 11, 1959, marked Exhibit A and made a part hereof.

TO HAVE AND TO HOLD the foregoing surface thereof unto said Grantee, its successors and assigns, for the term or any extension thereof of that said certain Contract dated September 8, 1956, providing for the furnishing by Grantee to Grantor of certain quantities of natural gas.

Grantee, by the acceptance of this Agreement and the exercise of the right herein granted as aforesaid, agrees for itself and

Houston Texas Gas + Oil Corp.
P. O. Box 10400
St. Petersburg, 33, Fla.

its successors, trustees and assigns, with the Grantor, its successors and assigns, as follows:

FIRST: That notwithstanding any provision or grant in this Agreement only a single pipeline shall be constructed under this Agreement.

SECOND: That the said premises shall be used solely and exclusively for the exercise of the right hereinabove granted.

THIRD: That the pipeline to be laid under this Agreement shall be constructed at a depth so as to provide a minimum cover of thirty (30) inches; that the Grantee at its sole cost and expense shall install and maintain throughout the term of this Agreement permanent markers indicating the existence and the location of the pipeline; and that no other part of the line or any appurtenance thereto shall be installed above ground.

FOURTH: That Grantee shall remove or relocate at its sole cost and expense only such trees, undergrowth and other obstructions from the property covered by the herein granted easement but only after the Superintendent of the Grantor's Power Plant has designated such trees, undergrowth and other obstructions as may be removed or shall be relocated by Grantee under the right granted by this Agreement; and that all such trees, undergrowth and other obstructions so permitted to be removed or required to be relocated originally and at any time or from time to time in the future shall be removed from the right of way and disposed of in a manner acceptable to said Superintendent.

FIFTH: That Grantor shall have and reserves to itself and to its successors and assigns and to others the right and privilege to install, operate and maintain electric and other public utility facilities, including but not limited to electric transmission and distribution lines and underground electric, water and other conduits and pipes in accordance with standard construction and operating standards across the granted easement, however, in exercising this right Grantor agrees not to build, construct or create, nor permit

others to build, construct or create, any buildings or other structures on the herein granted easement that will interfere with the normal operation and maintenance of said pipeline.

SIXTH: That in the event Grantor requires property covered by the herein granted easement in connection with the enlargement or improvement of or additions to its Power Plant facilities or otherwise, then upon written request of Grantor to Grantee, the Grantee shall relocate said pipeline within thirty (30) days after Grantee's receipt of such written request, at Grantee's sole cost and expense and at no cost and expense to Grantor at another location on Grantor's Power Plant property designated by Grantor and satisfactory to Grantee.

SEVENTH: That the Grantee shall indemnify and save the Grantor harmless from all loss, liability and expense, including (without in any way limiting the generality of the foregoing) legal expenses, for the death or injury of any person and damage to any property arising out of, resulting from or connected with any acts, omissions, or operations of the Grantee on or in connection with the easement hereby granted; that the Grantee shall name the Grantor an additional insured as respects Grantee's Comprehensive Public Liability and Property Damage Policies for the purpose of protecting, defending and holding the Grantor harmless from any and all claims against the Grantor arising out of the Grantee's use of the easement hereby granted; that such insurance shall be in the amount of not less than $100,000 for death or injury to one person and not less than $300,000 for death or injury to more than one person in any one accident, and not less than $100,000 aggregate property damage; and that Grantee shall furnish copy of said policies to the Grantor with the proper endorsements prior to the commencement of any work hereunder.

EIGHTH: That the Grantee takes cognizance of the fact that the lines of the Grantor on or adjacent to the property covered by the herein granted easement are conductors of high voltage electricity; that the Grantee agrees to exercise extraordinary precaution so as to prevent damage or injury to property or persons in the vicinity of

such lines; and that the Grantee agrees to notify its employees, agents, contractors, invitees and licensees of the existence of said high voltage lines.

NINTH: That all work done by the Grantee in connection with the use of this easement shall be done in such a manner so as not to interfere with the use and operation by the Grantor of its facilities now or hereafter located on or in the vicinity of the easement herein described; that the Grantee agrees to refrain from the use within or adjacent to the property covered by this easement of any movable equipment which is capable of extending more than 16 feet above ground level; that Grantee will notify the Grantor in writing at least five (5) days prior to performing any work in connection with the construction, operation and maintenance of its pipeline, however, in the event of an emergency such five (5) day period shall not apply and such work may be carried on at any time after written notice of the emergency is actually delivered in person to Grantor's Plant Superintendent; that such notice shall state the time of commencement and the nature of the work to be performed; that as soon as practical after the completion of any work in connection with the construction, operation or maintenance of its pipeline, the Grantee shall restore the surface to the condition in which the same existed prior to such commencement; and that all work in connection with the relocation or reconstruction of Grantor's facilities necessary for the construction, operation or maintenance of said pipeline shall be at the sole expense of the Grantee.

TENTH: That all undertakings on the part of the Grantee to be performed shall constitute conditions to this easement; that any violation of any such condition shall at the option of the Grantor constitute a revocation and cancellation of the rights herein granted if said violation is not remedied within ten (10) days after written notice from the Grantor to the Grantee; and that in the event the Grantee abandons the use of said easement, then in that event this easement shall terminate and the Grantee upon the request of the Grantor shall execute any instrument necessary to release and reconvey this easement of record.

ELEVENTH: That Grantee shall forthwith pay to Grantor all loss or damage, upon its demand, to Grantor's properties and facilities that may arise from the exercise by the Grantee of the right herein granted.

TWELFTH: That Grantor may dedicate the above described property or any part thereof to a governmental body for public use without obtaining the consent of the Grantee and subject to this Agreement and the rights herein.

THIRTEENTH: That the word "Grantor" as used in this Agreement shall not only include Florida Power & Light Company but also its successors, trustees and assigns.

All of the rights of the Grantee hereunder may be assigned to a Trustee or Trustees under a deed of trust and mortgage as security for indebtedness of the Grantee and such rights may be further assigned in connection with the enforcement of any such deed of trust and mortgage; the obligations hereunder of Grantee may be performed by such Trustee or Trustees or any further assignee without releasing Grantee therefrom but neither such assignment, the acceptance thereof nor any performance hereunder by such Trustee or Trustees or further assignee shall obligate such Trustee or Trustees or assignee to perform such obligation.

The terms and conditions hereof shall be binding upon and inure to the benefit of the successors, trustees and assigns of the parties hereto.

WITNESS the signature and seal of Grantor, by its proper officers, this 21st day of July, 1959.

FLORIDA POWER & LIGHT COMPANY

By [signature]
Vice President

WITNESSES:

Geneelyn C. Parrish

Diane Scanlon

ATTEST: [signature]
Secretary

CORPORATE SEAL 1925

CORPORATION ACKNOWLEDGMENT

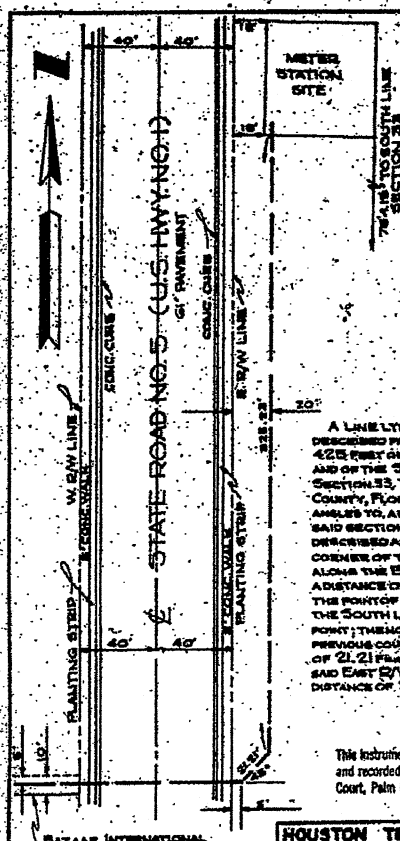
STATE OF FLORIDA }
COUNTY OF DADE } ss:

I hereby certify that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid to take acknowledgments, personally appeared BEN H. FUQUA and W. F. BLAYLOCK, to me known and known to be the persons described in and who executed the foregoing instrument as its Vice President, and Secretary, respectively, of the corporation named therein, and severally acknowledged before me that they executed the same as such officers in the name and on behalf of said corporation.

Witness my hand and official seal in the County and State last aforesaid this 21st day of July, 1959.

Fred L. McDuffie
Notary Public, State of Florida at Large

My Commission Expires:
Notary Public, State of Florida at large
My commission expires Sept. 29, 1961



BAZAAR INTERNATIONAL PIPELINE EASEMENT

I HEREBY CERTIFY THAT THE PLAT SHOWN HEREON IS A TRUE AND CORRECT REPRESENTATION OF A SURVEY OF THE LAND DESCRIBED IN THE CAPTION THEREOF, MADE UNDER MY DIRECTION, AND IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
ENCROACHMENTS AS SHOWN

William G. Wallace
REGISTERED LAND SURVEYOR
FLORIDA CERTIFICATE No. 913

DESCRIPTION

A LINE LYING AND BEING WITHIN THE LIMITS OF THE FOLLOWING DESCRIBED PARCEL OF LAND, TO WIT: ALL THAT PART OF THE NORTH 425 FEET OF THE SOUTH 844.19 FEET OF GOVERNMENT LOT 4, AND OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 33, TOWNSHIP 42 SOUTH, RANGE 43 EAST, PALM BEACH COUNTY, FLORIDA, SAID DISTANCES BEING MEASURED AT RIGHT ANGLES TO, AND BETWEEN LINES PARALLEL TO, THE SOUTH LINE OF SAID SECTION; AND SAID LINE BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS, TO WIT: FROM THE SOUTHWEST CORNER OF THE ABOVE DESCRIBED PARCEL, GO NORTHERLY ALONG THE EAST RIGHT-OF-WAY LINE OF STATE ROAD NO. 5 A DISTANCE OF 5.0 FEET TO A POINT IN THE SAID R/W LINE [redacted] THE POINT OF BEGINNING; THENCE EASTERLY AND PARALLEL TO THE SOUTH LINE OF SAID PARCEL, A DISTANCE OF 5.0 FEET TO A POINT; THENCE NORTHEASTERLY AT AN ANGLE OF 135° FROM THE PREVIOUS COURSE, TURNED FROM WEST TO NORTHEAST A DISTANCE OF 21.21 FEET TO A POINT; THENCE NORTH AND PARALLEL TO THE SAID EAST R/W LINE AND 20 FEET EASTERLY THEREFROM A DISTANCE OF 325.23 FEET TO THE END OF SAID LINE.

This instrument was filed for Record at 10 A.M. 12 day of Aug. 1954 and recorded in Book and Page noted above. J. ALEX ARNETTE, Clerk Circuit Court, Palm Beach County, Florida

SURVEY BY
K.C. MOCK & ASSOCIATES
RIVIERA BEACH, FLORIDA

HOUSTON TEXAS GAS AND OIL CORPORATION
ST. PETERSBURG, FLORIDA

BARNARD AND BURK PIPELINE ENGINEERING, INC.
ST. PETERSBURG 33, FLORIDA

PROPOSED EASEMENT TO BE ACQUIRED
FROM FLORIDA POWER & LIGHT CO.

Exhibit A

DRAWN	APPD.	DATE	SCALE	
L.L.S.	W.G.W.	7/11/59	1"=60'	255-163 12-332

19781

This instrument was prepared by.
T. P. McPeake, General Superintendent
Land Department - Florida Gas Transmission Co.
Post Office Box 44, Winter Park, Florida 32789

Riviera Beach Lateral
615-PALM-27A & 40
2/3.54

EASEMENT GRANT

KNOW ALL MEN BY THESE PRESENTS that FLORIDA POWER & LIGHT COMPANY, a Florida corporation, sometimes hereinafter referred to as "Grantor", in consideration of the sum of One Dollar ($1.00) and other valuable considerations, receipt of which is hereby acknowledged, does hereby grant to the FLORIDA GAS TRANSMISSION COMPANY, a Delaware corporation, its successors and assigns, sometimes hereinafter referred to as "Grantee", the right to construct, maintain, inspect, operate, protect, repair, replace, change the size of, or remove a pipeline and appurtenances, for the transportation of natural gas, gases or substances which can be transported through a pipeline, in, over, upon and across the following described lands of the Grantor, situated in the County of Palm Beach and State of Florida.

Said pipeline to be located within the following parcels of land of the Grantor, the centerline of which is described as:

Commencing at a point on the East line of Section 31, Township 42 South, Range 43 East, said point being 5 feet Northerly of a concrete monument marking the Southeast corner thereof; thence S 75° 05' W a distance of 17 feet to the point of terminus on the South line of said Section 31, ALSO,

Commencing at a point on the East line of the SW-1/4 of Section 32, Township 42 South, Range 43 East, said point being 18 feet Northerly of a concrete monument marking the Southeast corner thereof; thence S 84° 16' W a distance of 94 feet; thence N 87° 39' W a distance of 307 feet to the point of terminus on the West line of the East 400 feet of the South 300 feet of the E-1/2 of the SW-1/4 of Section 32, Township 42 South, Range 43 East, ALSO,

Commencing at a point on the West line of the SE-1/4 of Section 32, Township 42 South, Range 43 East, said point being 18 feet Northerly of a concrete monument marking the Southwest corner thereof; thence N 84° 16' E a distance of 63 feet; thence S 88° 10' E a distance of 94 feet; thence N 71° 50' E a distance of 40 feet; thence N 51° 50' E a distance of 87 feet; thence N 71° 51' E a distance of 40 feet; thence S 88° 08' E a distance of 1,015 feet to the point of exit on the Westerly right of way line of Voss Road; thence continue on the same bearing a distance of 50 feet to the point of reentry on the Easterly right of way line of Voss Road; thence S 88° 08' E a distance of 853 feet; thence S 80° 06' E a distance of 473 feet; thence S 60° 06' E a distance of 96 feet to the point of terminus on the South line of Section 33. (Drawing No. 615.4.27AE)

A line lying and being within the following described property:

The West 625 feet of the North 663.19 feet of the South 844.19 feet of that part of Section 33, Township 42 South, Range 43 East, lying East of U. S. Highway No. 1, in Palm Beach County, Florida, said line being more particularly described as: Commencing at an iron pipe marking the Northwest corner of the above described property; thence Easterly along said North property line a distance of 18 feet; thence S 00° 23' W a distance of 76 feet to the point of beginning thence S 89° 37' W a distance of 6 feet to a point, said point being 12 feet Easterly of the Easterly right-of-way line of U. S. 1; thence S 00° 23' W parallel to the Easterly right-of-way line of U. S. 1 a distance of 325 feet; thence N 88° 27' W a distance of 12 feet to the point of terminus in the Easterly right-of-way line of said U. S. 1.
(Drawing No. 615.4.40E)

STATE OF FLORIDA DOCUMENTARY STAMP TAX 0.90 PALM BEACH COUNTY

STATE OF FLORIDA DOCUMENTARY SUR TAX $.55

APR 30 11 58 AM '68

RECEIVED APR 1968 Florida Gas Transmission Co. LAND DEPT.

01289

OFF. REC. 1651 PAGE 1505

That the Grantee takes cognizance of the fact that the lines of the Grantor on or adjacent to the property covered by the herein granted easement are conductors of high voltage electricity; that the Grantee agrees to exercise extraordinary precaution so as to prevent damage or injury to property or persons in the vicinity of such lines; and that the Grantee agrees to notify its employees, agents, contractors, invitees and licensees of the existence of said high voltage lines.

That Grantee shall indemnify and save Grantor harmless from all loss, liability and expense, including legal fees and expenses, for the death or injury of any person and damage to any property during the term of the easement hereby granted, without reference to negligence, resulting from or connected with the easements hereby granted.

That the word "Grantor" as used in this Agreement shall not only include Florida Power & Light Company but also its successors, trustees and assigns.

All of the rights of the Grantee hereunder may be assigned to a Trustee or Trustees under a deed of trust and mortgage as security for indebtedness of the Grantee and such rights may be further assigned in connection with the enforcement of any such deed of trust and mortgage; the obligations hereunder of Grantee may be performed by such Trustee or Trustees or any further assignee without releasing Grnatee therefrom but neither such assignment, the acceptance thereof nor any performance hereunder by such Trustee or Trustees or further assignee shall obligate such Trustee or Trustees or assignee to perform such obligation.

The terms and conditions hereof shall be binding upon and inure to the benefit of the successors, trustees and assigns of the parties hereto.

WITNESS the signature and seal of Grantor, by its proper officers, this 23 day of April, 1968.

FLORIDA POWER & LIGHT COMPANY

WITNESS:

Barbara H. Kennedy

Rita A. Spencer

By: Executive Vice President

ATTEST: Secretary

STATE OF FLORIDA)
COUNTY OF DADE)

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared R. C. Fullerton and W. F. Blaylock, to me known and known to be the persons described in and who executed the foregoing instrument as its Executive Vice President, and Secretary, respectively, of the corporation named therein, and severally acknowledged before me that they executed the same as such officers in the name and on behalf of said corporation.

WITNESS my hand and official seal in the State and County last aforesaid this 23 day of April, 1968.

Notary Public

My commission expires:
NOTARY PUBLIC, STATE of FLORIDA at LARGE
MY COMMISSION EXPIRES SEPT. 7, 1968

RECEIVED

Recorded In Official Record Book
Of Palm Beach County, Florida
John B. Dunkle
Clerk of Circuit Court

DEPT.

19782

This instrument was prepared by.
T. P. McPoake, General Superintendent
Land Department - Florida Gas Transmission Co.
Post Office Box 44, Winter Park, Florida 32789

ORIGINAL

Riviera Beach Lateral
615-PALM-41
5.01

METER SITE LEASE

This relates to that certain Meter Site Lease dated May 5, 1959, where in FLORIDA POWER & LIGHT COMPANY granted to the FLORIDA GAS TRANSMISSION COMPANY the right to construct, operate and maintain a meter and regulator facility on certain lands of the Florida Power & Light Company system in the County of Palm Beach and State of Florida.

In view of a change in location of said meter and regulator facility on certain property of the Florida Power & Light Company, said lease is hereby amended so as to read in full as follows:

A parcel commencing at a nail marking the intersection of the centerline of State Road 5 with the South line of Section 33, Township 42 South, Range 43 East; thence N 00° 23' E along the centerline of State Road 5, a distance of 844.19 feet; thence S 88° 25' E a distance of 40 feet to an iron pipe marking the East right of way line of State Road 5; thence S 88° 25' E a distance of 18 feet to the point of beginning; thence S 88° 25' E a distance of 110 feet; thence S 00° 23' W a distance of 80 feet; thence N 88° 25' W a distance of 110 feet; thence N 00° 23' E a distance of 80 feet to the point of beginning and being located in Palm Beach County, Florida.

The Florida Gas Transmission Company joins in this agreement for the purpose of designating the proper description.

Except as provided herein said Meter Site Lease dated May 5, 1959, shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be signed in its respective names by its proper officers, this 16 day of April, 1968.

Signed, sealed and delivered in our presence.

Barbara H. Kennedy

Ruth A. Spencer

FLORIDA POWER & LIGHT COMPANY

By _____
Executive Vice President

ATTEST: _____
Secretary

Janice Bergstrom

Jeanne Ojdini

FLORIDA GAS TRANSMISSION COMPANY

By _____
Vice President

FORM APPROVED
Legal Dept.

ATTEST: _____
Assistant Secretary

RECEIVED
APR 1 1983
Florida Gas Transmission Co.
LAND DEPT.

3.30

012283

OFFICIAL RECORD 1651 PAGE 1507

STATE OF FLORIDA)
COUNTY OF DADE)

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledments, personally appeared R. C. Fullerton and W. F. Blaylock ; to me known and known to be the persons described in and who executed the foregoing instrument as its Executive Vice President and Secretary , respectively, of the corporation named therein, and severally acknowledged before me that they executed the same as such officers in the name and on behalf of said corporation.

WITNESS my hand and official seal in the State and County last aforesaid this 16 day of April , 1968.

Notary Public

My commission expires:
NOTARY PUBLIC, STATE OF FLORIDA at LARGE
MY COMMISSION EXPIRES SEPT. 7, 1968

STATE OF FLORIDA)
COUNTY OF ORANGE)

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared W. B. Aprow and W. J. Aberwald , to me known and known to be the persons described in and who executed the foregoing instrument as its Vice President , and Assistant Secretary , respectively, of the FLORIDA GAS TRANSMISSION COMPANY, and severally acknowledged before me that they executed the same as such officers in the name and on behalf of said corporation.

WITNESS my hand and official seal in the State and County last aforesaid this 23rd day of April , 1968.

Notary Public

My commission expires:
Notary Public, State of Florida at Large
My Commission Expires: July 16, 1968

RECEIVED

Florida Gas Transmission Co.
LAND DEPT.

Recorded In Official Record Book
Of Palm Beach County, Florida
John B. Dunkle
Clerk of Circuit Court

MAY-07-1998 10:40am 98-169446
ORB 10388 Pg 799

IN THE CIRCUIT COURT OF THE FIFTEENTH JUDICIAL CIRCUIT, IN AND FOR PALM BEACH COUNTY, FLORIDA

CASE NO. CL 97-4762-AO

PORT OF PALM BEACH DISTRICT,

Petitioner,

vs.

SOUTH ATLANTIC GAS, INC., et al.,

Defendants.

98 MAY -4 PM 2:28

ORDER OF TAKING

THIS CAUSE having come before the Court on the Petition in Eminent Domain filed by Petitioner, Port of Palm Beach District ("Petitioner") for acquisition of the interests held by Defendant, Florida Power & Light Company ("FPL"), a Florida corporation, in Parcels 38A, 38B and 39 in this cause, Petitioner and FPL having stipulated to the entry of this Order of Taking and the Court being fully advised in the premises, it is therefore,

ORDERED AND ADJUDGED that:

1. The Court has jurisdiction of the subject matter and the parties.

2. The areas of acquisition as to Parcels 38A, 38B and 39 described in the Petition in this cause are amended as set forth in the attached Composite Exhibit A to this Order of Taking (hereafter "the Lands"). Immediately upon the entry of this Order of Taking and upon its recordation in the Public Records of Palm Beach County, Florida, the legal descriptions as to

LR 4825 417

337

said parcels as the same are described in the Petition and any Notice of Lis Pendens filed in this cause are hereby amended in accordance with this Order and the attached Composite Exhibit A.

3. The pleadings in this cause are sufficient and the Petitioner is properly exercising its delegated authority for a public purpose.

4. The Petitioner shall deposit the following sum in the Registry of the Court within twenty (20) days from the date of this Order as its estimate of value to satisfy the requirements of Chapter 74, Florida Statutes for Parcels 38A, 38B and 39: $1,085,000 which does not include any relocation costs necessitated by the taking herein. This deposit is on account of the compensation due to FPL for the taking of its interests set forth below (subject only to any claims by Bankers Trust Company as mortgagee), and may be withdrawn solely by FPL (subject to any claims by said mortgagee). No other defendant or claimant has any interest in or claim to any portion of the deposit. The withdrawal of the deposit, and the terms, conditions, reservations and stipulations herein, shall be without prejudice to FPL's right to full and just compensation and all damages and compensation of any nature for the taking herein, including without limitation the right to claim compensation for the Lands taken, compensation for roads abutting the Lands vacated now or in the future, severance damages, costs-to-cure, moving and relocation expenses, business damages, special damages, attorneys' fees and costs.

5. Upon the making of said deposit, fee simple title to the Lands described in attached Composite Exhibit A, as is, without representations or warranties of any kind, including

without limitation permitting, environmental or zoning, and subject to the easements and other rights and interests granted and reserved below, shall vest in Petitioner and Petitioner shall have the right, as to FPL, to enter into possession of the Lands for which the deposit was made, subject to and based upon the following terms, conditions, reservations and stipulations:

A. Any and all FPL utility facilities or improvements currently located on, under, over or across the Lands shall remain the property of FPL.

B. Although title to the Lands shall vest in Petitioner, FPL shall be entitled to remain in possession of the Lands and any and all improvements thereto, and to exercise all rights of possession, including but not limited to access to and from the Lands and all improvements thereon, until such time as the parties expressly agree otherwise in writing.

C. Without limiting the generality of the foregoing, FPL reserves a perpetual easement for the purposes set forth in Exhibit A, page 7 of 7, on, under, over and across the Lands. FPL shall, within a reasonable time after completing any relocation provided for hereunder, including without limitation the execution and recordation of easement documents for any and all alternate easement locations, release that portion of the easement rights reserved to FPL herein relative to the facilities relocated.

D. All existing utility facilities and improvements located on, under, over and across the Lands shall be permitted to remain in their present locations, however, if Petitioner requests FPL to relocate any FPL facility or improvement currently located on, under, over and across the Lands due to the project for which FPL's interests are being acquired herein (hereafter "Skypass"), FPL agrees to negotiate with Petitioner in response to such request in good faith as to the items to be relocated and the timing thereof. If FPL agrees to relocate any FPL facilities and improvements located on, under, over and across the Lands to alternate locations, Petitioners shall provide an easement(s) to be granted to FPL and with such rights and interests therein as are agreeable to FPL and FPL shall provide the Petitioner with a rough schedule of the timing of the relocation and an estimate (in the form of utility relocation agreements or otherwise) of the costs of relocation. Within ten (10) business days after its receipt of such estimate, Petitioner shall deposit the estimated costs of relocation in the Court Registry or pay the estimate directly to FPL at FPL's discretion (if deposited in the Court Registry, FPL shall be permitted to withdraw said funds pursuant to paragraph 4 above). In response to a relocation request by Petitioner, FPL has provided Petitioner with relocation cost estimates

in the form of a Facilities Relocation Agreement and the Lump Sum Agreements for the facilities identified therein, copies of which are attached hereto as Composite Exhibit B. Petitioner has paid to FPL the estimated costs of relocation for such facilities, the receipt of which by FPL (as well as any other funds received pursuant to this paragraph) shall be without prejudice to FPL's rights as set forth in paragraphs 4 and 7 herein. To the extent not already provided, within ten (10) business days of the date of this Order (and within then (10) business days of any other withdrawal of deposit or direct payment to FPL), FPL will provide Petitioner with a firm schedule and date for the relocation of the facilities, subject to force majeure. Upon completion of the relocation, FPL shall release that portion of the easement rights reserved to FPL herein, as provided in paragraph 5C above. FPL agrees to work with the Petitioner in a good faith effort to coordinate with the Petitioner's construction schedule.

E. Without limiting the generality of the foregoing, at all times hereafter, including during construction of Skypass, Petitioner shall provide FPL, at no cost to FPL, direct, continuous, unimpaired and uninterrupted access agreeable to FPL, including but not limited to vehicular access, from a

public road to the Lands and to FPL's adjacent properties, including without limitation FPL's Riviera Power Plant and FPL's transmission line corridor, and to all FPL utility facilities or improvements located on, under, over or across such properties. No later than thirty (30) days after completion of construction such access shall be secured by a perpetual access easement from Petitioner to FPL.

F. Without limiting the generality of the foregoing, at all times hereafter, including during construction of Skypass, Petitioner shall provide FPL, at no cost to FPL, vehicular access from the Skypass to FPL's transmission line corridor by providing a curb cut no less than twenty-four (24) feet in width at Parcel 6 as described in Exhibit A.

G. The billboard currently located on the Lands pursuant to agreement with FPL and a third-party shall not be moved from its present location until expiration or termination of that agreement, and the taking herein and any termination of that agreement is without prejudice to FPL's right to claim compensation, damages or losses relating to the billboard caused by or related to the taking or the Petitioner's use of the Lands.

H. Petitioner shall not exercise its rights granted hereunder or otherwise use the Lands in any manner that interferes or is inconsistent with any right or

interest of FPL, including but not limited to all rights or interests granted or reserved to FPL hereunder, or subsequently granted or reserved to FPL, or that creates a hazardous condition. Without limiting the generality of the foregoing, Petitioner (i) shall observe and comply with all applicable clearance criteria and requirements concerning FPL's facilities and improvements, and (ii) shall not change the grade of or excavate the Lands or otherwise impair FPL's use of the Lands without FPL's prior written consent, which shall not be unreasonably withheld.

I. The taking herein is subject and without prejudice to all existing leases, easements, licenses, permits, agreements, reservations and rights-of-way.

6. The foregoing interests shall thereupon be vested on Petitioner, but in default of making such deposits, within the time specified, this Order shall be void and of no further force and effect.

7. Petitioner shall pay FPL for all reasonable direct and indirect costs and expenses incurred by FPL in connection with any relocation of its utility facilities and improvements on, under, over or across the Lands caused by or related to Petitioner or Petitioner's use of the Lands, including without limitation, the costs of replacement right-of-way, rearrangement, adjustment and relocation of FPL's utility facilities and improvements, including without limitation all reasonable costs and expenses for labor and materials, survey, engineering or permitting costs.

Such costs and expenses are part of the compensation due to FPL in this cause. If Petitioner objects to the amount of any such costs or expenses and the objection cannot be resolved by agreement, the amount shall be determined by the Court. In addition to other costs and attorney's fees that may be taxed against it in this action pursuant to sections 73.091 and 73.092, Florida Statutes, all reasonable costs and attorneys' fees incurred by FPL to secure determination of the amount of relocation costs pursuant to this paragraph shall be taxed against Petitioner.

8. Nothing in this Order shall be deemed to waive FPL's rights or exercise of its eminent domain powers.

9. The Court reserves jurisdiction to enforce the terms of this Order.

DONE AND ORDERED in Chambers, at West Palm Beach, Palm Beach County, Florida this 4th day of May, 1998.

Circuit Court Judge

Conformed Copies furnished
to Counsel of Record on attached
Service List

WPB/125513-1

SKETCH TO ACCOMPANY A LEGAL DESCRIPTION

SEE SHEET 2 OF 2 FOR LEGAL DESCRIPTION

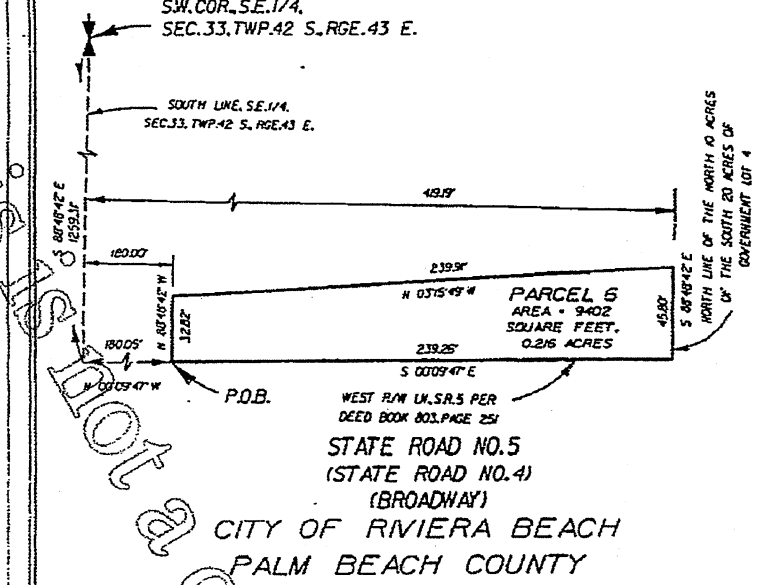
ORB 10388 Ps 807

SCALE : 1"=50'

GRAPHIC SCALE

0' 25' 50' 100'

DISTANCE IN FEET



CITY OF RIVIERA BEACH

PALM BEACH COUNTY

NOTES:

1. -BEARINGS SHOWN HEREON ARE REFERENCED TO THE SOUTH LINE OF SOUTHEAST ONE-QUARTER SECTION 33,TOWNSHIP 42 SOUTH, RANGE 43 EAST, AS BEING SOUTH 88°48'42" EAST.
2. -THIS SKETCH EXISTS SOLELY FOR THE PURPOSE OF ILLUSTRATING THE LEGAL DESCRIPTION TO WHICH IT IS ATTACHED.
3. -NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND RAISED SEAL OF A FLORIDA LICENCED SURVEYOR AND MAPPER.
4. -THIS IS NOT A "SURVEY".

LEGEND:

COR. -CORNER
S.R. -STATE ROAD
R/W -RIGHT-OF-WAY
BNDY. -BOUNDARY
P.O.C. -POINT OF COMMENCEMENT
P.O.B. -POINT OF BEGINNING
LN. -LINE
(D) -DEED DATA
SEC. -SECTION
TWP. -TOWNSHIP
RGE. -RANGE
L.B. -LICENCED BUSINESS

CERTIFICATE:

I HEREBY CERTIFY THAT THIS SKETCH TO ACCOMPANY LEGAL DESCRIPTION WAS MADE UNDER MY RESPONSIBLE CHARGE AND MEETS THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 61G17-6,FLORIDA ADMINISTRATIVE CODE,PURSUANT TO SECTION 472.027,FLORIDA STATUTES.

JOSEPH LEDGAR
PROFESSIONAL SURVEYOR & MAPPER NO.4097
DATE:

PARCEL 6

KIMLEY-HORN and ASSOCIATES, INC.
4431 EMBARCADERO DRIVE,
WEST PALM BEACH, FLORIDA 33407
PHONE: (561) 845-0665
L.B. # 696

COMPOSITE EXHIBIT "A" 1 of 7

SKETCH TO ACCOMPANY A LEGAL DESCRIPTION

SEE SHEET 1 OF 2 FOR SKETCH

ORB 10388 Ps 808

LEGAL DESCRIPTION (PARCEL 6)

A PORTION OF THE NORTH 10 ACRES OF THE SOUTH 20 ACRES OF GOVERNMENT LOT 4 AND OF THE WEST ONE-HALF (W.1/2) OF THE SOUTHEAST ONE-QUARTER (S.E.1/4) OF SECTION 33, TOWNSHIP 42 SOUTH, RANGE 43 EAST, LESS THE EXISTING RIGHT OF WAY OF STATE ROAD 5 (FORMERLY STATE ROAD #10, A) IN THE CITY OF RIVIERA BEACH, PALM BEACH COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF THE SOUTHEAST ONE-QUARTER (S.E.1/4) OF SECTION 33, TOWNSHIP 42 SOUTH, RANGE 43 EAST; THENCE ALONG THE SOUTH LINE OF SAID SOUTHEAST ONE-QUARTER (S.E.1/4), SOUTH 88°48'42" EAST, A DISTANCE OF 1259.31 FEET; THENCE ALONG THE WEST RIGHT OF WAY LINE OF STATE ROAD 5 ACCORDING TO DEED BOOK 803, PAGE 251 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, NORTH 00°09'47" WEST, A DISTANCE OF 180.05 FEET TO THE POINT OF BEGINNING; THENCE ALONG A LINE BEING 180.00 FEET NORTH OF AND PARALLEL WITH THE AFOREMENTIONED SOUTH LINE OF THE SOUTHEAST ONE-QUARTER (S.E.1/4), NORTH 88°48'42" WEST, A DISTANCE OF 32.82 FEET; THENCE NORTH 03°15'49" WEST, A DISTANCE OF 239.91 FEET; THENCE ALONG THE NORTH LINE OF SAID NORTH 10 ACRES OF THE SOUTH 20 ACRES OF GOVERNMENT LOT 4 (A LINE BEING 419.19 FEET NORTH OF AND PARALLEL WITH SAID SOUTH LINE OF THE SOUTHEAST ONE-QUARTER (S.E.1/4), SOUTH 88°48'42" EAST, A DISTANCE OF 45.80 FEET; THENCE ALONG THE AFOREMENTIONED WEST RIGHT OF WAY LINE OF STATE ROAD 5, SOUTH 00°09'47" EAST, A DISTANCE OF 239.25 FEET TO THE POINT OF BEGINNING.

CONTAINING 9,402 SQUARE FEET (0.216 ACRES), MORE OR LESS.

PARCEL 6

KIMLEY-HORN and ASSOCIATES, INC.
4431 EMBARCADERO DRIVE
WEST PALM BEACH, FLORIDA 33407
PHONE: (561) 845-0665
L.B. # 696

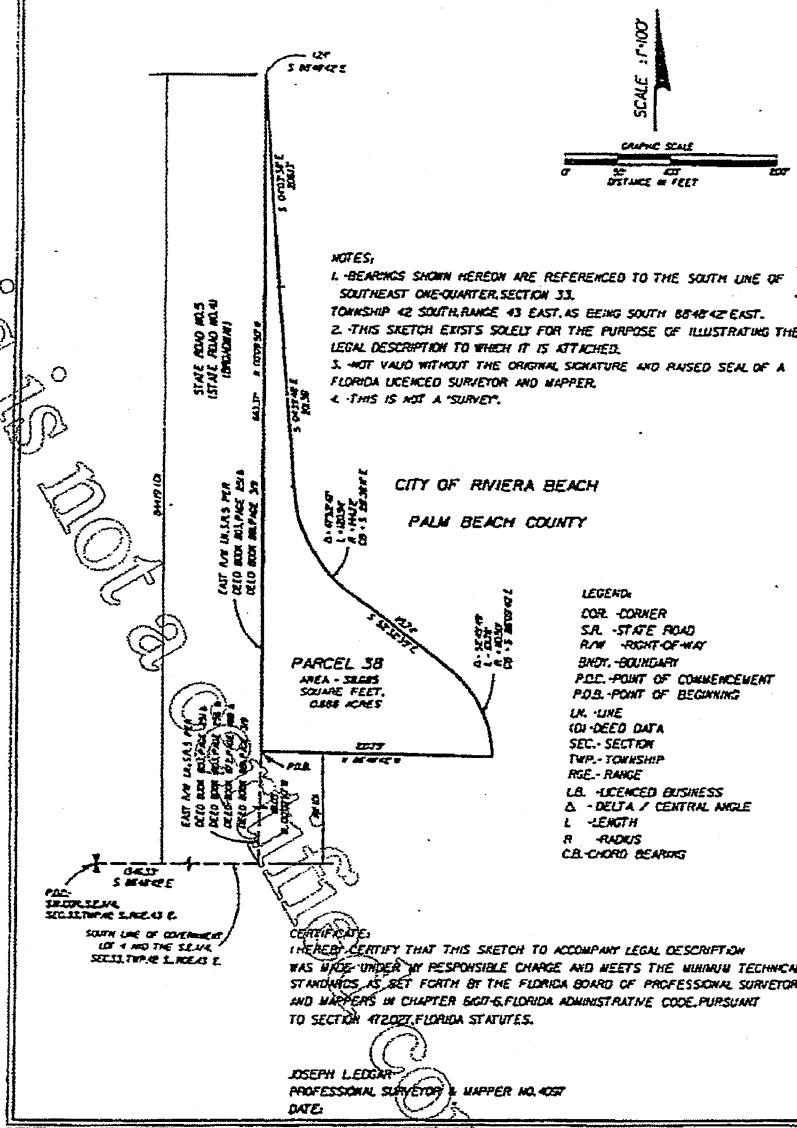
SHEET NO. 2 OF 2 SHEETS
PROJECT NO. 042010.00

DATE: 8/11/04

SKETCH TO ACCOMPANY A LEGAL DESCRIPTION

SEE SHEET 2 OF 2 FOR LEGAL DESCRIPTION

ORB 10388 Pg 809



NOTES:

1. -BEARINGS SHOWN HEREON ARE REFERENCED TO THE SOUTH LINE OF SOUTHEAST ONE-QUARTER,SECTION 33, TOWNSHIP 42 SOUTH,RANGE 43 EAST,AS BEING SOUTH 88°48'42" EAST.
2. -THIS SKETCH EXISTS SOLELY FOR THE PURPOSE OF ILLUSTRATING THE LEGAL DESCRIPTION TO WHICH IT IS ATTACHED.
3. -NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND RAISED SEAL OF A FLORIDA LICENCED SURVEYOR AND MAPPER.
4. -THIS IS NOT A "SURVEY".

LEGEND:

COR. -CORNER
S.R. -STATE ROAD
R/W -RIGHT-OF-WAY
BNDY. -BOUNDARY
P.O.C. -POINT OF COMMENCEMENT
P.O.B. -POINT OF BEGINNING
LN. -LINE
(D) -DEED DATA
SEC. - SECTION
TWP. - TOWNSHIP
RGE. - RANGE
L.B. -LICENCED BUSINESS
Δ - DELTA / CENTRAL ANGLE
L -LENGTH
R -RADIUS
C.B. -CHORD BEARING

CERTIFICATE:
I HEREBY CERTIFY THAT THIS SKETCH TO ACCOMPANY LEGAL DESCRIPTION WAS MADE UNDER MY RESPONSIBLE CHARGE AND MEETS THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17,FLORIDA ADMINISTRATIVE CODE,PURSUANT TO SECTION 472.027,FLORIDA STATUTES.

JOSEPH L.EDGAR
PROFESSIONAL SURVEYOR & MAPPER NO.4057
DATE:

PARCEL 38

KIMLEY-HORN and ASSOCIATES, INC.
4401 ENGINEERING DRIVE,
WEST PALM BEACH, FLORIDA 33407
PHONE: (561) 845-0665
L.B. # 696

SKETCH TO ACCOMPANY A LEGAL DESCRIPTION

SEE SHEET 1 OF 2 FOR SKETCH

ORB 10388 Pg 810

LEGAL DESCRIPTION (PARCEL 38)

A PORTION OF THE NORTH 425 FEET OF THE SOUTH 844.19 FEET AND THE NORTH 663.19 FEET OF THE SOUTH 844.19 FEET (MEASURED AT RIGHT ANGLES BETWEEN PARALLEL LINES) OF GOVERNMENT LOT 4, SECTION 33, TOWNSHIP 42 SOUTH, RANGE 43 EAST, PALM BEACH COUNTY, FLORIDA, LYING EASTERLY OF THE RIGHT OF WAY OF STATE ROAD NO. 4 (ALSO KNOWN AS STATE ROAD NO. 5) (U.S. HIGHWAY NO. ONE), IN THE CITY OF RIVIERA BEACH, PALM BEACH COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF THE SOUTHEAST ONE-QUARTER (S.E.1/4) OF SECTION 33, TOWNSHIP 42 SOUTH, RANGE 43 EAST; THENCE ALONG THE SOUTH LINE OF SAID SOUTHEAST ONE-QUARTER (S.E.1/4), SOUTH 88°48'42" EAST, A DISTANCE OF 1346.33 FEET; THENCE ALONG THE EAST RIGHT OF WAY LINE OF STATE ROAD 5 ACCORDING TO DEED BOOK 803, PAGE 256 AND DEED BOOK 801, PAGE 251 AND DEED BOOK 672, PAGE 469 AND DEED BOOK 881, PAGE 319 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, NORTH 00°09'50" WEST, A DISTANCE OF 1810.5 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE ALONG THE EAST RIGHT OF WAY LINE OF STATE ROAD 5 ACCORDING TO DEED BOOK 803, PAGE 251 AND DEED BOOK 881, PAGE 319 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, NORTH 00°09'50" WEST, A DISTANCE OF 663.37 FEET; THENCE ALONG A LINE BEING 844.19 FEET NORTH OF AND PARALLEL WITH SAID SOUTH LINE OF THE SOUTHEAST ONE-QUARTER (S.E.1/4), SOUTH 88°48'42" EAST, A DISTANCE OF 1.24 FEET; THENCE SOUTH 04°03'38" EAST, A DISTANCE OF 206.13 FEET; THENCE SOUTH 04°39'48" EAST, A DISTANCE OF 206.36 FEET TO A POINT OF CURVATURE OF A CURVE CONCAVE TO THE NORTHEAST HAVING A CHORD BEARING OF SOUTH 28°36'10" EAST; THENCE SOUTHEASTERLY ALONG SAID CURVE HAVING A RADIUS OF 144.72 FEET, THROUGH A CENTRAL ANGLE OF 47°52'47", AN ARC DISTANCE OF 120.94 FEET TO A POINT OF TANGENCY; THENCE SOUTH 52°32'35" EAST, A DISTANCE OF 105.74 FEET TO A POINT OF CURVATURE OF A CURVE CONCAVE TO THE SOUTHWEST HAVING A CHORD BEARING OF SOUTH 25°09'40" EAST; THENCE SOUTHEASTERLY ALONG SAID CURVE HAVING A RADIUS OF 110.50 FEET, THROUGH A CENTRAL ANGLE OF 52°45'47", AN ARC DISTANCE OF 101.76 FEET TO A POINT OF TERMINUS; THENCE ALONG A LINE BEING 1810.0 NORTH OF AND PARALLEL WITH THE SOUTH LINE OF SAID SOUTHEAST ONE-QUARTER (S.E.1/4), NORTH 88°48'42" WEST, A DISTANCE OF 281.75 FEET TO THE POINT OF BEGINNING.

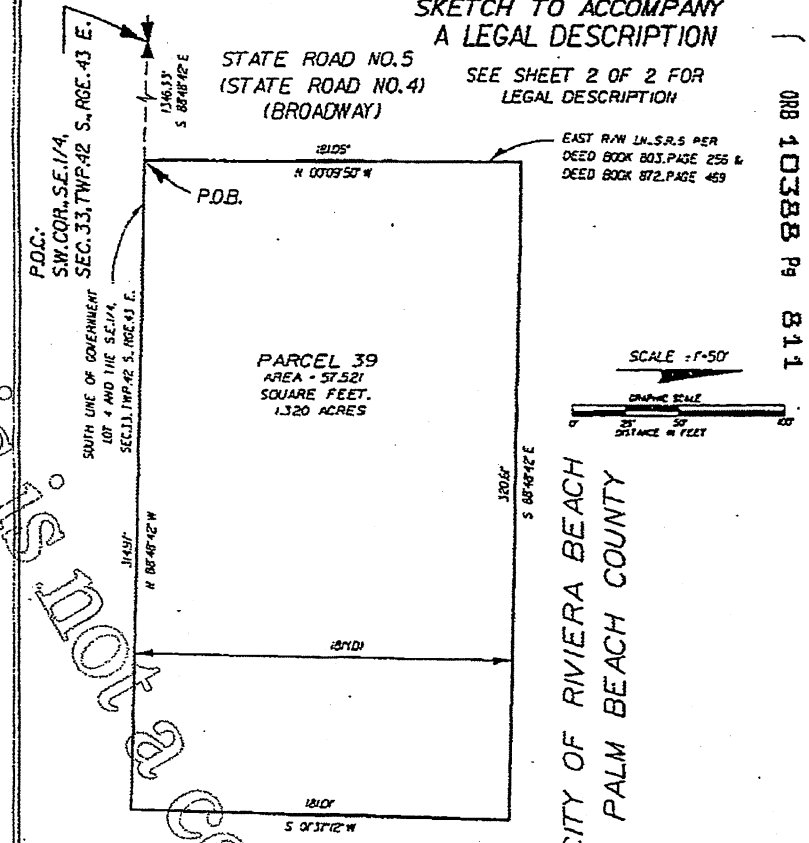
CONTAINING 38,285 SQUARE FEET (0.888 ACRES), MORE OR LESS.

ORIGINATED / DRAWN BY:	PARCEL 38		KIMLEY-HORN and ASSOCIATES, INC.
SHEET NO. 2 OF 2 SHEETS			4121 EMBASSADORS DRIVE, WEST PALM BEACH, FLORIDA 33407

COMPOSITE EXHIBIT "A" 4 of 7

SKETCH TO ACCOMPANY A LEGAL DESCRIPTION

SEE SHEET 2 OF 2 FOR LEGAL DESCRIPTION



NOTES:

1. -BEARINGS SHOWN HEREON ARE REFERENCED TO THE SOUTH LINE OF SOUTHEAST ONE-QUARTER, SECTION 33, TOWNSHIP 42 SOUTH, RANGE 43 EAST, AS BEING SOUTH 88°48'42" EAST.
2. -THIS SKETCH EXISTS SOLELY FOR THE PURPOSE OF ILLUSTRATING THE LEGAL DESCRIPTION TO WHICH IT IS ATTACHED.
3. -NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND RAISED SEAL OF A FLORIDA LICENCED SURVEYOR AND MAPPER.
4. -THIS IS NOT A "SURVEY".

CERTIFICATE:

I HEREBY CERTIFY THAT THIS SKETCH TO ACCOMPANY LEGAL DESCRIPTION WAS MADE UNDER MY RESPONSIBLE CHARGE AND MEETS THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

JOSEPH L. EDGAR
PROFESSIONAL SURVEYOR & MAPPER NO. 4098
DATE:

LEGEND:
COR. -CORNER
S.R. -STATE ROAD
R/W -RIGHT-OF-WAY
BNDY. -BOUNDARY
P.O.C. -POINT OF COMMENCEMENT
P.O.B. -POINT OF BEGINNING
LN. -LINE
(D) -DEED DATA
SEC. -SECTION
TWP. -TOWNSHIP
RGE. -RANGE
L.B. -LICENCED BUSINESS

PARCEL 39		KIMLEY-HORN and ASSOCIATES, INC.

ORB 10388 Pg 811

SKETCH TO ACCOMPANY A LEGAL DESCRIPTION

SEE SHEET 1 OF 2 FOR SKETCH

ORB 10388 Pg 812

LEGAL DESCRIPTION (PARCEL 39)

A PORTION OF THE SOUTH 181 FEET (MEASURED AT RIGHT ANGLES BETWEEN PARALLEL LINES) OF GOVERNMENT LOT 4, SECTION 33, TOWNSHIP 42 SOUTH, RANGE 43 EAST, PALM BEACH COUNTY, FLORIDA, LYING EASTERLY OF THE RIGHT OF WAY OF STATE ROAD NO. 4 (ALSO KNOWN AS STATE ROAD NO. 5) (U.S. HIGHWAY NO. 1) WITHIN THE CITY OF RIVIERA BEACH, PALM BEACH COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF THE SOUTHEAST ONE-QUARTER (S.E. 1/4) OF SECTION 33, TOWNSHIP 42 SOUTH, RANGE 43 EAST; THENCE ALONG THE SOUTH LINE OF SAID SOUTHEAST ONE-QUARTER (S.E. 1/4), SOUTH 88°48'42" EAST, A DISTANCE OF 1346.33 FEET TO THE POINT OF BEGINNING; THENCE ALONG THE EAST RIGHT OF WAY LINE OF STATE ROAD 5 ACCORDING TO DEED BOOK 803, PAGE 256 AND DEED BOOK 872, PAGE 469 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, NORTH 00°09'50" WEST, A DISTANCE OF 181.05 FEET; THENCE ALONG A LINE BEING 181.00 FEET NORTH OF AND PARALLEL WITH THE AFOREMENTIONED SOUTH LINE OF THE SOUTHEAST ONE-QUARTER (S.E. 1/4), SOUTH 88°48'42" EAST, A DISTANCE OF 320.61 FEET; THENCE SOUTH 01°37'12" WEST, A DISTANCE OF 181.01 FEET; THENCE ALONG THE SOUTH LINE OF SAID GOVERNMENT LOT 4 AND SAID SOUTH LINE OF THE SOUTHEAST ONE-QUARTER (S.E. 1/4), NORTH 88°48'42" WEST, A DISTANCE OF 314.97 FEET TO THE POINT OF BEGINNING.

CONTAINING 57,521 SQUARE FEET (1.320 ACRES) MORE OR LESS.

SHEET NO. 2 OF 2 SHEETS PROJECT NO. 040280.010	PARCEL 39	DRAWN BY: J.A. CHECKED BY: J.A. DATE: 8/11/1998	KIMLEY-HORN and ASSOCIATES, INC. 4630 SHERIDAN DRIVE, WEST PALM BEACH, FLORIDA 33407 PHONE (561) 615-1663 LB # 696

EASEMENT RESERVATION

Reserving to FPL, its successors and assigns, the right, privilege, and use of a non-exclusive perpetual easement located over, under, across and through the foregoing described property herein conveyed to the Port of Palm Beach District, to be used for any and all FPL utility facilities and improvements located on the easement area, including but not limited to the construction, operation and maintenance of overheard and underground electric transmission and distribution lines, wells, structures, towers, cables, roads, pipelines, billboards, and fences, together with the right and privilege from time to time to replace, remove or relocate such facilities or any part of them upon, across, over or under the above-described easement area, and the right of ingress and egress for personnel and equipment of FPL, its contractors, agents, successors or assigns over the adjoining lands of the Port of Palm Beach District, for the purposes of exercising and enjoying the rights reserved herein.

The Port of Palm Beach District may use the easement area for such other purposes except as herein granted or as might interfere or be inconsistent with the use, occupation, maintenance or enjoyment thereof by FPL or its successors or assigns, or as might cause a hazardous condition; provided, however, the Port of Palm Beach District agrees that no portion of the easement area shall be excavated, altered, obstructed, improved, surfaced or paved without the prior written permission of FPL, or its successors or assigns.

WPB/132818-1

LUMP SUM RELOCATION AGREEMENT

Applicant PORT OF PALM BEACH Agrees to pay FPL $4,703.00 to relocate FOUR DOWN GUYS AND ANCHORS WEST OF U.S. #1

Applicant understands that this cost is valid for 180 days from the date of this agreement and is based on the applicant's plans which are dated 3-27-98. Applicant also agrees that any scope of work changes listed below will result in FPL providing a new estimate for which applicant is obligated to pay.

These scope changes are:

1. Change in applicant's plans/schedule which will affect FPL's relocation.

2. Any error in applicant's plans which will affect FPL's relocation.

Applicant agrees to pay for FPL in advance the full amount for this relocation.

Applicant acknowledges that high voltage electric lines are located in the area of Applicant's project and agrees to warn its employees, agents, contractors and invitees, new and experienced alike, of the danger of holding on to or touching a cable or other piece of equipment that is located or working close to any overhead power line and to use all safety and precautionary measures when working under or near FPL's facilities. Applicant acknowledges and agrees that it has read and will comply with the Notification of FPL Facilities attached hereto.

Limitations of Liability. Neither Party shall be liable in contract, in tort (including negligence), or otherwise to the other Party for any incidental or consequential loss or damage whatsoever including but not limited to loss of profits or revenue on work not performed, for loss of use or under utilization of the Party's facilities, or loss of use of revenues or loss of anticipated profits resulting from either Party's performance, nonperformance, or delay in performance of its obligations under this Agreement.

Indemnification. The Applicant shall indemnify, defend and hold harmless FPL, its parent, subsidiaries or affiliates and their respective officers, directors and employees (collectively "FPL Entities") from and against any liabilities whatsoever, occasioned wholly or in part by the negligence of the Applicant, its contractors, subcontractors or employees, including attorney fees, for injury to or death of person(s) and property damage arising or resulting in connection with any activity associated with work or service under this Agreement, EXCEPT if the liability arises out of a claim made by an employee of the Applicant, its contractors or assigns, the Applicant shall indemnify FPL Entities whether or not the damage or liability is due to or caused by the sole negligence of FPL Entities. The Applicant's obligation to protect, and hold FPL Entities free and unharmed against such liabilities shall extend up to, but shall not exceed the sum $1,000,000 combined single limit for injuries to or death of person(s) or damage to existing property arising out of a single occurrence, except in the event Applicant is insured for liability with limits in excess of $1,000,000 combined single limit for injuries to or death of person(s) or property arising out of a single occurrence, Applicant's said obligations shall extend up to but shall not exceed the limits of that insurance. Applicant's costs of defending FPL Entities, including Applicant's attorneys' fees, are excluded from and are in addition to the aforesaid limitation of liability for injury, death and property damage.

Insurance. If the Applicant utilizes its own personnel in the construction or maintenance work around the subject Facilities, the Applicant shall furnish FPL with evidence of insurance maintained by Applicant insuring FPL Entities from liabilities assumed under the above indemnification. Said insurance shall contain a broad form contractual endorsement or, alternatively, the Applicant shall cause FPL, its parent, subsidiaries and affiliates and their respective officers, directors and employees to be named as additional named insured on the Applicant's comprehensive general liability policy. Such liability coverage shall be primary to any liability coverage maintained by or on behalf of FPL up to the $1,000,000 limit of liability.

In the event that the policy is on a "claims made" basis, the retroactive date of the policy shall be the effective date of this or such other date as to protect the interest of FPL coverage shall survive the termination of this Agreement until expiration of the maximum statutory period of limitations in the State of Florida for actions based in contract or in tort (currently, five years). If coverage is an "occurrence" basis, such insurance shall be maintained by the Applicant during the entire term of this Agreement. The policy shall not be canceled or materially altered without at least thirty (30) days written notice to FPL.

The Applicant shall provide FPL with evidence of such liability insurance coverage and the standard insurance industry form (ACORD) without modification. A copy of the policy shall be made available for inspection by FPL upon reasonable request.

Contractor Indemnification. The Applicant further agrees to include the following indemnification in all contracts between the Applicant and its general contractors who perform or are responsible for construction or maintenance work on or around the subject FPL Facilities:

> "The Contractor hereby agrees to release, indemnify, defend, save and hold harmless the Applicant and FPL, its parent, subsidiaries, affiliates or their respective officers, directors, or employees, from all claims, demands, liabilities and suits whether or not due to or caused by negligence of the Applicant or FPL for bodily injuries or death to person(s) or damage to property resulting in connection with the performance of the described work by Contractor, its subcontractor, agents or employees. This indemnification shall extend up to but shall not exceed the sum of $1,000,000.00 for bodily injury or death of person(s) or property damage combined single limit and $3,000,000 occurrence aggregate. In the event the Contractor is insured for liability with limits in excess of these amounts, Contractor's said obligation shall extend up to but shall not exceed the limits of that insurance. Contractor's costs of defending Applicant and FPL, including attorneys' fees are excluded from and are in addition to the aforesaid limitation of liability for injury, death and property damage."

Contractor Insurance and Notice. The Applicant agrees to require its contractors to obtain insurance to cover the above indemnity and further agrees to verify with its contractors that such insurance is in full force and effect. The Applicant shall provide FPL Group Inc.'s Risk Management Department with notice of the name and address of Applicant's contractors as specified in section 7.5 above, prior to the commencement of the Relocation of FPL Facilities by FPL.

This agreement may be terminated at any time upon written agreement between applicant FPL.

Applicant: _____ FPL: _____

Title: _____ Title: _____

Date: _____ Date: _____

This Estimate valid through 09/17/98

FLORIDA POWER & LIGHT COMPANY
SUMMARY ESTIMATE OF COST

FOR: COST ONLY EST

CONST/LIKE-LIKE EST.

PORT OF PALM BEACH PROPOSED SKYPASS PROJECT FOR US 1
RELOCATE FOUR DOWNGUYS AND ANCHORS WEST OF US 1

REMOVALS SALV CR	REMOV COST	ITEM	INSTALL & MAINT. ITEM COST	TOTAL
		(A) ENGINEERING		
		Labor		
		Transportation & Misc Expenses		
		Applied Engineering		
		Sub-Total		
		(B) LAND & LAND RIGHTS (RT OF WAY)		
		Labor		
		Transportation & Misc Expenses		
		Purchase and/or Easements		
		Payment to Contractor		
		Sub-Total		
		(C) CONSTRUCTION		
		Labor		
		Transportation & Misc Expenses		
		Material		
		Payment to Contractor		
		Sub-Total		
		(D) OTHER MAINTENANCE		
		Labor	2,469	
		Transportation & Misc Expenses	782	
		Material	1,452	
		Payment to Contractor		
		Sub-Total		4,703
		TOTALS		4,703
		Recapitulation of Cost Estimate		

Total Installation and Transfer Cost	4,703	
Removal Cost		
Salvage Credit *	( )	
SUBTOTAL		4,703
Less Credit Ratio of 0.00%	( )	
Net Replacement Cost		4,703

* Handling, Tax & Ins and Pension & Welfare at Approved Rates. 8877 REV 3/94B

Engineer Steve HENRY Submitted by Ed Pasai 3/27/98

LUMP SUM RELOCATION AGREEMENT

Applicant Port Of Palm Beach Agrees to pay FPL $635,022.00 to relocate 4 Underground Feeders in conflict with the construction of Skypass on US 1 in Riviera Beach

Applicant understands that this cost is valid for 180 days from the date of this agreement and is based on the Applicant's plans which are dated November 3, 1997. Applicant also agrees that any scope of work changes listed below will result in FPL providing a revised Lump Sum cost which Applicant is obligated to pay.

These scope changes are:

1. Change in Applicant's plans/schedule which will affect FPL's relocation.

2. Any error in Applicant's plans which will affect FPL's relocation.

Applicant agrees to pay for FPL in advance the full Lump Sum amount or this relocation: This Lump Sum amount is non-refundable, provided, however if this agreement is terminated or indefinitely suspended, the Applicant shall be responsible for the costs actually incurred by FPL and any additional cost incurred by FPL to restore FPL's facilities to complete operational capability and FPL shall refund the balance.

Applicant acknowledges that high voltage electric lines are located in the area of Applicant's project and agrees to warn its employees, agents, contractors and invitees, new and experienced alike, of the danger of holding on to or touching a cable or other piece of equipment that is located or working close to any overhead power line and to use all safety and precautionary measures when working under or near FPL's facilities. Applicant acknowledges and agrees that it has read and will comply with the Notification of FPL Facilities attached hereto.

Limitations of Liability. Neither Party shall be liable in contract, in tort (including negligence), or otherwise to the other Party for any incidental or consequential loss or damage whatsoever including but not limited to loss of profits or revenue on work not performed, for loss of use or under utilization of the Party's facilities, or loss of use of revenues or loss of anticipated profits resulting from either Party's performance, nonperformance, or delay in performance of its obligations under this Agreement.

Indemnification. The Applicant shall indemnify, defend and hold harmless FPL, its parent, subsidiaries or affiliates and their respective officers, directors and employees (collectively "FPL Entities") from and against any liabilities whatsoever, occasioned wholly or in part by the negligence of the Applicant, its contractors, subcontractors or employees, including attorney fees, for injury to or death of person(s) and property damage arising or resulting in connection with any activity associated with work or service under this Agreement, EXCEPT if the liability arises out of a claim made by an employee of the Applicant, its contractors or assigns, the Applicant shall indemnify FPL Entities whether or not the damage or liability is due to or caused by the sole negligence of FPL Entities. The Applicant's obligation to protect, and hold FPL Entities free and unharmed against such liabilities shall extend up to, but shall not exceed the sum $1,000,000 combined single limit for injuries to or death of person(s) or damage to existing property arising out of a single occurrence, except in the event Applicant is insured for liability with limits in excess of $1,000,000 combined single limit for injuries to or death of person(s) or property arising out of a single occurrence. Applicant's said obligations shall extend up to but shall not exceed the limits of that insurance. Applicant's costs of defending FPL Entities, including Applicant's attorneys' fees, are excluded from and are in addition to the aforesaid limitation of liability for injury, death and property damage.

Form 3525le 10/94

Insurance. If the Applicant utilizes its own personnel in the construction or maintenance work around the subject Facilities, the Applicant shall furnish FPL with evidence of insurance maintained by Applicant insuring FPL Entities from liabilities assumed under the above indemnification. Said insurance shall contain a broad form contractual endorsement or, alternatively, the Applicant shall cause FPL, its parent, subsidiaries and affiliates and their respective officers, directors and employees to be named as additional named insured on the Applicant's comprehensive general liability policy. Such liability coverage shall be primary to any liability coverage maintained by or on behalf of FPL up to the $1,000,000 limit of liability.

In the event that the policy is on a "claims made" basis, the retroactive date of the policy shall be the effective date of this or such other date as to protect the interest of FPL. coverage shall survive the termination of this Agreement until expiration of the maximum statutory period of limitations in the State of Florida for actions based in contract or in tort (currently, five years). If coverage is on "occurrence" basis, such insurance shall be maintained by the Applicant during the entire term of this Agreement. The policy shall not be canceled or materially altered without at least thirty (30) days written notice to FPL.

The Applicant shall provide FPL with evidence of such liability insurance coverage and the standard insurance industry form (ACORD) without modification. A copy of the policy shall be made available for inspection by FPL upon reasonable request.

Contractor Indemnification. The Applicant further agrees to include the following indemnification in all contracts between the Applicant and its general contractors who perform or are responsible for construction or maintenance work on or around the subject FPL Facilities:

> "The Contractor hereby agrees to release, indemnify, defend, save and hold harmless the Applicant and FPL, its parent, subsidiaries, affiliates or their respective officers, directors, or employees, from all claims, demands, liabilities and suits whether or not due to or caused by negligence of the Applicant or FPL, for bodily injuries or death to person(s) or damage to property resulting in connection with the performance of the described work by Contractor, its subcontractor, agents or employees. This indemnification shall extend up to but shall not exceed the sum of $1,000,000.00 for bodily injury or death of person(s) or property damage combined single limit and $3,000,000 countrywide aggregate. In the event the Contractor is insured for liability with limits in excess of these amounts, Contractor's said obligation shall extend up to but shall not exceed the limits of that insurance. Contractor's costs of defending Applicant and FPL, including attorneys' fees are excluded from and are in addition to the aforesaid limitation of liability for injury, death and property damage."

Contractor Insurance and Notice. The Applicant agrees to require its contractors to obtain insurance to cover the above indemnity and further agrees to verify with its contractors that such insurance is in full force and effect. The Applicant shall provide FPL Group Inc.'s Risk Management Department with notice of the name and address of Applicant's contractors prior to the commencement of the Relocation of FPL Facilities by FPL.

This agreement may be terminated at any time upon written agreement between Applicant and FPL.

Applicant: [signature]	FPL: [signature] for Nick Giordano
Title: Executive Director	Title: Distribution Supervisor
Date: 4/8/98	Date: 4-9-93

COPY

Form 3525is 10/94

FACILITIES RELOCATION AGREEMENT
(Government Entity)

THIS AGREEMENT made and entered into this ___day of _____, 19__ by and between PORT OF PALM BEACH hereinafter called the Applicant, and FLORIDA POWER & LIGHT COMPANY, a Florida corporation with its principal place of business in Dade and Palm Beach Counties, Florida, hereinafter called FPL.

WITNESSETH:

WHEREAS the Applicant intends to construct SKYPASS PROJECT, and will require the relocation of certain incompatible and conflicting portions of FPL's facilities and equipment, and

WHEREAS FPL will incur costs in the Relocation of FPL's existing and proposed Facilities which costs would not have occurred but for the Applicant's construction,

NOW THEREFORE, in consideration of the mutual promises of the Applicant and FPL and other good and valuable consideration, the Parties agree that FPL shall Rearrange the FPL Facilities and the Applicant shall reimburse FPL for the actual cost of such Relocation as follows:

ARTICLE 1 - DEFINITIONS

For the purposes of this Agreement the following terms, whether used in the singular or plural, shall have the meanings set forth below when used with initial capitalization:

1.1 Betterment is any increase in service capacity of the Replacement FPL Facilities, not attributable to Contractor's construction, over the service capacity of the FPL Facilities prior to Relocation and any upgrading of a Replacement FPL Facility above FPL's current minimum standard practices, as specified in Article III of this Agreement, that normally would be used on projects financed solely by FPL. Betterment does not include: (a) any increase in service capacity required by federal, state or local law which applies to FPL Facilities as of the date of construction of the Replacement FPL Facilities; (b) any increase in service capacity resulting solely from the replacement of devices or materials which at the time of construction of the Replacement FPL Facility are no longer manufactured, processed, or installed and used by FPL in projects financed entirely by FPL, (c) any upgrading of a Replacement FPL Facility requested by the Applicant, (d) any upgrading of a Replacement FPL Facility required by any agency responsible for regulation of FPL Facilities, (e) any upgrading of the Replacement FPL Facility which is

necessitated by the Applicant's construction, if the replacement is the same as that used by FPL on FPL's own projects, or (f) any upgrading that will result in a reduction in the overall project cost.

1.2 Conversion is the replacement of existing overhead facilities with underground facilities.

1.3 Credit Ratio is the credit given to the Applicant in the form of a percentage derived by dividing the sum of the Betterment and the Non-Reimbursable Work Credit by the Total cost of the Relocation:

$$\text{Credit Ratio} = \frac{\text{Dollar Amount of Betterment} + \text{Non-Reimbursable Work Credit}}{\text{Total Cost of Relocation} - \text{The Land and Land Right Cost}}$$

1.4 Date Cost Estimate Received, for purposes of this Agreement, shall be deemed to be the day that the cost estimate was hand-delivered or transmitted by facsimile, or if mailed, five days from the date of postmark.

1.5 FPL's Facility or Facilities shall be, but shall not be limited to, any structure consisting of manholes, conduits, poles, wires, cables, substations, system protection equipment or other appurtenances, and associated equipment, and used by FPL in connection with the transmission and/or distribution of electric power.

1.6 Relocation and/or Relocate includes the terms "rearrange or rearrangement" and is the work performed by FPL under this Agreement and any activity made necessary by Applicant's construction which conflicts with or affects FPL, its Facilities, or service. Relocations shall include conversion of transmission facilities and shall include, but shall not be limited to, permanent or temporary support, protection, relocation, rearrangement, design, redesign, abandonment or reconstruction of the FPL Facilities and all other work required to provide continuity of service to FPL's customers which is a result of a conflict.

1.7 Replacement FPL Facility is any facility which will be constructed under the terms of this Agreement as a consequence of Relocation of an FPL Facility or portion thereof.

1.8 Salvage is the credit to the Applicant for the reusable materials recovered or removed by FPL less the Salvage Adjustment Credit.

ARTICLE II - IDENTIFICATION OF CONFLICTS, CONVERSIONS

2.1 Known Conflicts. The Applicant shall reimburse FPL for costs associated with the Relocation of the FPL Facilities more particularly described and located on property described in Exhibit A attached hereto and incorporated herein.

2.2 Other Conflicts. The identification of any other conflicting facilities of FPL requiring Relocation shall be undertaken by FPL pursuant to a subsequent written agreement between FPL and the Applicant.

2.3 Distribution Conversion. If an Applicant has requested a conversion of distribution facilities as part of a Relocation of Facilities, the FPL Distribution Facilities Conversion Agreement which is approved by the Florida Public Service Commission shall be attached hereto and incorporated herein. The Indemnity and Insurance provisions of this Agreement shall apply to all Distribution Conversions which are part of a Relocation. In addition, all other terms and conditions of this Agreement which are not expressly modified by the Addendum attached hereto shall remain in full force and effect. If there is a direct conflict between this Agreement and the attached Addendum, then the Underground Distribution Conversion Tariff and the Underground Distribution Conversion Agreement shall prevail as to that specific term or condition.

___ Underground Distribution Facilities Conversion Agreement is attached hereto and incorporated herein.

X This Project does not involve a conversion of electric distribution facilities.

ARTICLE III - DESIGN AND CONSTRUCTION OF REPLACEMENT FACILITIES

3.1 Design Standards. Engineering design standards and material specified shall meet FPL's Current Design Standards. In addition, the design of Relocations will be in conformity with all laws and regulations.

3.2 Construction Standards. Materials and construction procedures shall meet FPL's Current Construction Standards. In addition, Relocations or Replacement Facilities will be accomplished in conformance with all laws, codes and regulations.

ARTICLE IV - REPLACEMENT RIGHT-OF-WAY

4.0 Replacement Right-of-Way. The Applicant shall provide FPL with replacement rights-of-way in one of the following manners:

___ (a) The Applicant shall reimburse FPL for costs associated with the identification and acquisition of replacement rights-of-way, including, but not limited to, FPL's attorney fees for costs in prosecuting or in connection with any condemnation actions for the acquisition of necessary rights-of-way.

(b) The Applicant shall convey or grant to FPL replacement rights-of-way sufficient to permit FPL to accomplish Relocations of the FPL Facilities and to operate and maintain the Replacement Facilities in accordance with FPL's customary practices. Such conveyances or grants of replacement rights-of-way shall be accomplished at no cost to FPL and in a form and substance satisfactory to FPL.

SEE ORDER OF TAKING, DATED: _____

NOTE: FENCE TEMPORARY; MONITORING WELL TO BE RELOCATED ONTO FPL PROPERTY.

4.1 Location of Replacement Right-of-Way. The Location of the aforesaid replacement rights-of-way are generally set forth in Exhibit B attached hereto. NOT APPLICABLE.

ARTICLE V - COST ESTIMATES, CREDITS AND BILLING

5.1 Full Cost

The Applicant shall pay FPL for the full cost of Relocation of the FPL Facilities. The work to be performed by FPL will be in accordance with the construction drawings attached hereto as Exhibit B.

5.2 Cost Estimate

The Applicant shall be responsible for the total cost of the project. The estimated cost to Relocate the FPL Facilities is (a) or (b) below:

a. Relocation: $ 170,000.00. This cost estimate is set out in detail in Exhibit C attached hereto; or

b. Relocation Conversion:

Relocation: $_____ (Exhibit C)

Distribution Conversion $_____ (Addendum)

= Total Project Cost Estimate:

$_____

The Applicant understands and agrees that the amount set forth in Exhibit C is an estimate only. The Applicant shall be responsible for the total cost of the project. The cost for the Relocation portion shall not exceed 110% of a valid Relocation cost estimate, except as provided herein.

5.3 Duration of Cost Estimate

A cost estimate is valid only:

a. Prior to construction, for 180 days from the date of the estimate is received by Applicant (this includes the estimate attached as Exhibit C and any subsequent estimate) or

b. As long as the scope of work (Relocation) upon which the estimate is based has not been changed; whichever first occurs.

5.4 Re-estimates, Scope of Work Changes

5.4.1 Pre-construction. If the construction of the Relocation of the FPL Facilities has not commenced within 180 days of the date that the latest cost estimate is received by Applicant or if the scope of work ("Relocation") has been changed on any individual work order, prior to any construction, the estimate is invalid. A new estimate is required. FPL shall provide a re-estimate of the work prior to commencement of the Relocation by FPL. The Applicant shall agree in writing to pay the re-estimated cost and shall be responsible for the full cost of Relocation, not to exceed 110% of the re-estimate.

5.4.2 After Start of Construction. If after the start of construction, the Applicant requests a change in the scope of work (Relocation) of FPL Facilities or if FPL determines that there is a need for a change in the scope of work (Relocation) and such change causes either the credit ratio to change or the reimbursable cost of the project to change by 10% or more, FPL shall provide the Applicant with a new estimate as soon as practicable. The Applicant shall provide FPL with written approval of the re-estimate. The Applicant shall be responsible for any increased cost due to unknown or unforseen physical conditions at the site which differ materially from those originally encountered. Increased costs due to differing site conditions

are in addition to the estimated amount and are not subject to the 110% cap on estimated costs.

5.5 Credits.

5.5.1 The Applicant shall receive a credit for Betterment and Salvage.

5.5.2 The Applicant shall receive a credit for the payment of any non-refundable deposit required for estimates for underground installation included within a Relocation according to the terms of the FPL Distribution Conversion Tariff and FPL's Underground Distribution Conversion Agreement.

5.5.3 The Applicant shall receive a credit for payment made to FPL for a detailed cost estimate, if payment is required by FPL prior to issuing such estimate and if the Facilities Relocation Agreement has been entered into within 180 days of the date that estimate was received by the Applicant and the Relocation performed.

5.5.4 The Applicant shall receive no credit for payment for an estimate, and such payment shall not be refunded: (a) if the Applicant has not executed a Facilities Relocation Agreement within 180 days of the date that estimate was received by the Applicant, (b) if a subsequent estimate is required or (c) if the Applicant terminates the Agreement.

5.5.5 Any estimate provided to the Applicant after the initial, detailed estimate shall be done at additional cost and expense to Applicant. Applicant's payment for estimates shall be credited or retained by FPL as provided above.

5.6 Billing and Payment. FPL shall bill the Applicant for cost incurred not more frequently than once monthly. The Applicant shall have twenty (20) days from the date of an invoice to approve the invoice and any accompanying information supplied by FPL. Failure to provide FPL with written notice to the contrary within the twenty (20) day period shall constitute approval by the Applicant of the invoice against which payment must be remitted in full to FPL within forty-five (45) days of the date of the invoice. If payment by the Applicant is not postmarked within forty-five (45) days of the date of the invoice, then a late payment charge shall be assessed in the amount of one percent (1%) of the amount of the billing per month, or the highest amount then permitted by law.

BILLING AND PAYMENT SHALL BE IN ACCORDANCE WITH THE ORDER OF TAKING ENTERED INTO BETWEEN THE PARTIES, DATED _____. IF PAYMENT IS MADE DIRECTLY TO FPL, THEN THE ABOVE TERMS APPLY.

5.7 Final Bill. Upon completion of the work, FPL shall at the earliest date practicable furnish to the Applicant a final and complete billing of all costs incurred in connection with performance of Relocation of the FPL Facilities less any prepaid credits for additional cost estimates.

5.8 Refund and Effect of Termination.

5.8.1 Consistent with the terms of this Agreement, FPL shall refund to the Applicant any amounts which the Applicant has paid to FPL beyond the full cost of Relocation.

5.8.2 In the event that this Agreement is terminated due to the cancellation or indefinite suspension of work in furtherance of the Applicant's construction, the Applicant shall be responsible for the costs of Relocation already incurred, including but not limited to all engineering, design, equipment, and materials cost, labor costs, and if any, the costs of replacement facilities already installed, necessary to place FPL's facilities into a permanent condition suitable to provide continuous, reliable electric service to the public in accordance with all applicable laws, regulations and FPL's usual practices as set forth in Article III herein. Nothing in this section shall be construed to modify or abrogate FPL's legal duty to mitigate damages.

ARTICLE VI - AUDITS

6.1 All cost records and accounts of FPL directly related to the work performed under this Agreement shall be subject to audit by the Applicant for a period of two years from the completion date of all work performed under this Agreement. Such audits shall be performed by the Applicant and in accordance with the following considerations:

(a) the Applicant shall provide FPL with thirty (30) days written notice requesting an audit,
(b) the specific time of audit must be mutually agreed to,
(c) information required for audit purposes shall be accounts and records kept by FPL directly related to Relocation and reimbursable costs,
(d) the Applicant may request only information reasonably required by it concerning Relocation and such request for information shall be in writing and shall include the purpose of the audits,

(e) FPL shall make available the requested information at its offices during normal business hours, Monday through Friday,

(f) the Applicant shall bear any costs associated with any audits, including FPL costs, if any, and

(g) information available under this Agreement shall not be used in violation of any law or regulation.

ARTICLE VII - GENERAL CONDITIONS

7.1 Benefit of Agreement; Assignment. The provisions of this Agreement shall inure to the benefit of and bind the successors and assigns of the Parties to this Agreement but shall not inure to the benefit of any third party or other person. This Agreement shall not be assigned by either Party except upon receipt of the prior written permission of the other Party. Such permission shall not be unreasonably withheld.

7.2 Nonwaiver. The failure of either Party at any time to require performance by the other Party of any provision hereof shall not affect the full right to require such performance at any time thereafter. Waiver by either Party of a breach of the same provision or any other provision shall not constitute a waiver of the provision itself.

7.3 Limitations of Liability. Neither Party shall be liable in contract, in tort (including negligence), or otherwise to the other Party for any incidental or consequential loss or damage whatsoever including but not limited to loss of profits or revenue on work not performed, for loss of use or underutilization of the Party's facilities, or loss of use of revenues or loss of anticipated profits resulting from either Party's performance, nonperformance, or delay in performance of its obligations under this Agreement.

7.4 Indemnification. The Applicant shall indemnify, defend and hold harmless FPL, its parent, subsidiaries or affiliates and their respective officers, directors and employees (collectively "FPL Entities") from and against any liabilities whatsoever, occasioned wholly or in part by the negligence of the Applicant, its contractors, subcontractors or employees, including attorney fees, for injury to or death of person(s) and property damage arising or resulting in connection with any activity associated with work or service under this Agreement, EXCEPT if the liability arises out of a claim made by an employee of the Applicant, its contractors or assigns, the Applicant shall indemnify FPL Entities whether or not the damage or liability is due to or caused by the sole negligence of FPL Entities. The Applicant's obligation to protect,

defend and hold FPL Entities free and unharmed against such liabilities shall be subject to the limitation set forth in Section 768.28(5) Florida Statutes, except in the event the Applicant purchases insurance covering the liability with limits in excess of the statutory limits, the Applicant's obligation shall extend up to but shall not exceed the limits of that insurance.

7.5 Insurance. If the Applicant utilizes its own personnel in the construction or maintenance work around the subject Facilities, the Applicant shall furnish FPL with evidence of insurance maintained by Applicant insuring FPL Entities from liabilities assumed under the above indemnification. Said insurance shall contain a broad form contractual endorsement or, alternatively, the Applicant shall cause FPL, its parent, subsidiaries and affiliates and their respective officers, directors and employees to be named as additional named insureds on the Applicant's comprehensive general liability policy. Such liability coverage shall be primary to any liability coverage maintained by or on behalf of FPL up to the $1,000,000 limit of liability.

In the event that the policy is on a "claims made" basis, the retroactive date of the policy shall be the effective date of this Agreement or such other date as to protect the interest of FPL and the coverage shall survive the termination of this Agreement until the expiration of the maximum statutory period of limitations in the State of Florida for actions based in contract or in tort (currently, five years). If coverage is on an "occurrence" basis, such insurance shall be maintained by the Applicant during the entire term of this Agreement. The policy shall not be canceled or materially altered without at least thirty (30) days written notice to FPL.

The Applicant shall provide FPL with evidence of such liability insurance coverage on the standard insurance industry form (ACORD) without modification. A copy of the policy shall be made available for inspection by FPL upon reasonable request.

7.6 Contractor Indemnification. The Applicant further agrees to include the following indemnification in all contracts between the Applicant and its general contractors who perform or are responsible for construction or maintenance work on or around the subject FPL Facilities:

> "The Contractor hereby agrees to release, indemnify, defend, save and hold harmless the Applicant and FPL, its parent, subsidiaries, affiliates or their respective officers, directors, or employees, from all claims,

demands, liabilities and suits whether or not due to or caused by negligence of the Applicant or FPL for bodily injuries or death to person(s) or damage to property resulting in connection with the performance of the described work by Contractor, its subcontractor, agents or employees. This indemnification shall extend up to but shall not exceed the sum of $1,000,000.00 for bodily injury or death of person(s) or property damage combined single limit and $3,000,000 occurrence aggregate. In the event the Contractor is insured for liability with limits in excess of these amounts, Contractor's said obligation shall extend up to but shall not exceed the limits of that insurance. Contractor's costs of defending Applicant and FPL, including attorneys' fees are excluded from and are in addition to the aforesaid limitation of liability for injury, death and property damage."

7.7 Contractor Insurance and Notice. The Applicant agrees to require its contractors to obtain insurance to cover the above indemnity and further agrees to verify with its contractors that such insurance is in full force and effect. The Applicant shall provide FPL Group Inc.'s Risk Management Department with notice of the name and address of Applicant's contractors as specified in section 7.6 above, prior to the commencement of the Relocation of FPL Facilities by FPL.

7.8 Modification or Termination of Agreement. This Agreement may be modified, amended, or terminated at any time by written agreement of the Parties authorized and executed with the same formality as this Agreement. FPL's Underground Facilities Distribution Conversion Agreement, if attached hereto, is approved by the Florida Public Service Commission and may not be modified or amended by the Parties.

7.9 Effect of Headings. The headings set forth herein are for convenience only and shall not be deemed to modify or affect the rights and obligations of the Parties to this Agreement.

7.10 ~~FPL Consent to Relocations. FPL agrees to the Relocation of the FPL Facilities to the extent necessary to eliminate Conflicts with the Applicant's construction in accordance with the terms and conditions of this Agreement. The Applicant shall make all necessary arrangements and agreements with any person or entity which has facilities attached to the FPL poles for the Relocation of those facilities at no expense to FPL.~~

NOT APPLICABLE — SEE ORDER OF TAKING, DATED _____.

7.11 Delegation of Power and Duties Notice. The following persons are designated as the authorized representatives of the Parties for the purposes of this Agreement and all notices or

other communications to either Party by the other shall be made in writing and addressed as follows:

To the Applicant: _____
(Name and Title)
_____
_____
_____
_____

For FPL: ED JANTZ
(Name and Title)
FLORIDA POWER & LIGHT COMPANY
700 UNIVERSE BLVD.
JUNO BEACH, FL. 33408

7.12 Force Majeure

(a) Neither Party shall be liable or responsible for any delay in the performance of, or the ability to perform, any duty or obligation required by this Agreement in the event of a force majeure occurrence. Such occurrence shall include, but shall not be limited to acts of civil or military authority (including courts or administrative agencies), acts of God, war, riot, or insurrection, inability to obtain required permits or licenses, blockades, embargoes, sabotage, epidemics, fires, unusually severe floods or weather, strikes, lockouts or other labor disputes or difficulties. The obligation of either Party to pay money in a timely manner is absolute and shall not be subject to the force majeure provisions. Force majeure as used herein means, without limitation, any cause or event not reasonably within the control of FPL or the Applicant.

(b) In the event of any delay resulting from a force majeure circumstance, the time for performance hereunder shall be extended for a period of time reasonably necessary to overcome the effect of such delays.

(c) In the event of any delay or nonperformance caused by a force majeure circumstance, the Party affected shall promptly notify the other in writing.

7.13 Severability. In the event that any of the provisions or portions or applications thereof of this Agreement are held to be unenforceable or invalid by any court of competent jurisdiction, the Applicant and FPL shall negotiate an equitable adjustment in the affected provisions of this Agreement. The validity and enforceability of the remaining independent provisions shall not be affected.

7.14 Effective Date. This Agreement shall become effective upon execution by the Parties and shall continue in effect until completion of all Relocation work by FPL unless otherwise provided herein or earlier termination in accordance with this Agreement.

7.15 Complete Agreement. This Agreement shall be signed by the authorized representatives of both Parties and constitutes the final written expression of all the terms of the agreement between the Parties and is a complete and exclusive statement of those terms. Any and all prior or contemporaneous course of dealing, representations, promises, warranties or statements by the Parties or their agents, employees, or representatives that differ in any way from the terms of this written Agreement shall be given no force or effect.

IN WITNESS WHEREOF, the Parties have executed this Relocation Agreement, to be effective as of the date first above written.

NOTWITHSTANDING THE FOREGOING THE PARTIES HAVE ENTERED INTO AN ORDER OF TAKING DATED _____.

APPLICANT:	FLORIDA POWER & LIGHT COMPANY:
_____	_____
_____	_____
By: _____	By: _____
Title: _____	Title: _____
Date: _____	Date: _____

Attest:

_____ (Seal)
Title

Skypass Project
FPL Riviera Plant Gate Relocation
Facilities Relocation Agreement
Attachment "C"
Estimated Cost

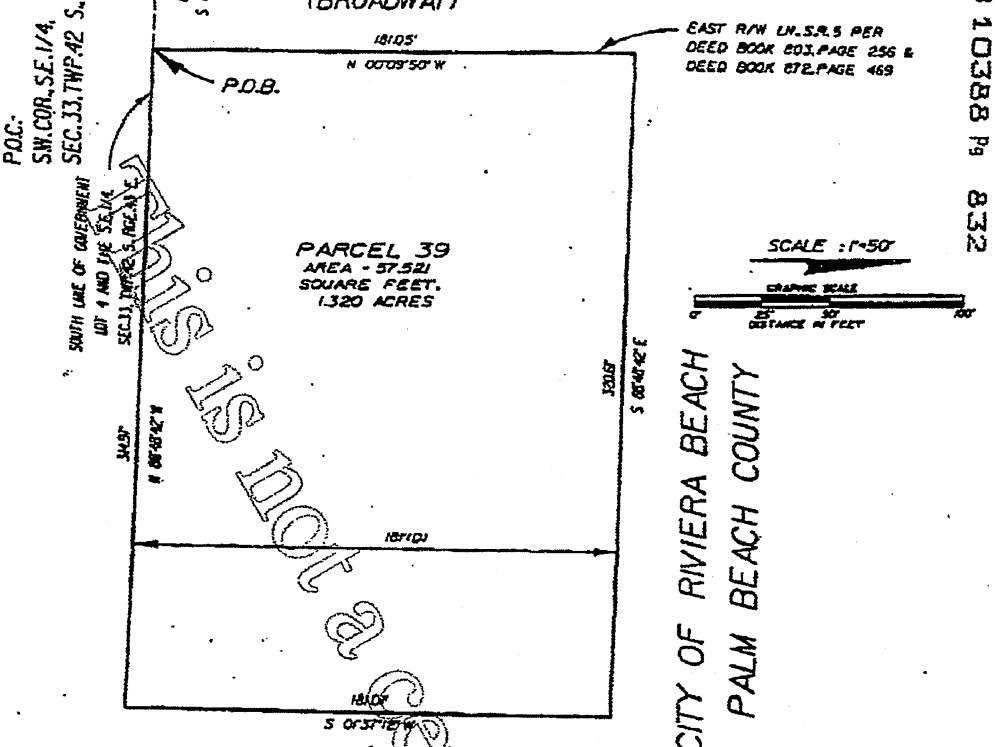
Activity	Estimated Amount
A/E Services	$ 20,000
Relocate Monitoring Well	$ 1,500
Remove/Reinstall Fencing	$ 18,000
Remove/Replace/Reinstall Fence Controls	$ 65,000
Install Fuel Oil Pipe Casing	$ 30,000
Abandon/Relocate Irrigation Well	$ 22,500
FPL Direct Labor	$ 5,000
Contingency	$ 8,000
Total	**$170,000**

Note: This estimate does not include distribution and transmission costs.

EXHIBIT -"A"
Pg 1 of 4

SKETCH O ACCOMPANY A LEGAL DESCRIPTION

SEE SHEET 2 OF 2 FOR LEGAL DESCRIPTION



CITY OF RIVIERA BEACH
PALM BEACH COUNTY

ORB 10388 Pg 832

NOTES:
1. -BEARINGS SHOWN HEREON ARE REFERENCED TO THE SOUTH LINE OF SOUTHEAST ONE-QUARTER, SECTION 33, TOWNSHIP 42 SOUTH, RANGE 43 EAST, AS BEING SOUTH 88°48'42" EAST.
2. -THIS SKETCH EXISTS SOLELY FOR THE PURPOSE OF ILLUSTRATING THE LEGAL DESCRIPTION TO WHICH IT IS ATTACHED.
3. -NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND RAISED SEAL OF A FLORIDA LICENCED SURVEYOR AND MAPPER.
4. -THIS IS NOT A "SURVEY".

CERTIFICATE:
I HEREBY CERTIFY THAT THIS SKETCH TO ACCOMPANY LEGAL DESCRIPTION WAS MADE UNDER MY RESPONSIBLE CHARGE AND MEETS THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

JOSEPH L. EDDAR
PROFESSIONAL SURVEYOR & MAPPER NO. 4087
DATE:

LEGEND:
COR. -CORNER
S.R. -STATE ROAD
R/W -RIGHT-OF-WAY
BNDY. -BOUNDARY
P.O.C. -POINT OF COMMENCEMENT
P.O.B. -POINT OF BEGINNING
LN. -LINE
(D) -DEED DATA
SEC. - SECTION
TWP. - TOWNSHIP
RGE. - RANGE
L.B. -LICENCED BUSINESS

PARCEL 39

KIMLEY-HORN and ASSOCIATES, INC.
WEST PALM BEACH, FLORIDA 33407

EXHIBIT A Pg. 2 of 4

SKETCH TO ACCOMPANY A LEGAL DESCRIPTION

SEE SHEET 1 OF 2 FOR SKETCH

ORB 10388 Pg. 833

LEGAL DESCRIPTION (PARCEL 39)

A PORTION OF THE SOUTH 181 FEET (MEASURED AT RIGHT ANGLES BETWEEN PARALLEL LINES) OF GOVERNMENT LOT 4, SECTION 33, TOWNSHIP 42 SOUTH, RANGE 43 EAST, PALM BEACH COUNTY, FLORIDA, LYING EASTERLY OF THE RIGHT OF WAY OF STATE ROAD NO. 4 (ALSO KNOWN AS STATE ROAD NO. 5) (U.S. HIGHWAY NO. ONE), IN THE CITY OF RIVIERA BEACH, PALM BEACH COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF THE SOUTHEAST ONE-QUARTER (S.E. 1/4) OF SECTION 33, TOWNSHIP 42 SOUTH, RANGE 43 EAST; THENCE ALONG THE SOUTH LINE OF SAID SOUTHEAST ONE-QUARTER (S.E. 1/4), SOUTH 88°48'42" EAST, A DISTANCE OF 1346.33 FEET TO THE POINT OF BEGINNING; THENCE ALONG THE EAST RIGHT OF WAY LINE OF STATE ROAD 5 ACCORDING TO DEED BOOK 803, PAGE 256 AND DEED BOOK 872, PAGE 469 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, NORTH 00°09'50" WEST, A DISTANCE OF 181.05 FEET; THENCE ALONG A LINE BEING 181.00 FEET NORTH OF AND PARALLEL WITH THE AFOREMENTIONED SOUTH LINE OF THE SOUTHEAST ONE-QUARTER (S.E. 1/4), SOUTH 88°48'42" EAST, A DISTANCE OF 320.81 FEET; THENCE SOUTH 00°37'18" WEST, A DISTANCE OF 181.01 FEET; THENCE ALONG THE SOUTH LINE OF SAID GOVERNMENT LOT 4 AND SAID SOUTH LINE OF THE SOUTHEAST ONE-QUARTER (S.E. 1/4), NORTH 88°48'42" WEST, A DISTANCE OF 314.57 FEET TO THE POINT OF BEGINNING.

CONTAINING 57,521 SQUARE FEET (1.320 ACRES), MORE OR LESS.

PROJECT NO. 00-0000	SHEET NO. 2 OF 2 SHEETS	PARCEL 39	DATE: JUNE 20, 2000 SCALE: N/A DRAWN BY: S.L. CHECKED BY:	REVISIONS DATE

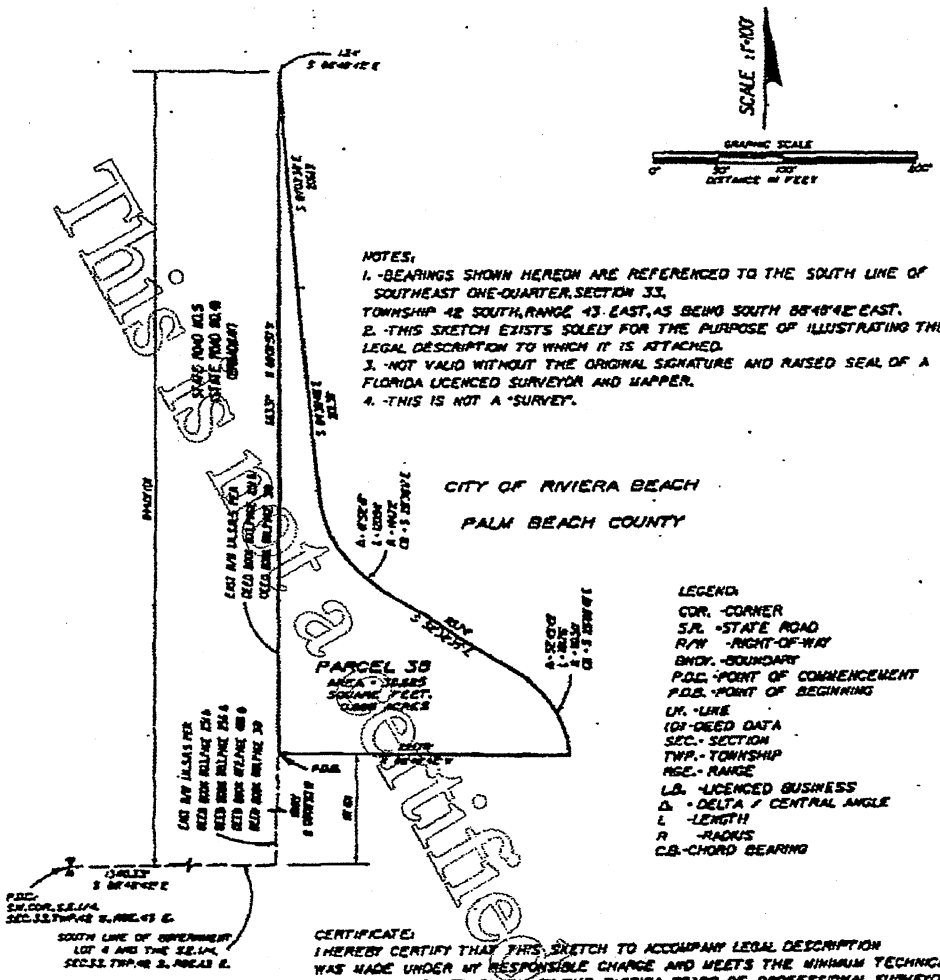
KIMLEY-HORN and ASSOCIATES, INC.
4423 CONSTITUTION DRIVE,
WEST PALM BEACH, FLORIDA 33407
PHONE: (561) 845-0665
L.B. # 516

EXHIBIT "A" pg 3 of 4

SKETCH TO ACCOMPANY A LEGAL DESCRIPTION

SEE SHEET 2 OF 2 FOR LEGAL DESCRIPTION

ORB 10388 Ps 834



NOTES:

1. -BEARINGS SHOWN HEREON ARE REFERENCED TO THE SOUTH LINE OF SOUTHEAST ONE-QUARTER, SECTION 33, TOWNSHIP 42 SOUTH, RANGE 43 EAST, AS BEING SOUTH 88°49'42" EAST.
2. -THIS SKETCH EXISTS SOLELY FOR THE PURPOSE OF ILLUSTRATING THE LEGAL DESCRIPTION TO WHICH IT IS ATTACHED.
3. -NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND RAISED SEAL OF A FLORIDA LICENCED SURVEYOR AND MAPPER.
4. -THIS IS NOT A "SURVEY".

LEGEND:

COR. -CORNER
S.R. -STATE ROAD
R/W -RIGHT-OF-WAY
BNDY. -BOUNDARY
P.O.C. -POINT OF COMMENCEMENT
P.O.B. -POINT OF BEGINNING
U.N. -UNE
(D) -DEED DATA
SEC. - SECTION
TWP. - TOWNSHIP
RGE. - RANGE
L.B. -LICENCED BUSINESS
Δ -DELTA / CENTRAL ANGLE
L -LENGTH
R -RADIUS
C.B. -CHORD BEARING

CERTIFICATE:

I HEREBY CERTIFY THAT THIS SKETCH TO ACCOMPANY LEGAL DESCRIPTION WAS MADE UNDER MY RESPONSIBLE CHARGE AND MEETS THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

JOSEPH LEDGAR
PROFESSIONAL SURVEYOR & MAPPER NO. 4037
DATE:

PARCEL 38

KIMLEY-HORN and ASSOCIATES, INC.

EXHIBIT "A" Pg 4 of 4

SKETCH TO ACCOMPANY A LEGAL DESCRIPTION

SEE SHEET 1 OF 2 FOR SKETCH

ORB 10388 Pg 835

LEGAL DESCRIPTION (PARCEL 38)

A PORTION OF THE NORTH 425 FEET OF THE SOUTH 844.19 FEET AND THE NORTH 663.19 FEET OF THE SOUTH 844.19 FEET (MEASURED AT RIGHT ANGLES BETWEEN PARALLEL LINES) OF GOVERNMENT LOT 4, SECTION 33, TOWNSHIP 42 SOUTH, RANGE 43 EAST, PALM BEACH COUNTY, FLORIDA LYING EASTERLY OF THE RIGHT OF WAY OF STATE ROAD NO. 4 (ALSO KNOWN AS STATE ROAD NO. 5) (U.S. HIGHWAY NO. ONE) IN THE CITY OF RIVIERA BEACH, PALM BEACH COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF THE SOUTHEAST ONE-QUARTER (S.E.1/4) OF SECTION 33, TOWNSHIP 42 SOUTH, RANGE 43 EAST; THENCE ALONG THE SOUTH LINE OF SAID SOUTHEAST ONE-QUARTER (S.E.1/4) SOUTH 88°48'42" EAST, A DISTANCE OF 1346.33 FEET; THENCE ALONG THE EAST RIGHT OF WAY LINE OF STATE ROAD 5 ACCORDING TO DEED BOOK 803, PAGE 256 AND DEED BOOK 803, PAGE 251 AND DEED BOOK 87E, PAGE 469 AND DEED BOOK 881, PAGE 319 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, NORTH 00°09'50" WEST, A DISTANCE OF 1810.5 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE ALONG THE EAST RIGHT OF WAY LINE OF STATE ROAD 5 ACCORDING TO DEED BOOK 803, PAGE 251 AND DEED BOOK 881, PAGE 319 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, NORTH 00°09'50" WEST, A DISTANCE OF 663.37 FEET; THENCE ALONG A LINE BEING 844.19 FEET NORTH OF AND PARALLEL WITH SAID SOUTH LINE OF THE SOUTHEAST ONE-QUARTER (S.E.1/4) SOUTH 88°48'42" EAST, A DISTANCE OF 124 FEET; THENCE SOUTH 04°03'38" EAST, A DISTANCE OF 208.13 FEET; THENCE SOUTH 04°33'48" EAST, A DISTANCE OF 201.56 FEET TO A POINT OF CURVATURE OF A CURVE CONCAVE TO THE NORTHEAST HAVING A CHORD BEARING OF SOUTH 22°35'11" EAST; THENCE SOUTHEASTERLY ALONG SAID CURVE HAVING A RADIUS OF 1447.2 FEET, THROUGH A CENTRAL ANGLE OF 41°52'41", AN ARC DISTANCE OF 1103.94 FEET TO A POINT OF TANGENCY; THENCE SOUTH 5°32'35" EAST, A DISTANCE OF 119.74 FEET TO A POINT OF CURVATURE OF A CURVE CONCAVE TO THE SOUTHWEST HAVING A CHORD BEARING OF SOUTH 25°09'40" EAST; THENCE SOUTHEASTERLY ALONG SAID CURVE HAVING A RADIUS OF 1050 FEET, THROUGH A CENTRAL ANGLE OF 52°45'42", AN ARC DISTANCE OF 1013.6 FEET TO A POINT OF TERMINUS; THENCE ALONG A LINE BEING 1810.0 NORTH OF AND PARALLEL WITH THE SOUTH LINE OF SAID SOUTHEAST ONE-QUARTER (S.E.1/4) NORTH 88°48'42" WEST, A DISTANCE OF 28.73 FEET TO THE POINT OF BEGINNING.

CONTAINING 38,885 SQUARE FEET (0.893 ACRES) MORE OR LESS.

DRAWN BY: DWB	PARCEL 38				KIMLEY-HORN and ASSOCIATES, INC.
SHEET 2 OF 2					WEST PALM BEACH, FLORIDA
					PHONE: (561) 515-2000
					L.B. # 696

SERVICE LIST

Thomas J. Baird, Rsquire
Thomas J. Baird, P.A.
11891 U.S. Highway One
Sjuite 201
North Palm Beach, Florida 33408
Attorney for Port of Palm Beach

PARCEL 8:
Ernest A. Cox, Esquire
Gunster, Yoakley, Vales-Fauli & Stewart, P.A.
777 South Flagler Drive
Suite 500 East
West Palm Beach, Florida 33401-6194
Attorneys for Birdsell, Inc.

PARCELS 8, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 29-A, 30, 32, 34, 35, 38-A, 38-B and 39:
Brian T. Hanlon, Esquire
Office of the Tax Collector
P.O. Box 3715
West Palm Beach, Florida 33402-3715
Attorney for John K. Clark, Palm Beach County Tax Collector

PARCEL 13:
Robert A. Ware, Esquire
English, McCaughan & O'Bryan, P.A.
P.O. Box 14098
Fort Lauderdale, Florida 33402-3715
Attorney for South Atlantic Gas, Inc., a Florida corporation, Anam Hague and Muhammad Hasan

William H. Sned, Jr., Esquire
Brackett, Sned, Welch, D'Angio, Tucker & Farach
P.O. Box 3746
West Palm Beach, Florida 33402
Attorney for Fidelity Federal Savings Bank of Florida

William C. McIntyre, Esquire
3561 S.W. Corporate Parkway
Palm City, Florida 34990
Attorney for Como Oil Company of Florida

Joseph L. Ackerman, Jr., Esquire
Boose, Casey, Ciklin, Lubitz, Martens, McBane & O'Connell
P.O. Box 4626
West Palm Beach, Florida 33402-4626
Attorneys for National Gas Distributors, Inc.

PARCEL 14:
Sidney A. Stubbs, Jr., Esquire
Jones, Foster, Johnston & Stubbs, P.A.
505 S. Flagler Drive, Suite 1100
West Palm Beach, Florida 33402-3475
Attorney for Charles R. Brown

Richard N. Milian, Esquire
Broad and Cassel
P.O. Box 4961
Oralndo, Florida 32802
Attorney for Barnett Bank

PARCEL 15:
Fred Dahlmeier, Esquire
631 U.S. Highway One
Norht Palm Beach, Florida 33408
Attorney for Robert Cromwell

Awnings Plus
c/o Manuel Frazao
856 Avenue "E"
Riviera Beach, Florida 33404

Kim's Day Care & Wholesale Restaurant Supply
856 Avenue "E"
Riviera Beach, Florida 33404

PARCELS 15, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 29-A and 30:
BESSEMER PROPERTIES, INCORPORATED
a Delaware corporation authorized ot do business in Florida
3228 Southwest Martin Downs Boulevard
Suite 201
Palm City, Florida 34990
Attention: John Baker

PARCEL 16:
Brian Patchen, Esquire
Earle & Patchen
1000 Brickell Avenue, Suite 1112
Miami, Florida 33131
Attorney for Dana J. Elmore and Savasort, Inc.

Roger V. Goodin, as Trustee of the
Roger V. Goodin Revocable Trust dated June 27, 1991
519 Prestwick Circle
Palm Beach Gardens, Florida 33418

PARCEL IV:
James M. Spoonhour, Esquire
Lowden, Drosdick, Doster, Kantor & Reed
P.O. Box 2809
Orlando, Florida 32802
Attorney for CNL Income Fund XIV, Ltd.

SunTrust Bank, South Florida, N.A.
501 East Las Olas Boulevard
Fort Lauderdale, Florida 33301

Ernest A. Cox, Esquire
Gunster, Yoakley, Valdes-Fauli & Stewart, P.A.
777 South Flagler Drive, Suite 500 East
West Palm Beach, Florida 33401-6194
Attorney for Checkers Drive-In Restaurants, Inc. and
CKE Restaurants, Inc.

PARCELS 18 and 20:
Sidney A. Stubbs, Jr., Esquire
Jones, Foster, Johnston & Stubbs, P.A.
505 S. Flagler Drive, Suite 1100
West Palm Beach, Florida 33402-3475
Attorney for Harry L. Nagel and Marie D. Nagel, his wife

PARCEL 19:
Paul R. Golis, Esquire
4100 RCA Boulevard, Suite 100
Palm Beach Gardens, Florida 33410
Attorney for Edward W. Hendricks and Patricia D. Hendricks, his wife
and Cale of Fort Myers, Inc., a Florida corporaiton d/b/a Kirby Auto Supply

Angelo Pardo, Esquire
Bosso, Bosso & Pardo, P.A.
2428 Broadway
Riviera Beach, Florida 33404
Attorney for The Marguerite L. White Salmon Revocable Trust dated June 5, 1985

PARCELS 21, 22, 24, 25, 26 and 30:
Sidney A. Stubbs, Jr., Esquire
Jones, Foster, Johnston & Stubbs, P.A.
505 S. Flagler Drive, Suite 1100
West Palm Beach, Florida 33402-3475
Attorney for Kenneth L. Kellar, as Trustee and individually, Exports, Inc , d/b/a Palm Automotive Exports

PARCELS 26, 32 and 38-A:
City of Riviera Beach
600 West Blue Heron Boulevard
Riviera Beach, Florida 33404

PARCEL 23:
Brian R. Brattebo, Esquire
Steel Hector & Davis, LLP
777 South Flagler Drive, Suite 1900
West Palm Beach, Florida 33401
Attorney for Tony Accetta and Son, Inc.

PARCELS 27, 29 and 29-A:
Andrew Fulton, IV, Esquire
Cohen, Chernay, Norris, Weinberger & Harris
712 U.S. Highway One, 4th Floor
North Palm Beach, Florida 33408
Attorney for Manhar Z. Patel and Usha M. Patel, his wife

Greater Delaware Valley Savings Bank
153 Saxer Avenue
Springfield, Pennsylvania 19064

PARCEL 28:
Gerald Ross and Anna Mae Ross, his wife
3655 Battersea Road
Miami, Florida 33133-6804

Ross Automotive
c/o C.A.R. III, Inc., a Florida corporation
949 Broadway
Riviera Beach, Florida 33410
Attention: Clarie E. Ross, Registered Agent

PARCEL 32:
Paul R. Golis, Esquire
4100 RCA Boulevard, Suite 100
Palm Beach Gardens, Florida 33410

Chase Manhattan Bank
c/o Marcus Gustafson, Corp. Trust Dept.
450 West 33rd Street, 15th Floor
New York, New York 10001

Ted E. Bullard
69 West 10th Street
Riviera Beach, Florida 33404

PARCEL 34:
Sidney A. Stubbs, Jr., Esquire
Jones, Foster, Johnston & Stubbs, P.A.
505 So. Flagler Drive, Suite 1100
West Palm Beach, Florida 33402-3475
Atotrney for American Property Maintenance, Inc.

Port Printing Co., a Florida corporation
1003 Broadway
Riviera Beach, Florida 33404
Attention: Lawrence Garvey, Registered Agent

Entertainment Support, Inc., a Florida corporation
905 Lake Shore Drive, #305
Lake Park, Florida 33403
Attention: Alan C. Winters, Registered Agent

Town of Lake Park
535 Park Avenue
Lake Park, Florida 33403

PARCELS 35:
James D. Ryan, Esquire
11891 U.S. Highway One
Suite 201
North Palm Beach, Florida 33408
Attorney for Diosdado J. Broche and JB Auto Brokers

John N. Buso, Esquire
1645 Palm Beach Lakes Blvd.
Suite 500
West Palm Beach, Florida 33401
Co-Counsel for Diosdado J. Broche

Richard N. Milian, Esquire
Broad and Cassel
P.O. Box 4961
Orlando, Florida 32802
Attorney for Barnett Bank

WPB/125510-1

83 077002

1983 APR 28 PM 2:30

B3930 P1596

Page #1 of 3
F.P. & L. - S.B.T., Easement
Riviera Beach Generating Plant
October 7, 1982 RFS/mg

FORM 8416
APR. 1969

RIGHT-OF-WAY EASEMENT

In consideration of the sum of money hereinafter set out and other good and valuable consideration, the adequacy and receipt of which is hereby acknowledged from the Southern Bell Telephone and Telegraph Company, the undersigned, owner(s) of the premises described below, do hereby grant to the Southern Bell Telephone and Telegraph Company its licensees, agents, successers, assigns, and allied and associated companies, a right of way easement to construct, operate, maintain, add or remove such lines or systems of communications or related services as the grantee may require, consisting of:

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

(3) conduits, manholes, markers, underground cables and wires;

(4) and other amplifiers, boxes, appurtenances or devices

upon over and under a strip of land 5 feet wide across the following lands in Plm. Bch. County, State of Fla. generally described as follows:

- See Page #3 of 3 -

and, to the fullest extent the undersigned has the power to grant, if at all, over, along and under the roads, streets or highways adjoining or through said property.

The following rights are also granted: to allow any other person or company to attach wires or lay cable or conduit within the right of way for communications or electric power transmission or distribution; ingress and egress to said premises at all times; to clear the land and keep it cleared of all trees, undergrowth or other obstructions within the easement area; to trim and cut and keep trimmed and cut all dead, weak, leaning or dangerous trees or limbs outside of the easement area which might interfere with or fall upon the lines or systems of communications or power transmission or distribution.

The receipt of ______ and ______ /100 Dollars ($______) is hereby acknowledged by the undersigned.

17.60

To have and to hold the above granted easement unto Southern Bell Telephone and Telegraph Company, its successors and assigns forever.

IN WITNESS WHEREOF, the undersigned ha S ______ XXXXXXXXXXXXXXXXXXXXXXXX caused this instrument to be executed by its duly authorized agent

on March 11, 1983.

Signed, sealed and delivered
in the presence of:

H.D. Nielsen
Witness

Rita W. Costantino

By: ______ L.S.

Vice President L.S.

Florida Power & Light
Name of Corporation

Attest:

Aslid Pfeiffer
Corporate Officer
SECRETARY

By: ______
Title: ______

This instrument was prepared by:

Southern Bell Tel. & Tel.
P. O. Box 3227
West Palm Beach, Fl. 33402
Roberta McNeil /Asst Sec

RECORDER'S MEMO: Legibility of Writing, Typing or Printing unsatisfactory in this document when received.

File No. _____

Name and Post Office Address of Grantor: Florida Power & Light

Toll Line or Exchange Line tributary to: Riviera Beach Central Office (Name) (Exchange)

The Property is bounded where Grantor enters and leaves this property by the property of:

Fla. Dept. of Trans. on the North

and Fla. Dept. of Trans. on the South

Authority P-65823 Classification R4C

Area Southeast

Approved _____

Title for District Manager

NORTH

See Sketch Page #3 of 3

STATE OF FLORIDA AND COUNTY OF DADE

The foregoing instrument was acknowledged before me this 11TH day of March, 19 83

by W. H. Brunetti and Astrid Pfeiffer

respectively the Vice President and Secretary of Florida Power & Light Company, a Florida corporation, on behalf of the corporation.

NOTARY PUBLIC STATE OF FLORIDA AT LARGE
MY COMMISSION EXPIRES JUNE 2 1985
BONDED THRU GENERAL INS. UNDERWRITERS

Denise C. Romero
NOTARY PUBLIC, STATE OF FLORIDA AT LARGE
MY COMMISSION EXPIRES:

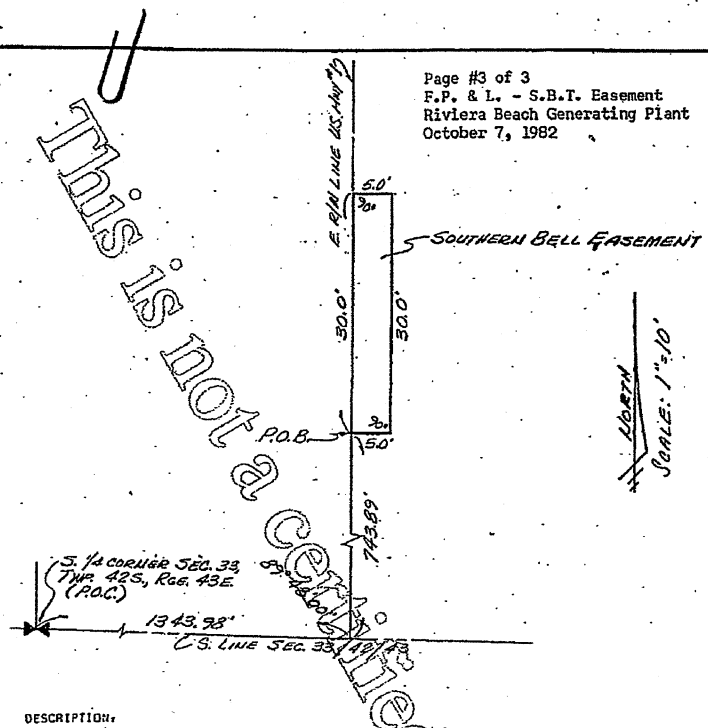
STATE OF FLORIDA AND COUNTY OF

The foregoing instrument was acknowledged before me this day of , 19,

by and

NOTARY PUBLIC, STATE OF FLORIDA AT LARGE
MY COMMISSION EXPIRES:

Page #3 of 3
F.P. & L. - S.B.T. Easement
Riviera Beach Generating Plant
October 7, 1982



DESCRIPTION:

A PARCEL OF LAND IN GOVERNMENT LOT 4, SECTION 33, TOWNSHIP 42 SOUTH, RANGE 43 EAST, PALM BEACH COUNTY, FLORIDA. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTH QUARTER CORNER OF SAID SECTION 33; THENCE EASTERLY ALONG THE SOUTH LINE OF SAID SECTION 33, A DISTANCE OF 1343.98 FEET TO THE INTERSECTION OF THE SAID SOUTH LINE OF SECTION 33 AND THE EAST RIGHT OF WAY LINE OF U.S. NO. 1 (STATE ROAD 5) AS LAID OUT AND IN USE; THENCE MAKING AN ANGLE OF 89° 48' 00" FEET FROM THE LAST DESCRIBED LINE THROUGH THE NORTHWEST TO THE NORTH, A DISTANCE OF 743.89 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTHERLY ALONG THE EAST RIGHT OF WAY LINE OF SAID U.S. NO. 1, A DISTANCE OF 30.0 FEET; THENCE MAKING AN ANGLE OF 90° FROM THE LAST DESCRIBED LINE THROUGH THE SOUTHEAST TO THE EAST, A DISTANCE OF 5.0 FEET; THENCE MAKING AN ANGLE OF 90° FROM THE LAST DESCRIBED LINE THROUGH THE SOUTHWEST TO THE SOUTH, A DISTANCE OF 30.0 FEET (SAID LINE BEING 5.0 FEET EAST OF AND PARALLEL WITH THE EAST RIGHT OF WAY LINE OF SAID U.S. NO. 1); THENCE MAKING AN ANGLE OF 90° WITH THE LAST DESCRIBED LINE THROUGH THE NORTHWEST TO THE WEST, A DISTANCE OF 5.0 FEET TO THE POINT OF BEGINNING.

CONTAINING 150 SQUARE FEET, MORE OR LESS.

REFERENCES: STATE OF FLORIDA STATE ROAD DEPARTMENT, RIGHT OF WAY MAP (REVISED RIGHT OF WAY MAP FROM STATION 10+00.23 TO STATION 36+69.32 STATE ROAD NO. 5, PALM BEACH COUNTY, FLORIDA, SHEET 1 OF 3.

THIS IS NOT A SURVEY!

NO SEARCH OF THE PUBLIC RECORDS HAS BEEN MADE BY THIS OFFICE.
THIS PLAT IS NOT VALID UNLESS SEALED WITH AN EMBOSSED SURVEYOR'S SEAL.

I HEREBY CERTIFY THAT THE SKETCH SHOWN HEREON IS A GRAPHIC REPRESENTATION OF THE ACCOMPANYING DESCRIPTION AND IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

PROFESSIONAL LAND SURVEYOR FLORIDA CERTIFICATE NUMBER 3971

WILLIAM G. WALLACE, INC.
CONSULTING ENGINEERS, LAND PLANNERS & SURVEYORS
821 NORTHLAKE BLVD., NO. PALM BEACH, FL. 33408 • 305/845-4333
3941 SW MAPP RD. PALM CITY PLAZA, PALM CITY, FL. 33480 • 305/283-0308

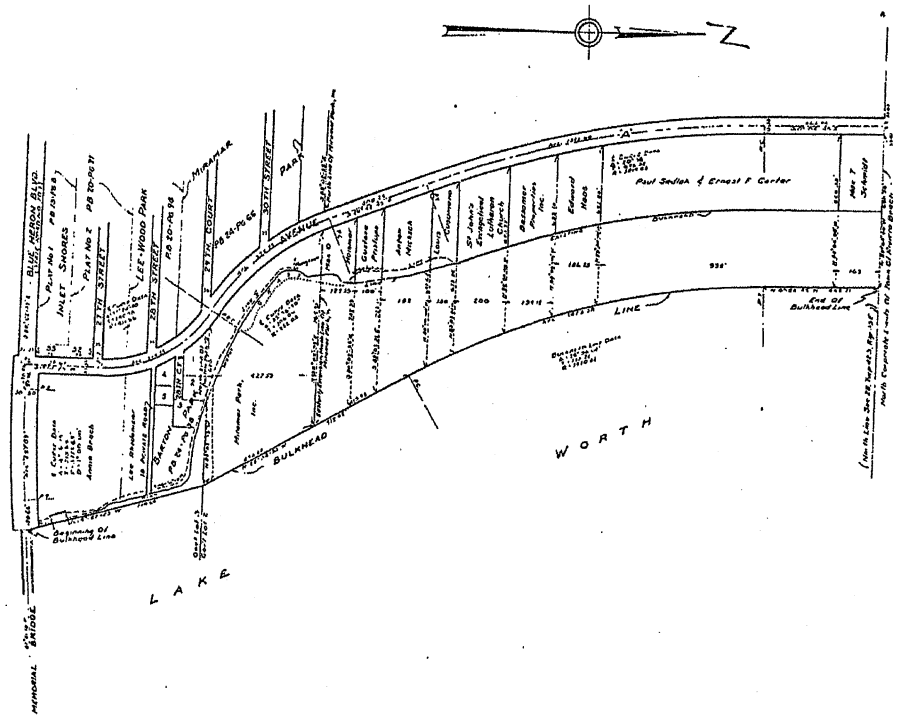
FIELD: K.H.	JOB NO. 82-0771	F.B. 581	PG. 55
OFFICE: S.L.	DATE: 24 SEPT. 1982	DWG. NO.: 82-771	
CKD.:	REF.:	SHEET	OF

27-142

PLAT OF
BULKHEAD LINE
WEST SIDE OF LAKE WORTH
RIVIERA BEACH, FLORIDA

TO ACCOMPANY RIVIERA BEACH ORDINANCE NO. 432

SEPTEMBER 1957 - SCALE 1" = 200'



STATE OF FLORIDA
COUNTY OF PALM BEACH } ss

This Plat was filed for record at 3 - 45 P.M. this 14th day of Nov. A.D. 1957 and duly recorded in Plat Book No. 27 on page 142

ELLIS ARNOLD, Clerk Circuit Court
By [illegible] D.C.

This Plat represents the "Bulkhead line" established and approved by Ordinance No 432 of the Town of Riviera Beach, which ordinance was passed on second and final reading September 25, 1957 and became effective October 1, 1957.

TOWN OF RIVIERA BEACH, FLORIDA

By B. Fox Griffin
Mayor

ATTEST

Rose B. Gunde
Town Clerk

Approved OCTOBER 22 A.D. 1957 by the TRUSTEES of the INTERNAL IMPROVEMENT FUND of the STATE of FLORIDA as evidenced by Certificate of Approval recorded in Official Record Book 172, Page 429, on file in the office of the Clerk of the Circuit Court in and for Palm Beach County, Florida.

COUNTY OF PALM BEACH
STATE OF FLORIDA } ss

I HEREBY CERTIFY that the Location of the Bulkhead Line shown hereon is a true and correct representation, to the best of my knowledge and belief, of the bulkhead line described in Town ordinance Number 432 passed on final reading on September 25, 1957 by the Town Council of Riviera Beach, Florida, and became effective on October 1, 1957.

George S. Brockway
Registered Land Surveyor
State Of Florida Certificate No. 131

Subscribed and sworn to before me this 2nd day of October, 1957

John J. Shaver
Notary Public

My Commission expires August 2, 1961

BROCKWAY, WEBER & BROCKWAY
ENGINEERS
WEST PALM BEACH, FLORIDA

BULKHEAD LINE
RIVIERA BEACH, FLORIDA

FIELD L.H.P.	SCALE 1" = 200'	Dwg. No.
OFFICE G.S.B.		BF-1940
DR. H. G.A.L.	DATE SEPT 30 1957	

PLAT OF

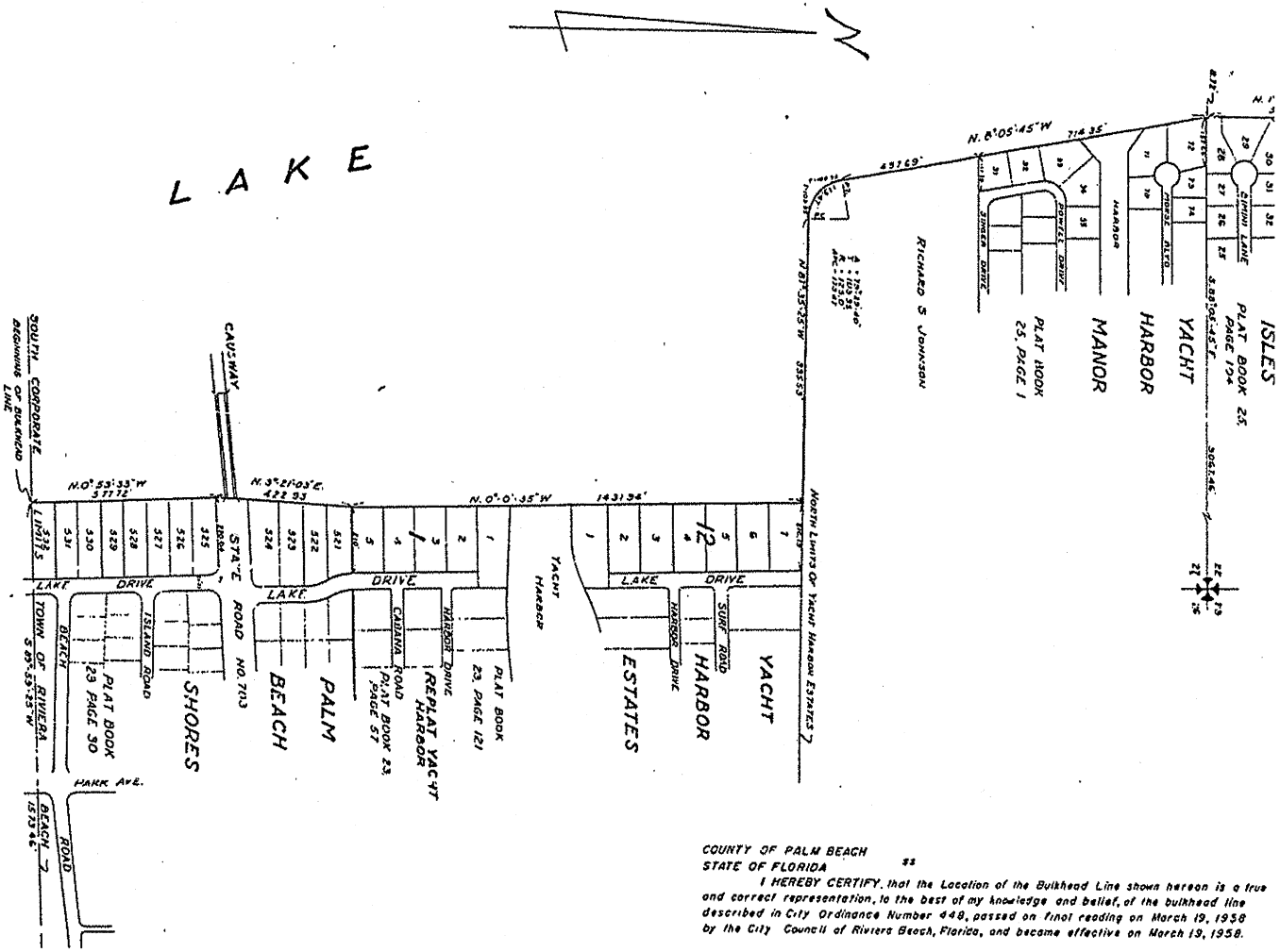
BULKHEAD LINE

EAST SIDE OF LAKE WORTH

RIVIERA BEACH, FLORIDA

TO ACCOMPANY RIVIERA BEACH ORDINANCE NO. 448

MARCH 1958 SCALE 1" = 200'



COUNTY OF PALM BEACH
STATE OF FLORIDA ss

I HEREBY CERTIFY, that the Location of the Bulkhead Line shown hereon is a true and correct representation, to the best of my knowledge and belief, of the bulkhead line described in City Ordinance Number 448, passed on final reading on March 19, 1958 by the City Council of Riviera Beach, Florida, and became effective on March 19, 1958.

STORMWATER MANAGEMENT PLAN
AND CERTIFIED CONSTRUCTION DRAINAGE PLAN

Stormwater Management Plan

Engineering Calculations & Supplementary Documents
Supporting a Surface Water Management System Serving

Riviera Beach Energy Center
Riviera Beach, Florida

Prepared for the benefit of

FPL®

Prepared By:

Boyle Engineering Corporation
3550 SW Corporate Parkway
Palm City, Florida 34990
(772) 286-3883

January 2009

ENGINEER OF RECORD
PATRICK J. LACONTE, P.E.
BOYLE ENGINEERING CORP. NO. 2005
FLORIDA REGISTRATION NO. 41070
3550 S.W. CORPORATE PARKWAY
PALM CITY, FLORIDA 34990

1-30-09

SIGNATURE / DATE

Riviera Beach Energy Center – Stormwater Management Plan

Table of Contents

DESCRIPTION	PAGE
Table of Contents	ii
List of Enclosed Exhibits	ii
1 – Project Description	1
2 – General Drainage Design Criteria	2
3 – Existing Conditions	3
4 – Proposed Conditions	5

List of Enclosed Exhibits

DESCRIPTION	
Exhibit	
A	Aerial Map
B	Rainfall Maps
C	Soil Survey
D	FEMA Flood Insurance Rate Map Panel
E.1	Pre-Development Basin Map
E.2	Pre-Development Land Use & Stage Storage Calculations
E.3	Pre-Development AdICPR Model Nodal Diagram and Input Report
E.4	Pre-Development Model Output • Basin Summary • Node Max Report • Link Max Report
F.1	Post-Development Basin Map
F.2	Post-Development Land Use & Stage Storage Calculations
F.3	Post-Development Water Quality Calculations
F.4	Post-Development AdICPR Model Nodal Diagram and Input Report
F.5	Post-Development AdICPR Model Output • Basin Summary • Node Max Report • Link Max Report

PROJECT DESCRIPTION AND DRAINAGE NARRATIVE

1 – PROJECT DESCRIPTION

The Florida Power & Light Company (FPL) is proposing a conversion of their existing Riviera Plant on a 33.3-acre property located within the Cities of Riviera Beach and West Palm Beach, FL. The plant is located within Riviera Beach, directly south of the Port of Palm Beach and adjacent to Lake Worth Lagoon on Broadway Avenue (US-1) in Section 33, Township 42S, Range 43 E of Palm Beach County, Florida. Southern portions of the FPL property, contiguous to the plant, are located in the City of West Palm Beach. A manatee viewing area will be constructed on a portion of this area. This report presents the proposed Stormwater Management System (SWMS) design and all applicable supporting information. **Figure 1.1** below provides a location map of the site and surrounding vicinity, while an aerial map is provided as **Exhibit A**.

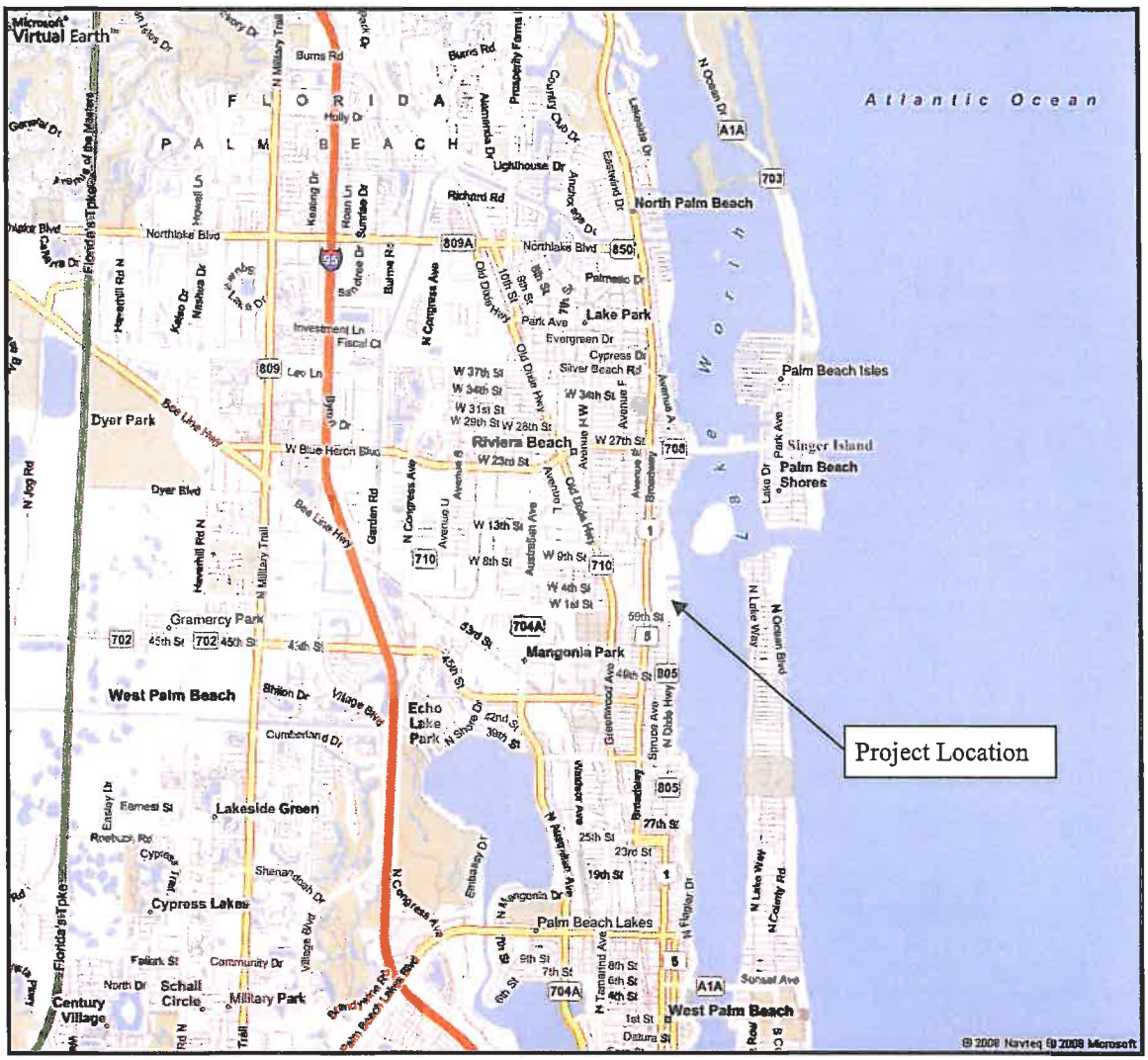


Figure 1.1 – Location Map

2 – General Drainage Design Criteria

2.1 – Applicable Regulations:

The SWMS is governed by the Florida Department of Environmental Protection (FDEP) regulations for Stormwater Discharge (Chapter 62-25, F.A.C.) and Environmental Resource Permitting (ERP) (Chapter 62-330, F.A.C.). According to this regulation, the rules of the local water management district are adopted by reference for FDEP ERP requirements. Since this project is located within the boundaries of the South Florida Water Management District (SFWMD), the SWMS for the project has been designed according to the criteria set forth in the SFWMD ERP Information Manual (Volume IV). Additionally, this project is designed to meet the requirements set forth by the City of Riviera Beach, FL and the City of West Palm Beach, FL as applicable.

2.2 – SWMS Modeling:

An Advanced Inter-Connected Pond Routing (AdICPR) model has been developed and implemented as part of the engineering analysis for the proposed project. AdICPR is commercially available software that allows modeling of multiple basins simultaneously. It is widely accepted by local, state, and federal agencies as appropriate for the engineering analysis of these types of projects.

2.3 – Rainfall Depth, Duration and Distribution:

The design rainfall depths for the project area have been obtained from SFWMD and are summarized in **Table 2.1** below. Rainfall maps are included in **Exhibit B** of the report. The SCS Type II – Florida Modified Cumulative Rainfall Distribution (FLMOD) has been used to develop the 24-hour storm event hydrograph. The SFWMD 3-day rainfall distribution has been used to develop the 72-hour storm event hydrograph. Since the site is within an urbanized area, the Santa Barbara Unit Hydrograph was utilized for the analysis.

Table 2.1 – Design Rainfall Depths

Storm Event	Design Purpose	Rainfall Depth (in)
10-year / 24-hour	Minimum Road Crown Elevation	9.50
25-year / 72-hour	Allowable Discharge / Minimum Perimeter Berm Elevation	13.50
100-year / 72-hour	Minimum Finish Floor Elevation	16.50

2.4 – Soil Storage:

The moisture storage capacity of the soil profile has been estimated according to the depth to water table criteria described in Section E of the Surface Water Design Aids section of Volume IV. The majority of the site is classified as an urban soil type. However, in the surrounding areas, the soil consists of the well drained St. Lucie series, and it has been assumed that these are the underlying soils present at this site. This, along with the location of the project adjacent to Lake Worth Lagoon, the Coastal soil type has been used in the soil storage calculations. A depth to water table of at least 4 feet throughout the site has been estimated based on existing site grades in relation to the Mean High Water (MHW) elevation of Lake Worth Lagoon (0.16-ft NAVD-88) obtained from FDEP LABINS database.

The average soil storage for each basin is an area-weighted average where soil storage is present in the pervious areas and is zero within the impervious areas. The soil storage in each basin has also been reduced by 25% to account for the compaction of soils on a developed site. Land use and soils storage calculations for both the existing and proposed development are available in **Exhibits E.2 and F.2**, respectively.

2.5 – Time of Concentration:

Both the existing and proposed site conditions are power plants which have a large percentage of impervious area. Runoff is able to travel to its collection point in a short duration. Therefore, the time of concentration for each basin has been set at 10 minutes.

2.6 – TAILWATER:

The entire site has historically discharged to Lake Worth Lagoon. The MHW elevation of 0.16-ft (NAVD-88) has been utilized as the downstream tailwater boundary condition for the existing and proposed surface water modeling.

2.7 – ALLOWABLE DISCHARGE RATE:

The pre-development discharge rate determined from the model analysis for the 25-year / 72-hour rainfall event has been used as the allowable discharge rate for the project.

2.8 – FEMA FLOOD ELEVATION:

The flood elevation for the east edge of the plant site ranges from 7.0 to 8.0-ft NGVD (5.5-ft to 6.5-ft NAVD) as provided on FEMA Flood Insurance Rate Map Panel 1251420003D for Riviera Beach. The flood elevation for east edge of the manatee viewing area is 7.0-ft NGVD (5.5-ft NAVD) as provided on FEMA Flood Insurance Rate Map Panel 1202290015B for West Palm Beach. The FEMA flood elevation for the site has been compared against the 100-year / 72-hour flood elevations to determine building finished floor elevations for the project. The FEMA Map Panels are provided in **Exhibit D**.

2.9 – WATER QUALITY

The proposed SWMS provides water quality treatment for the project area which is governed by SFWMD criteria requiring the greater of one-inch over the project area or 2.5 inches over the percent impervious (not including roof area). Since the project is an industrial site, a dry pretreatment volume of one half-inch is also required.

3 – EXISTING CONDITIONS

3.1 – SITE DESCRIPTION:

The overall property is 33.3 acres. The northern portion containing the power plant operations encompasses approximately 27 acres and is located in the City of Riviera Beach. The southern portion of property covers 6.3 acres and is located within West Palm Beach.

The Riviera Beach portion of property contains the operating power plant and the supporting facilitates. These facilities include a tank farm, support buildings, roadways, parking areas, and storage areas. Since this is an existing industrial facility, there is a large amount of impervious area resulting in a large pre-development discharge rate. The site generally slopes west to east towards Lake Worth Lagoon. The change in elevation from the west to east end of the site averages 6-8 feet.

While the plant site is ±27 acres, the overall drainage area is 25.5 acres. Approximately 1 acre of the project on the western boundary of site slopes towards the west and the US-1 drainage system. This area includes existing entrance roads and the berm slopes for the tank containment areas. Approximately 0.5 acres at the eastern boundary with Lake Worth Lagoon do not drain into the site. The existing site has been previously split into four separate areas, by FPL, to describe the path of discharge off-site into Lake Worth Lagoon. These same areas have been used to describe the existing conditions of the site and are described in greater detail below. A pre-development basin map has been provided as **Exhibit E.1**.

The FPL property in West Palm Beach is split into two areas. The western section is 1.9 acres and is a former city block that has been converted into a landscape buffer for local residents. No improvements are proposed for this area. The remaining area, 4.4 acres, is located adjacent to Lake Worth Lagoon and exists in an unimproved condition. Improvements are proposed for portions of this area.

3.2 – BASIN SUMMARY:

3.2.1 – AREA 1 (8.55 ACRES)

This basin is composed of two areas (Area 1A & Area 1B), which together have a common method of drainage. The operating power plant is described as Area 1A and is located in the center of the project site. This area is completely surrounded by a concrete wall. All waste ash water, stormwater and wastewater occurring within this area is collected in drainage sumps and is pumped to the tank farm which is located within Area 1B.

The tank farm area or Area 1B contains four large fuel oil tanks, two lined solids settling basins (SSB), and three evaporation / percolation ponds (EP) and is located near the western boundary of the site. Water pumped from Area 1A enters the SSB where it is treated to remove dissolved metals. After treatment in the SSB, the water is then pumped to the EP where it evaporates and percolates. Area 1B is surrounded by a berm and a wall, while manually operated drainage valves are maintained in a closed position. This prevents any water from reaching the navigable waters of Lake Worth Lagoon prior to treatment. In addition, water discharged from this area must be tested prior to any release. There is no surface water discharge from Area 1 into Lake Worth Lagoon during storm events. Therefore, this area has not been included within the modeling for the existing conditions to determine an allowable discharge rate.

3.2.2 – AREA 2 / 3 (12.86 ACRES)

Area 2 encompasses 7.92 acres and includes component equipment, a switchyard, service and storage buildings, and plant paved access areas. Area 2 is located central to the site and borders Lake Worth Lagoon on the east, the Port of Palm Beach on the North, Area 1B on the west, Area 4 on the south, and surrounds Area 1A. Stormwater from this area drains to inlets located throughout the site that discharge directly to Lake Worth Lagoon through 5 separate outfall pipes (Outfalls 2, 3, 5, 6, and 7 as shown on **Exhibit E.1**). There is no surface storage within Area 2 as runoff drains straight to inlets without any attenuation or treatment. Area 2 slopes from west to east towards Lake Worth Lagoon and its elevation ranges from 4.5 to 11.5-ft NAVD.

Area 3 encompasses 4.94 acres and includes employee parking lots, entrance driveways, waterfront grass areas, the employees pavilion, the children's playground, and a boat launching ramp. Similar to Area 2, stormwater from Area 3 drains to inlets located throughout the site and discharges directly into Lake Worth Lagoon without any surface attenuation or treatment. Area 3 discharges directly to Lake Worth Lagoon through four separate outfall pipes (Outfalls 1, 2, 3, and 4 as shown on **Exhibit E.1**). Area 3 slopes from west to east towards Lake Worth Lagoon and its elevation ranges from 3.5 to 11.0-ft NAVD.

Since Area 2 and Area 3 form one continuous area without any surface storage and share a series of outfall pipes, they have been modeled as one large basin covering 12.86 acres. The Area 2 / 3 Basin is modeled with seven separate outfall pipes representing the pipes shown on exhibits and as-built drawings provided by FPL. These outfall locations are shown on **Exhibit E.1**.

3.2.3 – AREA 4 (4.10 ACRES)

Area 4 is composed of a contractor parking lot, an employee parking lot, a switchyard, and an open storage-laydown area for steel fabrications, piping, and other metal, plastic, and concrete components for the plant. Area 4 is located on the southern edge of the project. Stormwater drains south into a combination of excavated ditches and concrete walled detention basins with sand and gravel bottoms. Due to the cascading nature of these drainage facilities, Area 4 has been split into three separate basins for modeling purposes (Area 4A, Area 4B, and Area 4C).

Area 4A is the western most portion of this basin and includes a large contractor parking and laydown area, a switchyard and excavated swales. Drainage from the parking lot sheet flows north to south into the swales. Elevations within the parking and laydown areas range from approximately 8.2 to 11.0-ft NAVD. The swale has a top area of 0.38 acres and its elevation ranges from 7.3 to 10.0-ft NAVD. The swales discharges into a ditch bottom inlet at its eastern end with a grate set at 7.34-ft NAVD. The stormwater then discharges to Area 4B.

Area 4B includes employees parking, open space, and one section of the concrete walled detention basin described above. Stormwater from Area 4A swale is piped directly into the walled detention basin. Drainage from the parking lot and open space sheet flows north to south into the detention basin. Elevations within the parking and open space areas range from approximately 6.4 to 8.2-ft NAVD. The detention basin is vertical walled with an area of 0.10 acres and a bottom elevation of 3.2-ft NAVD. The detention basin in Area 4B discharges east into a similar detention basin in Area 4C. The detention basin in Area 4B is controlled by a grate set at 5.02-ft NAVD.

Area 4C also includes employees parking, open space, and one section of the concrete walled detention basin described above. Stormwater from upstream areas is piped directly into the walled detention basin in Area 4C. Drainage from the parking lot and open space sheet flows north to south into the detention basin. Elevations within the parking and open space areas range from approximately 6.0 to 6.6-ft NAVD. The detention basin is vertical walled with an area of 0.06 acres and a bottom elevation of 3.0-ft NAVD. The detention basin in Area 4C discharges northeast into the existing Outfall 1 which is located within Area 2 / 3. The water elevation of the detention basin in Area 4C is controlled by a grate set at 4.49-ft NAVD.

3.2.4 – AREA SOUTH (2.90 ACRES)

Area South represents 2.90 acres of the proposed Manatee viewing area that includes a depressional area located on the south boundary of the property. The basin varies in elevation from 1.4 to 13.6-ft NAVD and mainly consists of open area. A small portion of the basin is covered by concrete fill (0.10 acres). Runoff from this basin is able to stage at low elevations within the depressional area and then sheet flow into Lake Worth Lagoon at stages above an elevation of 5.1-ft NAVD.

3.3 – SUMMARY OF RESULTS:

The areas described above have been modeled in AdICPR to determine the allowable discharge rates for the project. The criteria set forth previously in this report have been used to develop this model. A nodal diagram has been presented as part of **Exhibit E.3** to graphically describe the components of the model. The allowable discharge has been calculated from the rainfall volume of the 25-year / 72-hour storm event.

Based on the existing site conditions as described above and the design criteria utilized for the modeling, the plant site has an allowable discharge of 81.41 cfs while the Manatee viewing area has an allowable discharge of 6.01 cfs for the 25-year / 72-hour storm event. **Table 3.1** summarizes this information. Land-use, stage-storage, and stage-area calculations used to provide input for the model are provided in **Exhibit E.2**. Model input and output reports are provided in **Exhibits E.3 and E.4**, respectively.

Table 3.1 – Allowable Discharge Rate

Location	Storm Event	Rainfall Depth (in)	Allowable Discharge (cfs)
Plant Site	25-year / 72-hour	13.50	81.41
Manatee Viewing Area	25-year / 72-hour	13.50	6.01

4 – PROPOSED CONDITIONS

4.1 – PROJECT DESCRIPTION:

The conversion effort will begin with the demolition of the existing plant and supporting facilities. A new power plant with supporting infrastructure will be built in its place. As part of the proposed infrastructure, a SWMS will be constructed to provide on-site water quality (WQ) treatment and flood attenuation where none currently exists. In addition a Manatee viewing area and supporting facilities will be constructed on the southern portion of property located in West Palm Beach.

The proposed SWMS for the plant facility has been conceptualized as two basins following the natural slope of the land from west to east (West and East). A land use breakdown for the overall plant drainage area is provided in **Table 4.1** below. WQ treatment will be provided in a series of interconnected dry detention areas located throughout the project. Runoff will be treated and then discharged into Lake Worth Lagoon at a rate less than the allowable discharge (pre-development discharge). A more detailed description of each of these basins, proposed land use assumptions, and a detailed description of the proposed WQ treatment is presented below. A post-development basin map has been provided as **Exhibit F.1**.

Table 4.1 – Land Use Breakdown

Basin	Land Use Breakdown (Plant Site)				Total Area (ac)
	Pervious (ac)	Impervious (ac)	Building (ac)	Contact (ac)	
West	4.25	8.93	0.16	0.29	13.63
East	6.59	3.79	1.35	0.29	12.02
Total:	**10.84 (42%)**	**12.72 (50%)**	**1.51 (6%)**	**0.58 (2%)**	**25.65**

The manatee viewing area is located to the south of the plant site on FPL property. The site has been conceptualized as two basins with WQ treatment for the developed area being provided as dry retention. Runoff will be treated and overflow into

a depressional area located to the south of the developed area. A control structure is proposed for the depressional area to provide additional WQ for the basin in the form of dry detention, and also to control some of the previously uncontrolled discharge from this area into Lake Worth Lagoon. A more detailed description is provided below.

4.2 – BASIN SUMMARY:

4.2.1 – WEST BASIN – 13.63 ACRES

The West Basin is proposed to include two switchyards totaling ±3.7 acres, power block areas encompassing ±3.6 acres, approximately 2.5 acres of asphalt (roadway and parking), and open space. The basin varies in elevation from 9.0 to 13.0-ft NAVD. Since the power block areas are critical to the plant operation, the West Basin concrete pads and structure areas within the units have been set at 12.0-ft NAVD for modeling purposes and are based on existing topography.

Runoff from the West Basin will collect in a series of interconnected dry detention areas around the switchyard and parking areas. These detention areas vary in depth from two to three feet. The two foot deep detention area covers 0.21 acres with a bottom elevation of 7.0-ft NAVD. The three foot deep detention areas cover 0.59 acres with a bottom elevation of 6.0-ft NAVD.

A control structure for the West Basin has been conceptualized at this time as a 54-inch weir set at 8.0-ft NAVD and a 3-inch circular bleeder set at 5.0-ft NAVD. This structure has been sized to provide approximately 0.68 acre-ft of WQ volume in the West Basin. The connection to the East Basin downstream of this control structure has been conceptualized at this time as a 24-inch culvert set at 3.0-ft NAVD.

4.2.2 – EAST BASIN – 12.02 ACRES

The East Basin is proposed to include ±3.6 acres of power block areas, ±1.4 acres of asphalt (roadway and parking), oil and water storage tanks, administration and service buildings, and open space. The basin area varies in elevation from 5.0 to 11.0-ft NAVD. The power block areas within the East Basin have been set at 11.0-ft NAVD for modeling purposes and are based on existing topography.

Runoff from the East Basin will collect in a series of interconnected dry detention areas located on the eastern edge of the site near Lake Worth Lagoon. These detention areas vary in depth from two to three feet. The two foot deep detention area covers 0.13 acres with a bottom elevation of 4.0-ft NAVD. The three foot deep detention areas cover 1.59 acres with a bottom elevation of 3.0-ft NAVD.

The outfall from the East Basin and the plant site has been conceptualized at this time with three separate control structures acting in unison. The assumption is that the dry detention areas within this basin will be interconnected and will exhibit identical time-stage relationships. These structures would use existing outfall locations to discharge to Lake Worth Lagoon. The amount of stormwater outfall points will be reduced to three from seven existing outfalls. Each of the three control structures for the East Basin has a 36-inch weir set at 4.3-ft NAVD. One of the control structures would have a 3.25-inch diameter bleeder set at the basin control elevation of 2.0-ft NAVD. These structures have been sized to provide approximately 1.56 acre-ft of WQ volume. The connection downstream of each control structure has been conceptualized to use existing 21-inch culverts with an estimated elevation of 0.20-ft NAVD.

As noted before, the eastern boundary of the East Basin is located adjacent to Lake Worth Lagoon. In many places along this boundary, a seawall is present which includes the plant cooling water discharge structures. This seawall and these structures will be incorporated into the new power plant site. The maximum elevation of the seawall is approximately 6.6-ft NAVD near the proposed dry detention areas. This seawall has been conceptualized in the modeling as a broad-crested weir set at 6.6-ft NAVD.

4.2.2 – SOUTH BASINS – 3.68 ACRES TOTAL (SOUTH-A AND SOUTH-B BASINS)

The South Basins are located on the property in West Palm Beach. The combined post-development area (3.68 acres) is larger than the corresponding pre-development basin area (2.90 acres) due to proposed grading assumptions that increase the overall basin size. Portions of this property that will not be developed will remain in existing conditions. These areas are not included with the South Basins and will continue to sheet flow into Lake Worth Lagoon, or enter the West Palm Beach municipal stormwater system. A description of each basin is provided below.

4.2.2.1 – SOUTH-A BASIN – 2.50 ACRES

The South-A Basin consists of the Manatee viewing area parking lot, sidewalk, and a building. This development is located on the northern portion of the property located in West Palm Beach. Runoff from this development will be treated in a 2.5 foot deep dry retention area The 2.0-foot wide weir for this basin will be set at elevation 5.5-ft NAVD and has been sized to treat 0.19 acre-ft of WQ volume. The overflow from this retention area will be directed into a depressional area located on the southern portion of this property (South-B Basin).

4.2.2.2 – SOUTH-B BASIN – 1.18 ACRES

The South-B Basin consists of a depressional area located on the southern portion of the property in West Palm Beach. The runoff from this basin will be discharged into Lake Worth Lagoon via a proposed control structure that will provide additional WQ treatment for the site, and also control some of the previously uncontrolled discharge from this area. This structure consists of a 2.5-foot wide weir set at 4.3-ft NAVD and a 3.0-inch diameter bleeder set at 2.0-ft NAVD. The connection downstream of the control structure has been conceptualized as a 24-inch pipe discharging to Lake Worth Lagoon. Erosion control will be provided as necessary. With the addition of a control structure, the depressional area will serve as a dry detention area. A WQ volume of 0.57 acre-ft is provided where only 0.07 acre-ft is required.

4.3 – LAND USE ASSUMPTIONS

A summary of each type of land use used in the post-development calculations is shown in **Table 4.2**. Additional clarification on the land use assumptions shown in the table is also provided:

- The open space has an assumption of 20% impervious to account for potential increases in impervious area in future changes to the site plan.
- Building area is classified as impervious area for the purposes of modeling, but is taken out of the percentage impervious used to calculate water quality volumes per Volume IV.
- Contact area represents area that does not drain to the SWMS during rainfall events. The contact area is collected in a sump and treated for potential contaminants. This water is then tested before being released to the SWMS after the storm event. These contact areas have not been included in the water quality calculations and modeling.

Table 4.2 – Land Use Assumptions

Type	Description	Land Use Assumption (%)			
		Pervious	Impervious	Building	Contact
Open Space	Open area covered with either sod or gravel over natural ground	80	20	--	--
Switchyard	Switchyard areas covered with limerock	--	100	--	--
Gas Compression	Gas compression equipment and with concrete pads and open space	25	75	--	--
Other Impervious	Concrete pads and other impervious areas	--	100	--	--
Asphalt	Roadways and parking areas	--	100	--	--
Dry Detention / Retention	Excavated dry detention/retention swales	100	--	--	--
Structure / Roof	Buildings, storage tanks, and other areas covered with roof	--	--	100	--
Depressional Area	Areas including and surrounding the depressional area located near the Manatee Viewing area	100	--	--	--
Contact Areas	Areas with potential contaminants surrounded by curb and draining to sump to receive special treatment	--	--	--	100

4.4 – Water Quality Calculations

The proposed SWMS will provide the WQ treatment required for the project area as required by SFWMD criteria, based on the greater of one-inch over the project area or 2.5 inches over the percent impervious (not including roof area). The project is an industrial site with high percentages of impervious area, and the latter criterion governs. In addition, since the project is an industrial site, a dry pretreatment volume of one half-inch is required.

Based on the water table elevation and soils information for the site, a dry detention system is proposed for the plant. According to SFWMD criteria, a 25% reduction in WQ volume can be utilized for a dry detention system. Also, since dry detention is proposed, the dry pretreatment volume for an industrial site can be provided within the overall WQ volume. The proposed WQ volumes are provided across both basins. The West Basin only provides a portion of the required WQ for its area. The remaining volumes are provided downstream in the East Basin.

The WQ treatment for the South-A Basin developed area is provided within the dry retention area located in the basin. According to SFWMD criteria, a 50% reduction in WQ volume can be utilized for a dry retention system. The WQ treatment for the South-B basin will be provided with the addition of a control structure into the depressional area which will function as dry detention. The table below summarizes the WQ volumes provided within the project. Detailed WQ calculations are provided in **Exhibit F.3**.

Table 4.3 – Water Quality Summary

Basin	Treatment Method	WQ Volume Required	WQ Volume Provided	WQ Treatment Elevation
		(ac-ft)	(ac-ft)	(ft NAVD)
West	Dry Detention	1.41	0.68	8.00
East	Dry Detention	0.73	1.46	4.20
	Plant Total:	**2.14**	**2.14**	--
South-A	Dry Retention	0.14	0.19	5.50
South-B	Dry Detention	0.07	0.57	4.30
	Manatee Area Total:	**0.21**	**0.78**	--

4.5 – Summary of Results:

The areas described above have been modeled in AdICPR to determine design elevations for the project site. The criteria set forth previously in this report have been used to develop this model. A nodal diagram has been presented as part of **Exhibit F.4** to graphically describe the components of the model. The results of the post-development model are summarized below. Land-use, stage-storage, and stage-area calculations used to provide input for the model are provided in **Exhibit F.2**. Model input and output reports are provided in **Exhibits F.4 and F.5**, respectively.

For the plant site, the allowable discharge for the site has been calculated in the pre-development model as 81.41 cfs. The peak discharge resulting from the 25-year / 72-hour storm in the post-development model is 56.88 cfs.

For the Manatee viewing area, the allowable discharge for the site has been calculated in the pre-development model as 6.01 cfs. The peak discharge resulting from the 25-year / 72-hour storm event in the post-development model is 5.72 cfs.

The minimum road crown elevation for each basin has been calculated using the 10-year / 24-hour storm event. The minimum perimeter elevation for each basin has been calculated using the 25-year / 72-hour storm event. Results from these storms are summarized in the table below.

Table 4.3 – Post-development Peak Stage and Discharge Summary

Basin	10-year / 24-hour (Min. Road Crown)		25-year / 72-hour (Min. Perimeter El.)	
	Peak Stage (ft-NAVD)	Peak Discharge (cfs)	Peak Stage (ft-NAVD)	Peak Discharge (cfs)
West	10.0	23.91	10.2	23.69
East	5.5	38.91	5.8	**56.88**
South-A	6.3	4.24	6.5	6.56
South-B	N/A	N/A	5.1	**5.72**

The minimum building finished floor elevation has been calculated using the 100-year / 72-hour storm. Since this site historically discharges into Lake Worth Lagoon, a tidally controlled water body, the flooding impacts to downstream neighbors are non-existent. Minimum finished floor elevations determined with the modeling are higher than those shown on the FEMA Flood Insurance Rate Map and therefore govern. Per the City of Riviera Beach Comprehensive Plan, finish floor elevations are set at least one-foot above the 100-year flood and one-foot above road crown. Per the City of West Palm Beach Code of Ordinances for areas of special flood hazard with base flood elevation provided, the minimum finish floor shall be 6-inches above the base flood elevation found on the Flood Insurance Rate Map (5.5-ft NAVD). The proposed minimum finished floor elevations at this time are summarized in the table below.

Table 4.4 – Minimum Finished Floor Elevation Summary

Basin	100-year / 72-hour (Min. Finished Floor)
	Peak Stage (ft-NAVD)
West	11.4
East	7.8
South-A	7.9
South-B	N/A

Exhibit A

Aerial Map

REV	DATE	DESCRIPTION	APPR
7			
6			
5			
4			
3			
2			
1			

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY BF
DRAWN BY RCF
CHECKED BY PL
DATE 9/3/2008

PROJECT ENGINEER
REG NUMBER EXP DATE
PROJECT NUMBER
CADD STANDARDS

BOYLE AECOM
BOYLE ENGINEERING
3550 S.W. Corporate Parkway
Palm City, Florida 34990
T 772-286-3883 F 772-286-3925
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FLORIDA POWER & LIGHT
RIVIERA BEACH ENERGY CENTER

AERIAL MAP

DRAWING 17212 AERIAL EXHIBIT

SHEET A OF SHEETS

DWG: P:\17212\Permit\SCA\Exhibit\17212 AERIAL EXHIBIT.dwg Layout Name: AERIAL - Plotted by: Fecko, Ben Date: 1/12/2009 - 4:02 PM
XREFS: 17212 XREF TX1 IMAGES: parcel-aerial-50cm.sid

Exhibit B

Rainfall Maps

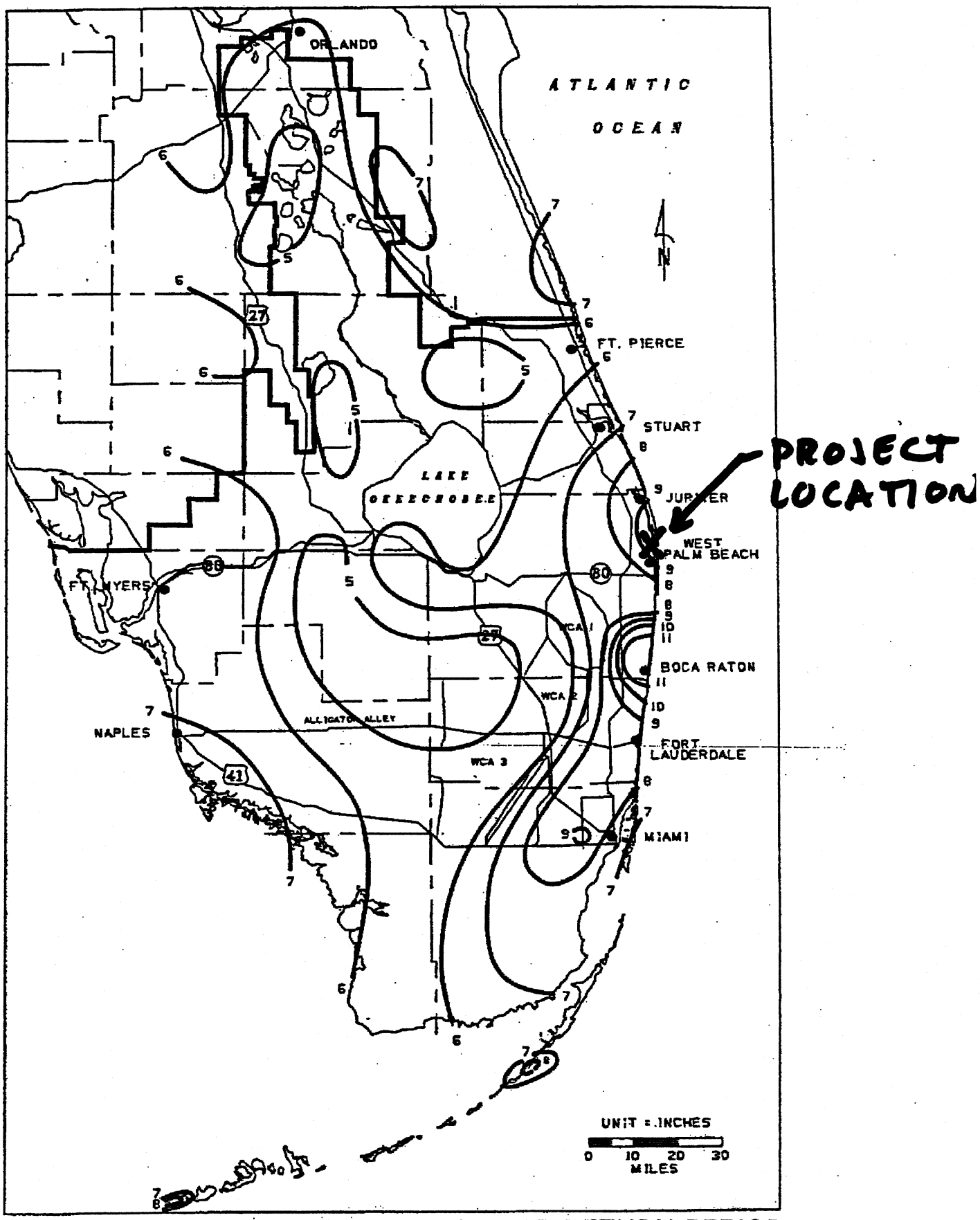
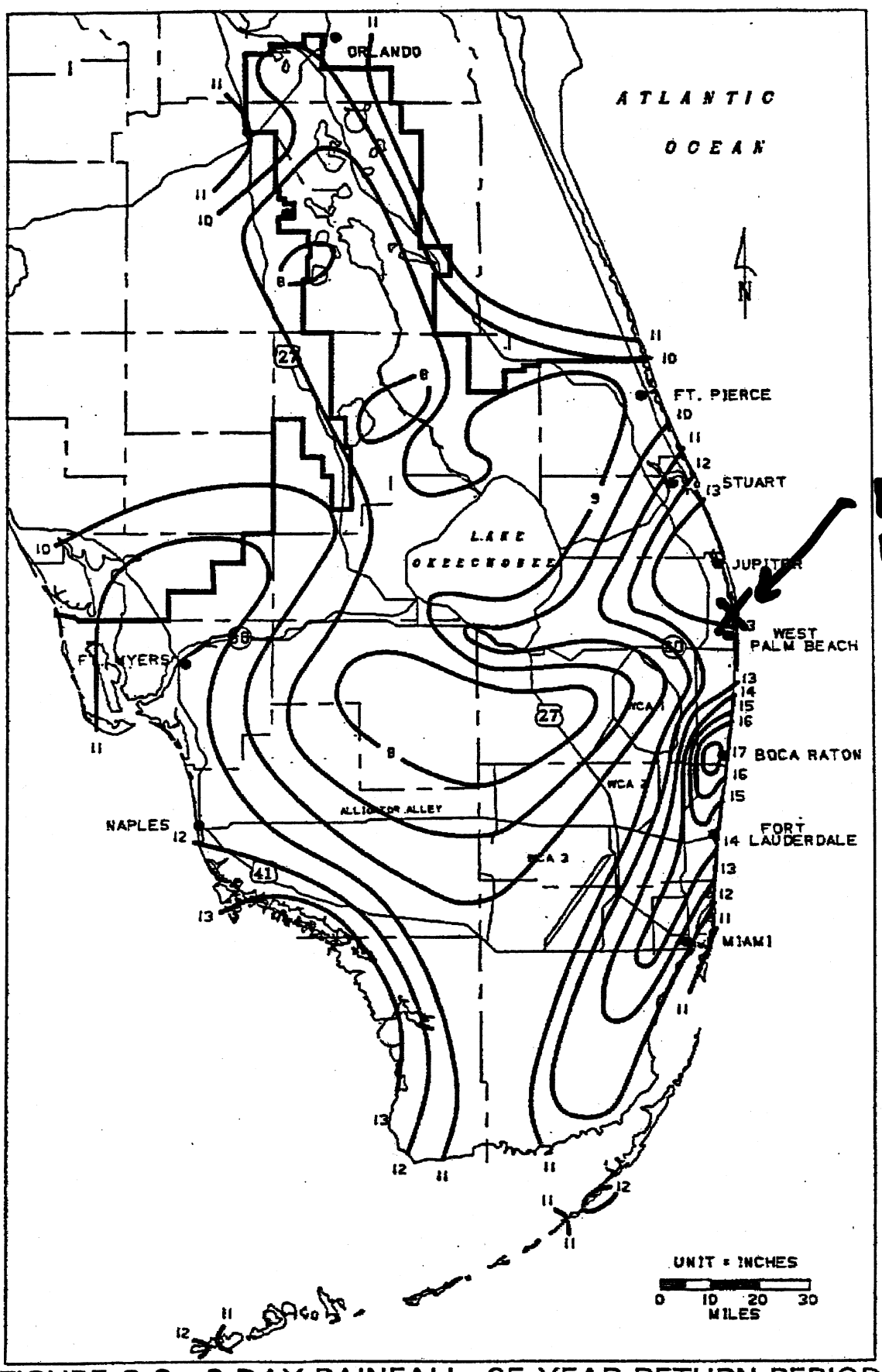


FIGURE C-4. 1-DAY RAINFALL: 10-YEAR RETURN PERIOD



PROJECT LOCATION

FIGURE C-8. 3-DAY RAINFALL: 25-YEAR RETURN PERIOD

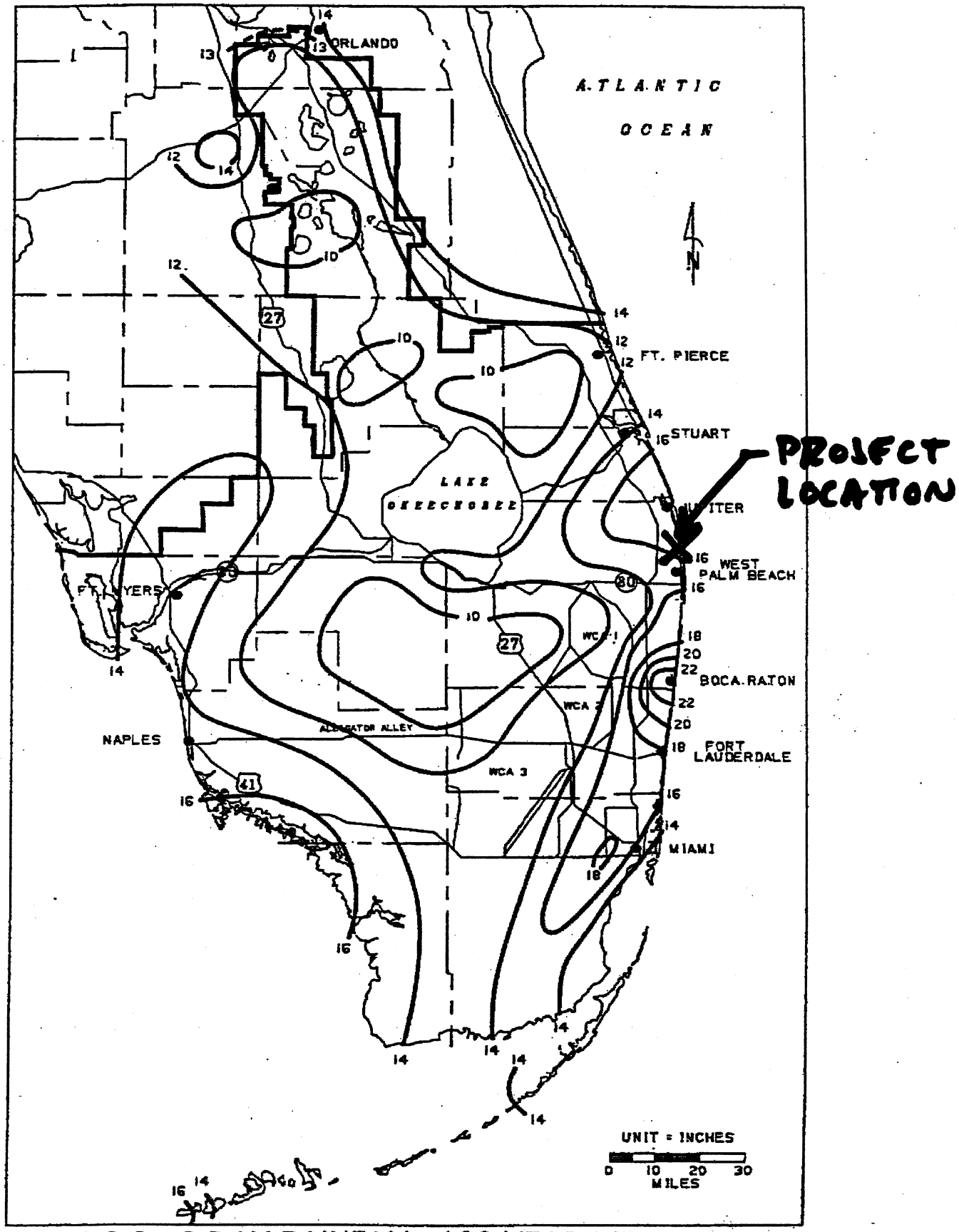
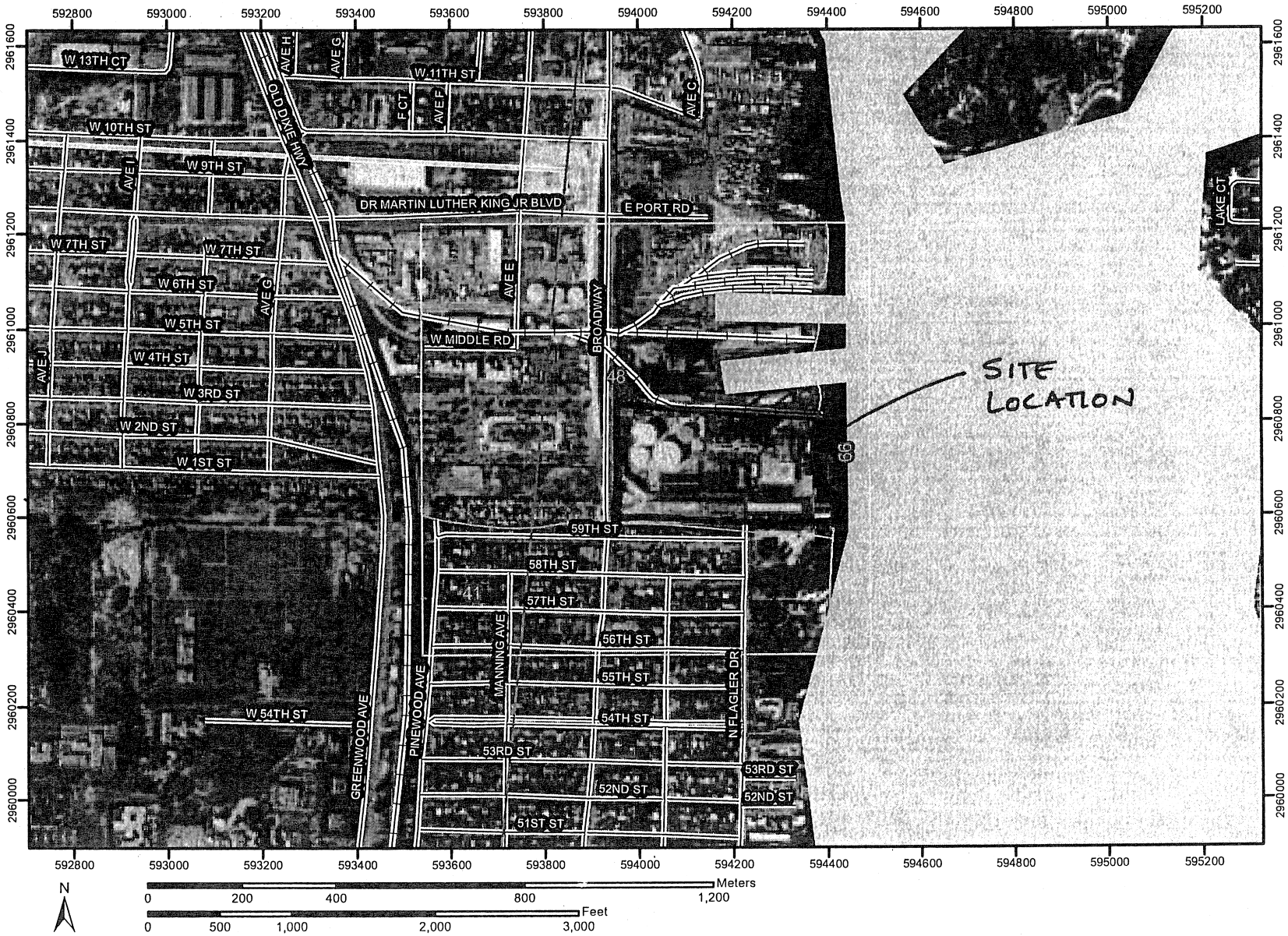


FIGURE C-9. 3-DAY RAINFALL: 100-YEAR RETURN PERIOD

Exhibit C

Soil Survey

Soil Map–Palm Beach County Area, Florida
(FPL - Riviera Beach Energy Center)



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features

- Gully
- Short Steep Slope
- Other

Political Features

Municipalities

- Cities
- Urban Areas

Water Features

- Oceans
- Streams and Canals

Transportation

- Rails

Roads

- Interstate Highways
- US Routes
- State Highways
- Local Roads
- Other Roads

MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 17N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Palm Beach County Area, Florida
Survey Area Data: Version 5, Dec 5, 2006

Date(s) aerial images were photographed: 2/28/1999

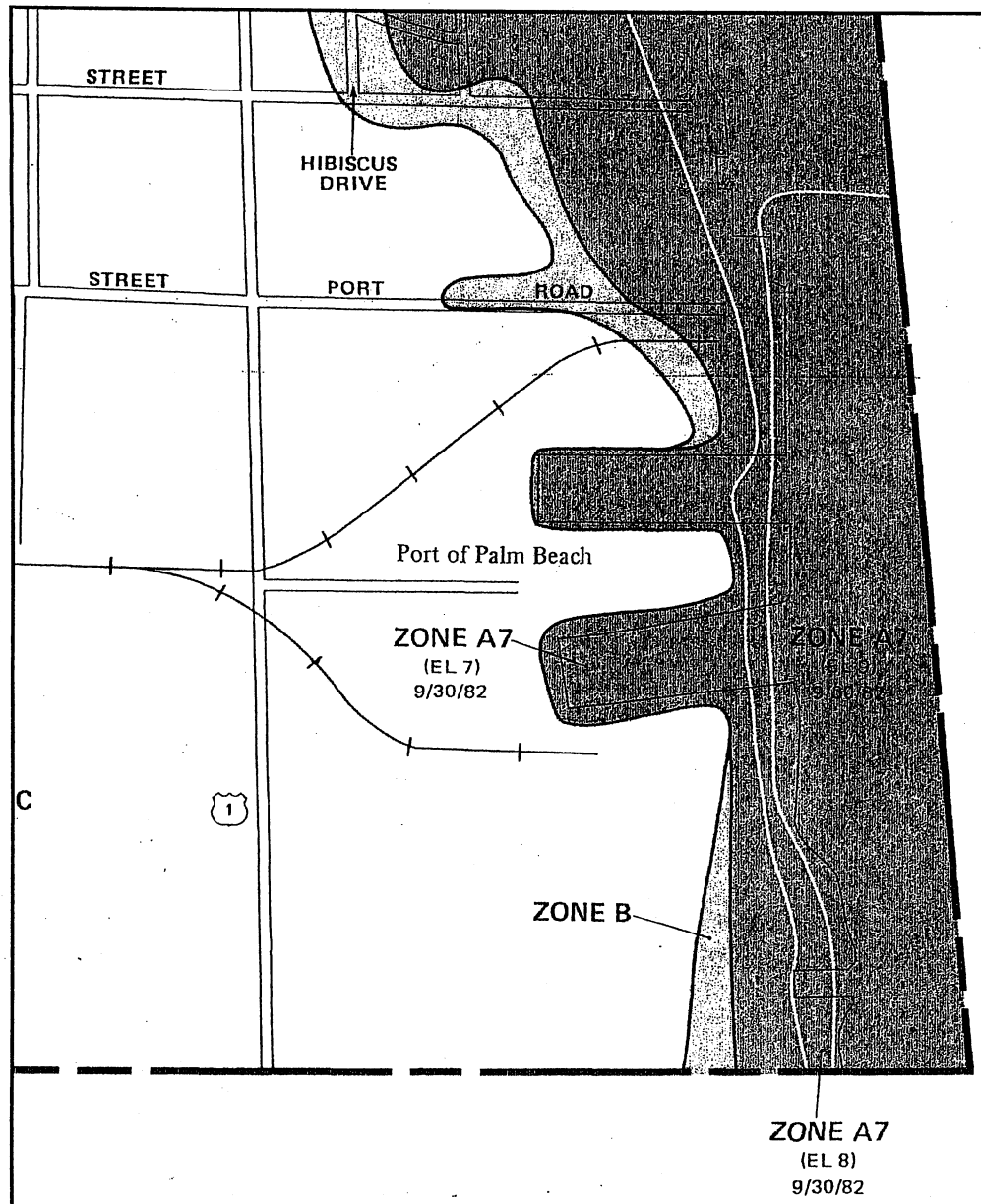
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Palm Beach County Area, Florida (FL611)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
41	St. Lucie-Paola-Urban land complex, 0 to 8 percent slopes	58.2	27.2%
48	Urban land	133.8	62.4%
99	Water	22.5	10.5%
Totals for Area of Interest (AOI)		214.5	100.0%

Exhibit D

FEMA Flood Insurance Rate Map



APPROXIMATE SCALE

500 0 500 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

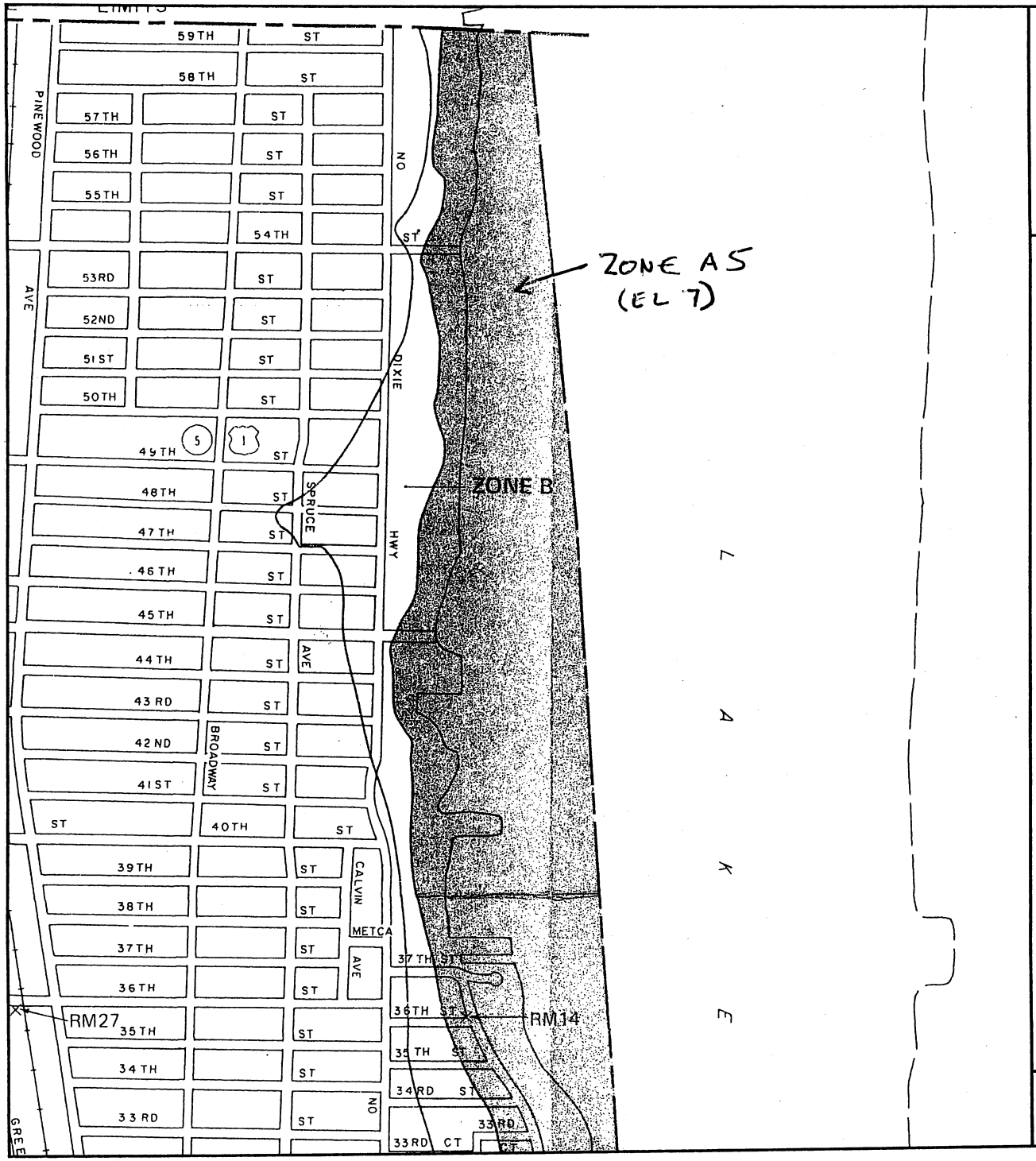
CITY OF
RIVIERA BEACH, FLORIDA
PALM BEACH COUNTY

PANEL 3 OF 3
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
125142 0003 D

MAP REVISED:
SEPTEMBER 30, 1982

Federal Emergency Management Agency



APPROXIMATE SCALE

1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

CITY OF
WEST PALM BEACH, FLORIDA
PALM BEACH COUNTY

PANEL 15 OF 20
(SEE MAP INDEX FOR PANELS NOT PRINTED)

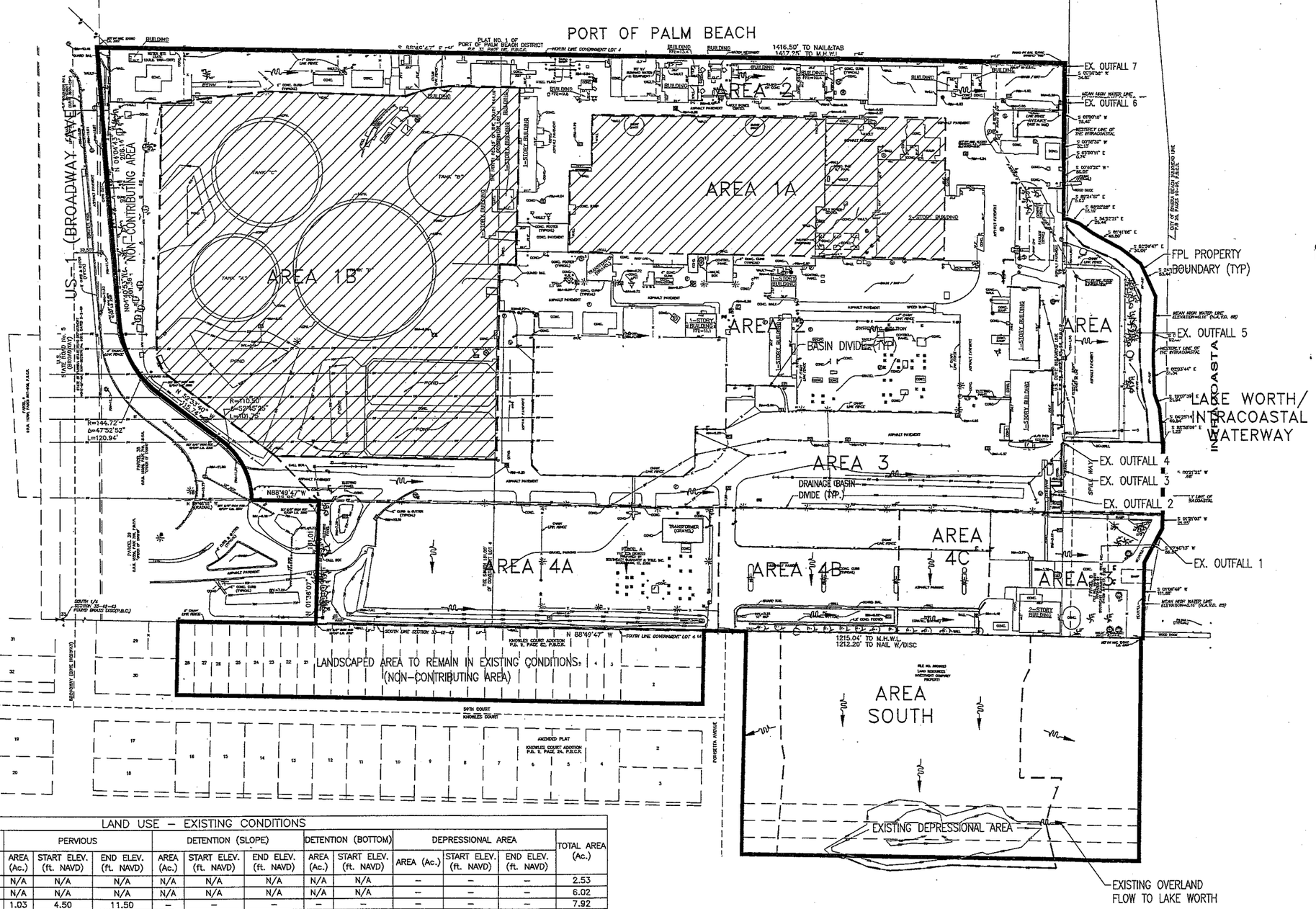
COMMUNITY-PANEL NUMBER
120229 0015 B

EFFECTIVE DATE:
MARCH 1, 1979

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION

Exhibit E.1

Pre-Development Basin Map



LAND USE – EXISTING CONDITIONS

BASIN	IMPERVIOUS			PERVIOUS			DETENTION (SLOPE)			DETENTION (BOTTOM)		DEPRESSIONAL AREA			TOTAL AREA (Ac.)
	AREA (Ac.)	START ELEV. (ft. NAVD)	END ELEV. (ft. NAVD)	AREA (Ac.)	START ELEV. (ft. NAVD)	END ELEV. (ft. NAVD)	AREA (Ac.)	START ELEV. (ft. NAVD)	END ELEV. (ft. NAVD)	AREA (Ac.)	START ELEV. (ft. NAVD)	AREA (Ac.)	START ELEV. (ft. NAVD)	END ELEV. (ft. NAVD)	
AREA 1A*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	–	–	–	2.53
AREA 1B*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	–	–	–	6.02
AREA 2	6.89	4.50	11.50	1.03	4.50	11.50	–	–	–	–	–	–	–	–	7.92
AREA 3	2.89	3.50	11.00	2.05	3.50	11.00	–	–	–	–	–	–	–	–	4.94
AREA 4A	1.68	8.20	11.00	0.40	8.20	11.00	0.27	7.30	10.00	0.11	7.30	–	–	–	2.46
AREA 4B	0.62	6.40	8.20	0.38	6.40	8.20	–	–	–	0.10	3.20	–	–	–	1.10
AREA 4C	0.27	6.00	6.60	0.21	6.00	6.60	–	–	–	0.06	3.00	–	–	–	0.54
AREA SOUTH	0.10	7.30	13.60	1.62	7.10	8.30	–	–	–	–	–	1.18	1.40	8.00	2.90

*AREA 1A & AREA 1B DO NOT DISCHARGE TO LAKE WORTH DURING STORM EVENTS AND THEREFORE ARE NOT INCLUDED IN PRE-DEVELOPMENT ANALYSIS.

REV	DATE	DESCRIPTION	APPR
7			
6			
5			
4			
3			
2			
1			

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY BF
DRAWN BY RCF
CHECKED BY PL
DATE 8/27/2008
PROJECT ENGINEER
REG NUMBER
EXP DATE
PROJECT NUMBER
CADD STANDARDS

BOYLE | AECOM
BOYLE ENGINEERING
3550 S.W. Corporate Parkway
Palm City, Florida 34990
T 772-286-3883 F 772-286-3925
BPR & FBPE License No's 2005 & LB7622
www.boyle.aecom.com

FLORIDA POWER & LIGHT
RIVIERA BEACH ENERGY CENTER

PRE-DEVELOPMENT BASIN MAP

DRAWING 17212 LU PRE EXHIBIT
SHEET E-1 OF SHEETS

Exhibit E.2

Pre-Development Land Use / Stage-Storage Calculations

Boyle Engineering Corp.
3550 SW Corporate Pkwy.
Palm City, FL 34990
(772) 286-3883

PRE-DEVELOPMENTLAND USE AND STAGE STORAGE CALULATIONS

FPL Riviera Beach - Pre-Development (AREAS 2 & 3)

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type: Land Use & Stage-Storage

Average Ground Elevation (EL_{grnd}) =	7.71	ft	
Soil Type =	Coastal		
Max. Available Soil Storage (S_{max}) =	10.9	in	(Per SFWMD Coastal soil category at 4' depth)
Compaction Factor ($F_{compact}$) =	25%	%	(Use 25% for developed site)
Compacted Soil Storage ($S_{compact}$) =	8.18	in	$(S_{max})(F_{compact})$
Available Soil Storage (S_{avail}) =	1.96	in	$(A_p)(S_{compact})/(A_t)$
Curve Number (CN) =	84		$1000 / (S_{avail}+10)$
Total Time of Concentration =	10.00	minutes	

Park	Pervious (Area 2)	Impervious (Area 2)	Pervious (Area 3)	Impervious (Area 3)	Total Area
	(ac)	(ac)	(ac)	(ac)	(ac)
Total Areas (A_t)	1.03	6.89	2.05	2.89	12.86
Pervious %	100.00%	0.00%	100.00%	0.00%	23.95%
Pervious Area (A_p)	1.03	0.00	2.05	0.00	3.08
Impervious %	0.00%	100.00%	0.00%	100.00%	76.05%
Impervious Area (A_i)	0.00	6.89	0.00	2.89	9.78
SWM %	0.00%	0.00%	0.00%	0.00%	0.00%
SWM Area (Ac.)	0.00	0.00	0.00	0.00	0.00

Starting Stage = 3.00
Ending Stage = 12.00
Stage Increment = 0.50

Name	Pervious (Area 2)	Impervious (Area 2)	Pervious (Area 3)	Impervious (Area 3)	
Area	1.03	6.89	2.05	2.89	
Start Elev	4.50	4.50	3.50	3.50	
End Elev	11.50	11.50	11.00	11.00	
Stage Feet NAVD	Linear Storage Ac-ft	Linear Storage Ac-ft	Linear Storage Ac-ft	Linear Storage Ac-ft	Total Storage Ac-ft
3.00	0.00	0.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	0.00	0.00
4.00	0.00	0.00	0.03	0.05	0.08
4.50	0.00	0.00	0.14	0.19	0.33
5.00	0.02	0.12	0.31	0.43	0.88
5.50	0.07	0.49	0.55	0.77	1.88
6.00	0.17	1.11	0.85	1.20	3.33
6.50	0.29	1.97	1.23	1.73	5.23
7.00	0.46	3.08	1.67	2.36	7.57
7.50	0.66	4.43	2.19	3.08	10.36
8.00	0.90	6.03	2.77	3.90	13.60
8.50	1.18	7.87	3.42	4.82	17.28
9.00	1.49	9.97	4.13	5.83	21.42
9.50	1.84	12.30	4.92	6.94	26.00
10.00	2.23	14.89	5.77	8.14	31.03
10.50	2.65	17.72	6.70	9.44	36.50
11.00	3.11	20.79	7.69	10.84	42.43
11.50	3.61	24.12	8.71	12.28	48.72
12.00	4.12	27.56	9.74	13.73	55.15

Boyle Engineering Corp.
3550 SW Corporate Pkwy.
Palm City, FL 34990
(772) 286-3883

Stage-Area Calculations

Execution Date: 1/8/2009
Engineer's Name: BF
Job No: 17212.00
Project Name: FPL - Riviera Beach
Basin: Pre-Development Areas 2 & 3

Computation Type Pre-Development Stage-Area

Starting Stage, Control El.	3.00
Ending Stage	12.00
Stage Increment	0.50

Name	**Pervious (Area 2)**	**Impervious (Area 2)**	**Pervious (Area 3)**	**Impervious (Area 3)**	
Area	1.03	6.89	2.05	2.89	
Start Elev	4.50	4.50	3.50	3.50	
End Elev	11.50	11.50	11.00	11.00	
Stage Feet NAVD	Linear Area Ac	Linear Area Ac	Linear Area Ac	Linear Area Ac	Total Area Ac
3.00	0.00	0.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	0.00	0.00
4.00	0.00	0.00	0.14	0.19	0.33
4.50	0.00	0.00	0.27	0.39	0.66
5.00	0.07	0.49	0.41	0.58	1.55
5.50	0.15	0.98	0.55	0.77	2.45
6.00	0.22	1.48	0.68	0.96	3.34
6.50	0.29	1.97	0.82	1.16	4.24
7.00	0.37	2.46	0.96	1.35	5.13
7.50	0.44	2.95	1.09	1.54	6.03
8.00	0.52	3.45	1.23	1.73	6.92
8.50	0.59	3.94	1.37	1.93	7.82
9.00	0.66	4.43	1.50	2.12	8.71
9.50	0.74	4.92	1.64	2.31	9.61
10.00	0.81	5.41	1.78	2.50	10.50
10.50	0.88	5.91	1.91	2.70	11.40
11.00	0.96	6.40	2.05	2.89	12.29
11.50	1.03	6.89	2.05	2.89	12.86
12.00	1.03	6.89	2.05	2.89	12.86

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(772) 286-3883

PRE-DEVELOPMENTLAND USE AND STAGE STORAGE CALULATIONS

FPL Riviera Beach - Pre-Development (AREA 4A)

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 8/18/2008

Computation Type: Land Use & Stage-Storage

Average Ground Elevation (EL_{grnd}) =	9.39	ft	
Soil Type =	Coastal		
Max. Available Soil Storage (S_{max}) =	10.9	in	(Per SFWMD Coastal soil category at 4' depth)
Compaction Factor ($F_{compact}$) =	25%	%	(Use 25% for developed site)
Compacted Soil Storage ($S_{compact}$) =	8.18	in	$(S_{max})(F_{compact})$
Available Soil Storage (S_{avail}) =	2.59	in	$(A_p)(S_{compact})/(A_t)$
Curve Number (CN) =	79		$1000 / (S_{avail}+10)$
Total Time of Concentration =	10.00	minutes	

Park	Pervious	Impervious	Ditch Slope	Ditch Bottom	Total Area
	(ac)	(ac)	(ac)	(ac)	(ac)
Total Areas (A_t)	0.40	1.68	0.27	0.11	2.46
Pervious %	100.00%	0.00%	100.00%	100.00%	31.71%
Pervious Area (A_p)	0.40	0.00	0.27	0.11	0.78
Impervious %	0.00%	100.00%	0.00%	0.00%	68.29%
Impervious Area (A_i)	0.00	1.68	0.00	0.00	1.68
SWM %	0.00%	0.00%	0.00%	0.00%	0.00%
SWM Area (Ac.)	0.00	0.00	0.00	0.00	0.00

Starting Stage = 7.00
Ending Stage = 11.00
Stage Increment = 0.50

Name	Pervious	Impervious	Ditch Slope	Ditch Bottom
Area	0.40	1.68	0.27	0.11
Start Elev	8.20	8.20	7.30	7.30
End Elev	11.00	11.00	10.00	

Stage Feet NAVD	Linear Storage Ac-ft	Linear Storage Ac-ft	Linear Storage Ac-ft	Vert Storage Ac-ft	Total Storage Ac-ft
7.00	0.00	0.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	0.02	0.02
8.00	0.00	0.00	0.02	0.08	0.10
8.50	0.01	0.03	0.07	0.13	0.24
9.00	0.05	0.19	0.14	0.19	0.57
9.50	0.12	0.51	0.24	0.24	1.11
10.00	0.23	0.97	0.36	0.30	1.86
10.50	0.38	1.59	0.50	0.35	2.82
11.00	0.56	2.35	0.63	0.41	3.95

Boyle Engineering Corp.
3550 SW Corporate Pkwy.
Palm City, FL 34990
(772) 286-3883

Stage-Area Calculations

Execution Date: 8/18/2008
Engineer's Name: BF
Job No: 17212.00
Project Name: FPL - Riviera Beach
Basin: Pre-Development Area 4A

Computation Type Pre-Development Stage-Area

Starting Stage, Control El.	7.00
Ending Stage	11.00
Stage Increment	0.50

Name	**Pervious**	**Impervious**	**Ditch Slope**	**Ditch Bottom**
Area	0.40	1.68	0.27	0.11
Start Elev	8.20	8.20	7.30	7.30
End Elev	11.00	11.00	10.00	

Stage Feet NAVD	Linear Area Ac	Linear Area Ac	Linear Area Ac	Vert Area Ac	Total Area Ac
7.00	0.00	0.00	0.00	0.00	0.00
7.50	0.00	0.00	0.02	0.11	0.13
8.00	0.00	0.00	0.07	0.11	0.18
8.50	0.04	0.18	0.12	0.11	0.45
9.00	0.11	0.48	0.17	0.11	0.87
9.50	0.19	0.78	0.22	0.11	1.30
10.00	0.26	1.08	0.27	0.11	1.72
10.50	0.33	1.38	0.27	0.11	2.09
11.00	0.40	1.68	0.27	0.11	2.46

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(772) 286-3883

PRE-DEVELOPMENTLAND USE AND STAGE STORAGE CALULATIONS

FPL Riviera Beach - Pre-Development (AREA 4B)

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 8/18/2008

Computation Type: Land Use & Stage-Storage

Average Ground Elevation (EL_{grnd}) =	6.93	ft	
Soil Type =	Coastal		
Max. Available Soil Storage (S_{max}) =	10.9	in	(Per SFWMD Coastal soil category at 4' depth)
Compaction Factor ($F_{compact}$) =	25%	%	(Use 25% for developed site)
Compacted Soil Storage ($S_{compact}$) =	8.18	in	$(S_{max})(F_{compact})$
Available Soil Storage (S_{avail}) =	3.57	in	$(A_p)(S_{compact})/(A_t)$
Curve Number (CN) =	74		$1000 / (S_{avail}+10)$
Total Time of Concentration =	10.00	minutes	

Park	Pervious	Impervious	Vertical Wall Detention Area	—	Total Area
	(ac)	(ac)	(ac)	(ac)	(ac)
Total Areas (A_t)	0.38	0.62	0.10	0.00	1.10
Pervious %	100.00%	0.00%	100.00%	0.00%	43.64%
Pervious Area (A_p)	0.38	0.00	0.10	0.00	0.48
Impervious %	0.00%	100.00%	0.00%	100.00%	56.36%
Impervious Area (A_i)	0.00	0.62	0.00	0.00	0.62
SWM %	0.00%	0.00%	0.00%	0.00%	0.00%
SWM Area (Ac.)	0.00	0.00	0.00	0.00	0.00

Starting Stage = 3.00
Ending Stage = 9.00
Stage Increment = 0.50

Name	Pervious	Impervious	Vertical Wall Detention Area	—	
Area	0.38	0.62	0.10	0.00	
Start Elev	6.40	6.40	3.20	0.00	
End Elev	8.20	8.20		0.00	
Stage Feet NAVD	Linear Storage Ac-ft	Linear Storage Ac-ft	Vert Storage Ac-ft	Vert Storage Ac-ft	Total Storage Ac-ft
3.00	0.00	0.00	0.00	0.00	0.00
3.50	0.00	0.00	0.03	0.00	0.03
4.00	0.00	0.00	0.08	0.00	0.08
4.50	0.00	0.00	0.13	0.00	0.13
5.00	0.00	0.00	0.18	0.00	0.18
5.50	0.00	0.00	0.23	0.00	0.23
6.00	0.00	0.00	0.28	0.00	0.28
6.50	0.00	0.00	0.33	0.00	0.33
7.00	0.04	0.06	0.38	0.00	0.48
7.50	0.13	0.21	0.43	0.00	0.77
8.00	0.27	0.44	0.48	0.00	1.19
8.50	0.46	0.74	0.53	0.00	1.73
9.00	0.65	1.05	0.58	0.00	2.28

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3550 SW Corporate Pkwy.
Palm City, FL 34990
(772) 286-3883

Stage-Area Calculations

Execution Date: 8/18/2008
Engineer's Name: BF
Job No: 17212.00
Project Name: FPL - Riviera Beach
Basin: Pre-Development Area 4B

Computation Type Pre-Development Stage-Area

Starting Stage, Control El.	3.00
Ending Stage	9.00
Stage Increment	0.50

Name	**Pervious**	**Impervious**	**Vertical Wall Detention Area**	**---**
Area	0.38	0.62	0.10	0.00
Start Elev	6.40	6.40	3.20	0.00
End Elev	8.20	8.20		0.00

Stage Feet NAVD	Linear Area Ac	Linear Area Ac	Vert Area Ac	Vert Area Ac	Total Area Ac
3.00	0.00	0.00	0.00	0.00	0.00
3.50	0.00	0.00	0.10	0.00	0.10
4.00	0.00	0.00	0.10	0.00	0.10
4.50	0.00	0.00	0.10	0.00	0.10
5.00	0.00	0.00	0.10	0.00	0.10
5.50	0.00	0.00	0.10	0.00	0.10
6.00	0.00	0.00	0.10	0.00	0.10
6.50	0.02	0.03	0.10	0.00	0.16
7.00	0.13	0.21	0.10	0.00	0.43
7.50	0.23	0.38	0.10	0.00	0.71
8.00	0.34	0.55	0.10	0.00	0.99
8.50	0.38	0.62	0.10	0.00	1.10
9.00	0.38	0.62	0.10	0.00	1.10

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PRE-DEVELOPMENTLAND USE AND STAGE STORAGE CALULATIONS

FPL Riviera Beach - Pre-Development (AREA 4C)

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 8/18/2008

Computation Type: Land Use & Stage-Storage

Average Ground Elevation (EL_{grnd}) =	5.93	ft	
Soil Type =	Coastal		
Max. Available Soil Storage (S_{max}) =	10.9	in	(Per SFWMD Coastal soil category at 4' depth)
Compaction Factor ($F_{compact}$) =	25%	%	(Use 25% for developed site)
Compacted Soil Storage ($S_{compact}$) =	8.18	in	$(S_{max})(F_{compact})$
Available Soil Storage (S_{avail}) =	4.09	in	$(A_p)(S_{compact})/(A_t)$
Curve Number (CN) =	71		$1000 / (S_{avail}+10)$
Total Time of Concentration =	10.00	minutes	

Park	Pervious	Impervious	Vertical Wall Detention Area	—	Total Area
	(ac)	(ac)	(ac)	(ac)	(ac)
Total Areas (A_t)	0.21	0.27	0.06	0.00	0.54
Pervious %	100.00%	0.00%	100.00%	0.00%	50.00%
Pervious Area (A_p)	0.21	0.00	0.06	0.00	0.27
Impervious %	0.00%	100.00%	0.00%	100.00%	50.00%
Impervious Area (A_i)	0.00	0.27	0.00	0.00	0.27
SWM %	0.00%	0.00%	0.00%	0.00%	0.00%
SWM Area (Ac.)	0.00	0.00	0.00	0.00	0.00

Starting Stage = 3.00
Ending Stage = 7.00
Stage Increment = 0.50

Name	Pervious	Impervious	Vertical Wall Detention Area	—	
Area	0.21	0.27	0.06	0.00	
Start Elev	6.00	6.00	3.00	0.00	
End Elev	6.60	6.60		0.00	
Stage Feet NAVD	Linear Storage Ac-ft	Linear Storage Ac-ft	Vert Storage Ac-ft	Vert Storage Ac-ft	Total Storage Ac-ft
3.00	0.00	0.00	0.00	0.00	0.00
3.50	0.00	0.00	0.03	0.00	0.03
4.00	0.00	0.00	0.06	0.00	0.06
4.50	0.00	0.00	0.09	0.00	0.09
5.00	0.00	0.00	0.12	0.00	0.12
5.50	0.00	0.00	0.15	0.00	0.15
6.00	0.00	0.00	0.18	0.00	0.18
6.50	0.04	0.06	0.21	0.00	0.31
7.00	0.15	0.19	0.24	0.00	0.58

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Palm City, FL 34990
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Stage-Area Calculations

Execution Date: 8/18/2008
Engineer's Name: BF
Job No: 17212.00
Project Name: FPL - Riviera Beach
Basin: Pre-Development Area 4C

Computation Type Pre-Development Stage-Area

Starting Stage, Control El.	3.00
Ending Stage	7.00
Stage Increment	0.50

Name	**Pervious**	**Impervious**	**Vertical Wall Detention Area**	**---**
Area	0.21	0.27	0.06	0.00
Start Elev	6.00	6.00	3.00	0.00
End Elev	6.60	6.60		0.00

Stage Feet NAVD	Linear Area Ac	Linear Area Ac	Vert Area Ac	Vert Area Ac	Total Area Ac
3.00	0.00	0.00	0.06	0.00	0.06
3.50	0.00	0.00	0.06	0.00	0.06
4.00	0.00	0.00	0.06	0.00	0.06
4.50	0.00	0.00	0.06	0.00	0.06
5.00	0.00	0.00	0.06	0.00	0.06
5.50	0.00	0.00	0.06	0.00	0.06
6.00	0.00	0.00	0.06	0.00	0.06
6.50	0.18	0.23	0.06	0.00	0.46
7.00	0.21	0.27	0.06	0.00	0.54

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PRE-DEVELOPMENTLAND USE AND STAGE STORAGE CALULATIONS

FPL Riviera Beach - Pre-Development (AREA SOUTH - FUTURE MANATEE VIEWING AREA)

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type: Land Use & Stage-Storage

Average Ground Elevation (EL_{grnd}) =	6.53	ft	
Soil Type =	Coastal		
Max. Available Soil Storage (S_{max}) =	10.9	in	(Per SFWMD Coastal soil category at 4' depth)
Compaction Factor ($F_{compact}$) =	25%	%	(Use 25% for developed site)
Compacted Soil Storage ($S_{compact}$) =	8.18	in	(S_{max})($F_{compact}$)
Available Soil Storage (S_{avail}) =	7.89	in	(A_p)($S_{compact}$)/(A_t)
Curve Number (CN) =	56		1000 / (S_{avail}+10)
Total Time of Concentration =	10.00	minutes	

Park	Pervious	Impervious	Depressional Area (1.4-3)	Depressional Area (3-4) Slope	Depressional Area (4-5) Slope	Depressional Area (5-8) Slope	Total Area
	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)
Total Areas (A_t)	1.62	0.10	0.21	0.15	0.14	0.68	2.90
Pervious %	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	96.55%
Pervious Area (A_p)	1.62	0.00	0.21	0.15	0.14	0.68	2.80
Impervious %	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	3.45%
Impervious Area (A_i)	0.00	0.10	0.00	0.00	0.00	0.00	0.10
SWM %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
SWM Area (Ac.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Starting Stage = 1.40
Ending Stage = 13.90
Stage Increment = 1.00

Name	Pervious	Impervious	Depressional Area (1.4-3)	Depressional Area (3-4) Slope	Depressional Area (4-5) Slope	Depressional Area (5-8) Slope	
Area	1.62	0.10	0.21	0.15	0.14	0.68	
Start Elev	7.10	7.30	1.40	3.00	4.00	5.00	
End Elev	8.30	13.60	3.00	4.00	5.00	8.00	
Stage Feet NAVD	Linear Storage Ac-ft	Linear Storage Ac-ft	Linear Storage Ac-ft	Linear Storage Ac-ft	Linear Storage Ac-ft	Linear Storage Ac-ft	Total Storage Ac-ft
1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.40	0.00	0.00	0.07	0.00	0.00	0.00	0.07
3.40	0.00	0.00	0.25	0.01	0.00	0.00	0.26
4.40	0.00	0.00	0.46	0.14	0.01	0.00	0.61
5.40	0.00	0.00	0.67	0.29	0.13	0.02	1.10
6.40	0.00	0.00	0.88	0.44	0.27	0.22	1.81
7.40	0.06	0.00	1.09	0.59	0.41	0.65	2.80
8.40	1.13	0.01	1.30	0.74	0.55	1.29	5.02
9.40	2.75	0.04	1.51	0.89	0.69	1.97	7.84
10.40	4.37	0.08	1.72	1.04	0.83	2.65	10.69
11.40	5.99	0.13	1.93	1.19	0.97	3.33	13.54
12.40	7.61	0.21	2.14	1.34	1.11	4.01	16.42
13.40	9.23	0.30	2.35	1.49	1.25	4.69	19.30

Boyle Engineering Corp.
3550 SW Corporate Pkwy.
Palm City, FL 34990
(772) 286-3883

Stage-Area Calculations

Execution Date: 1/8/2009
Engineer's Name: BF
Job No: 17212.00
Project Name: FPL - Riviera Beach
Basin: Pre-Development (AREA SOUTH)

Computation Type Pre-Development Stage-Area

Starting Stage, Control El.	1.40
Ending Stage	13.90
Stage Increment	1.00

Name	**Pervious**	**Impervious**	**Depressional Area (1.4-3)**	**Depressional Area (3-4) Slope**	**Depressional Area (4-5) Slope**	**Depressional Area (5-8) Slope**	
Area	1.62	0.10	0.21	0.15	0.14	0.68	
Start Elev	7.10	7.30	1.40	3.00	4.00	5.00	
End Elev	8.30	13.60	3.00	4.00	5.00	8.00	
Stage Feet NAVD	Linear Area Ac	Linear Area Ac	Linear Area Ac	Linear Area Ac	Linear Area Ac	Linear Area Ac	Total Area Ac
1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.40	0.00	0.00	0.13	0.00	0.00	0.00	0.13
3.40	0.00	0.00	0.21	0.06	0.00	0.00	0.27
4.40	0.00	0.00	0.21	0.15	0.06	0.00	0.42
5.40	0.00	0.00	0.21	0.15	0.14	0.09	0.59
6.40	0.00	0.00	0.21	0.15	0.14	0.32	0.82
7.40	0.41	0.00	0.21	0.15	0.14	0.54	1.45
8.40	1.62	0.02	0.21	0.15	0.14	0.68	2.82
9.40	1.62	0.03	0.21	0.15	0.14	0.68	2.83
10.40	1.62	0.05	0.21	0.15	0.14	0.68	2.85
11.40	1.62	0.07	0.21	0.15	0.14	0.68	2.87
12.40	1.62	0.08	0.21	0.15	0.14	0.68	2.88
13.40	1.62	0.10	0.21	0.15	0.14	0.68	2.90

Exhibit E.3

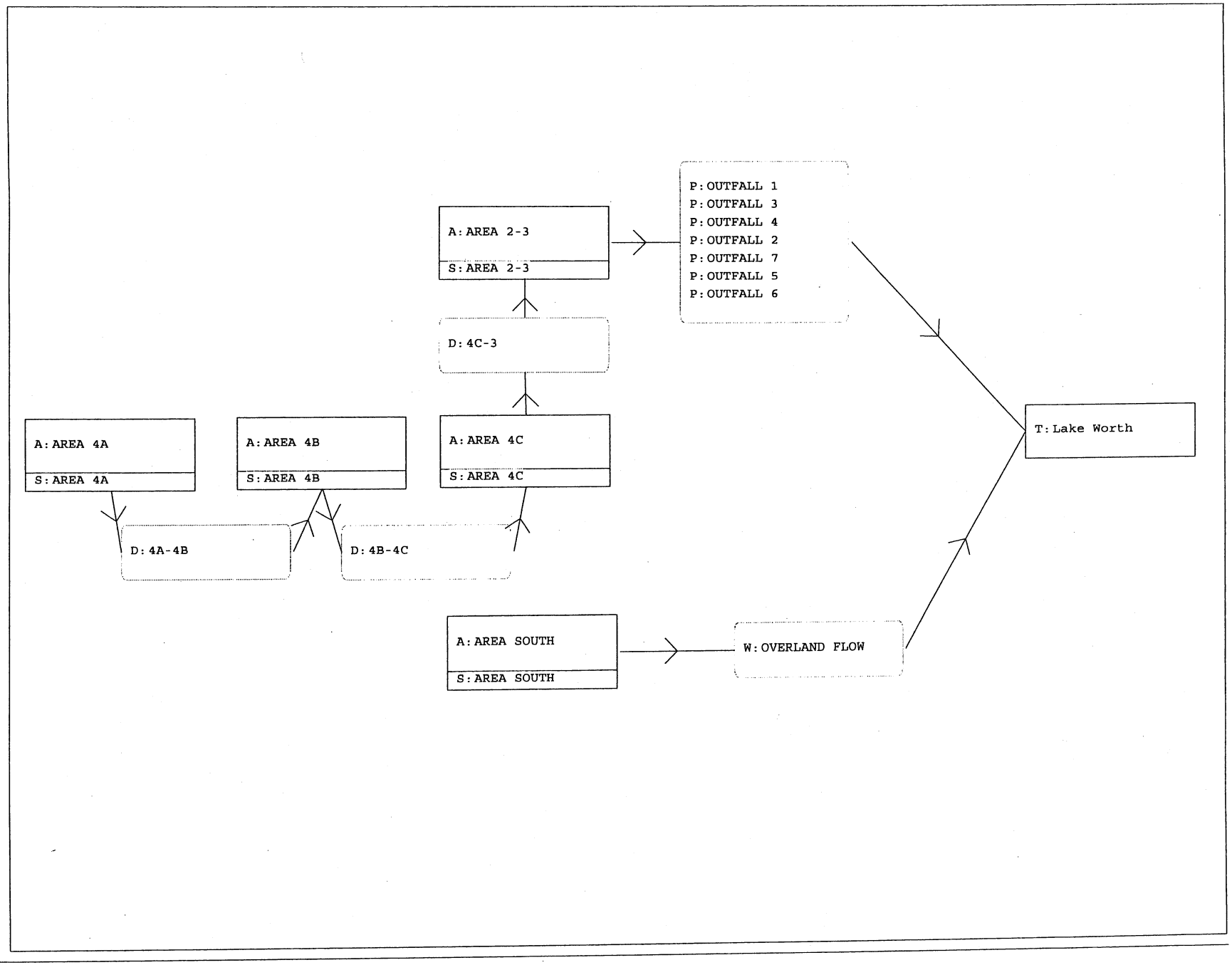
Pre-Development AdICPR Model Input

FPL-RIVIERA BEACH
PRE-DEVELOPMENT MODEL
NODAL DIAGRAM

Nodes
A Stage/Area
V Stage/Volume
T Time/Stage
M Manhole

Basins
O Overland Flow
U SCS Unit CN
S SBUH CN
Y SCS Unit GA
Z SBUH GA

Links
P Pipe
W Weir
C Channel
D Drop Structure
B Bridge
R Rating Curve
H Breach
E Percolation
F Filter
X Exfil Trench



==== Basins ====

Name: AREA 2-3 Node: AREA 2-3 Status: Onsite
Group: BASE Type: Santa Barbara CN

Rainfall File: Sfwmd72 Storm Duration(hrs): 72.00
Rainfall Amount(in): 13.500 Time of Conc(min): 10.00
Area(ac): 12.860 Time Shift(hrs): 0.00
Curve Number: 84.00 Time Increment(min): 15.00
DCIA(%): 0.00 Max Allowable Q(cfs): 999999.000

Name: AREA 4A Node: AREA 4A Status: Onsite
Group: BASE Type: Santa Barbara CN

Rainfall File: Sfwmd72 Storm Duration(hrs): 72.00
Rainfall Amount(in): 13.500 Time of Conc(min): 10.00
Area(ac): 2.460 Time Shift(hrs): 0.00
Curve Number: 79.00 Time Increment(min): 15.00
DCIA(%): 0.00 Max Allowable Q(cfs): 999999.000

Name: AREA 4B Node: AREA 4B Status: Onsite
Group: BASE Type: Santa Barbara CN

Rainfall File: Sfwmd72 Storm Duration(hrs): 72.00
Rainfall Amount(in): 13.500 Time of Conc(min): 10.00
Area(ac): 1.100 Time Shift(hrs): 0.00
Curve Number: 74.00 Time Increment(min): 15.00
DCIA(%): 0.00 Max Allowable Q(cfs): 999999.000

Name: AREA 4C Node: AREA 4C Status: Onsite
Group: BASE Type: Santa Barbara CN

Rainfall File: Sfwmd72 Storm Duration(hrs): 72.00
Rainfall Amount(in): 13.500 Time of Conc(min): 10.00
Area(ac): 0.540 Time Shift(hrs): 0.00
Curve Number: 71.00 Time Increment(min): 15.00
DCIA(%): 0.00 Max Allowable Q(cfs): 999999.000

Name: AREA SOUTH Node: AREA SOUTH Status: Onsite
Group: BASE Type: Santa Barbara CN

Rainfall File: Sfwmd72 Storm Duration(hrs): 72.00
Rainfall Amount(in): 13.500 Time of Conc(min): 10.00
Area(ac): 2.900 Time Shift(hrs): 0.00
Curve Number: 56.00 Time Increment(min): 15.00
DCIA(%): 0.00 Max Allowable Q(cfs): 999999.000

==== Nodes ====

Name: AREA 2-3 Base Flow(cfs): 0.000 Init Stage(ft): 0.200
Group: BASE Warn Stage(ft): 15.000
Type: Stage/Area

Areas 2 & 3 from the existing Riviera Beach drainage write-up and exhibits provided by FPL.

Stage(ft)	Area(ac)
0.200	0.0000
3.000	0.0000
3.500	0.0000
4.000	0.3300
4.500	0.6600
5.000	1.5500
5.500	2.4500
6.000	3.3400
6.500	4.2400
7.000	5.1300
7.500	6.0300

8.000	6.9200
8.500	7.8200
9.000	8.7100
9.500	9.6100
10.000	10.5000
10.500	11.4000
11.000	12.2900
11.500	12.8600
12.000	12.8600

Name: AREA 4A Base Flow(cfs): 0.000 Init Stage(ft): 7.000
Group: BASE Warn Stage(ft): 15.000
Type: Stage/Area

Stage(ft)	Area(ac)
7.000	0.0000
7.500	0.1300
8.000	0.1800
8.500	0.4500
9.000	0.8700
9.500	1.3000
10.000	1.7200
10.500	2.0900
11.000	2.4600

Name: AREA 4B Base Flow(cfs): 0.000 Init Stage(ft): 3.000
Group: BASE Warn Stage(ft): 15.000
Type: Stage/Area

Stage(ft)	Area(ac)
3.000	0.0000
3.500	0.1000
4.000	0.1000
4.500	0.1000
5.000	0.1000
5.500	0.1000
6.000	0.1000
6.500	0.1600
7.000	0.4300
7.500	0.7100
8.000	0.9900
8.500	1.1000
9.000	1.1000

Name: AREA 4C Base Flow(cfs): 0.000 Init Stage(ft): 3.000
Group: BASE Warn Stage(ft): 15.000
Type: Stage/Area

Stage(ft)	Area(ac)
3.000	0.0600
3.500	0.0600
4.000	0.0600
4.500	0.0600
5.000	0.0600
5.500	0.0600
6.000	0.0600
6.500	0.4600
7.000	0.5400

Name: AREA SOUTH Base Flow(cfs): 0.000 Init Stage(ft): 1.400
Group: BASE Warn Stage(ft): 7.400
Type: Stage/Area

Stage(ft)	Area(ac)
1.400	0.0000
2.400	0.1300
3.400	0.2700
4.400	0.4200
5.400	0.5900
6.400	0.8200
7.400	1.4500

8.400	2.8200
9.400	2.8300
10.400	2.8500
11.400	2.8700
12.400	2.8800
13.400	2.9000

Name: Lake Worth Base Flow(cfs): 0.000 Init Stage(ft): 0.160
Group: BASE Warn Stage(ft): 15.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	999.000
999.00	999.000

==========
==== Cross Sections ==========
==========

Name: OVERLAND Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	7.400	0.035000
43.500	7.300	0.035000
95.160	7.200	0.035000
143.850	7.400	0.035000

==========
==== Pipes ==========
==========

Name: OUTFALL 1 From Node: AREA 2-3 Length(ft): 100.00
Group: BASE To Node: Lake Worth Count: 1
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	24.00	24.00
Rise(in):	24.00	24.00
Invert(ft):	0.200	0.200
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: OUTFALL 2 From Node: AREA 2-3 Length(ft): 400.00
Group: BASE To Node: Lake Worth Count: 1
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	21.00	21.00
Rise(in):	21.00	21.00
Invert(ft):	0.200	0.200
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: OUTFALL 3 From Node: AREA 2-3 Length(ft): 100.00
Group: BASE To Node: Lake Worth Count: 1

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	18.00	18.00
Rise(in):	18.00	18.00
Invert(ft):	0.200	0.200
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: OUTFALL 4 From Node: AREA 2-3 Length(ft): 100.00
Group: BASE To Node: Lake Worth Count: 1

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	21.00	21.00
Rise(in):	21.00	21.00
Invert(ft):	0.200	0.200
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: OUTFALL 5 From Node: AREA 2-3 Length(ft): 120.00
Group: BASE To Node: Lake Worth Count: 1

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	10.00	10.00
Rise(in):	10.00	10.00
Invert(ft):	0.200	0.200
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: OUTFALL 6 From Node: AREA 2-3 Length(ft): 120.00
Group: BASE To Node: Lake Worth Count: 1

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	21.00	21.00
Rise(in):	21.00	21.00
Invert(ft):	0.200	0.200
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```
-----------------------------------------------------------------------------------------------
        Name: OUTFALL 7          From Node: AREA 2-3          Length(ft): 120.00
       Group: BASE                 To Node: Lake Worth              Count: 1
                                                       Friction Equation: Average Conveyance
              UPSTREAM       DOWNSTREAM                Solution Algorithm: Automatic
    Geometry: Circular       Circular                              Flow: Both
    Span(in): 15.00          15.00                     Entrance Loss Coef: 0.50
    Rise(in): 15.00          15.00                        Exit Loss Coef: 1.00
  Invert(ft): 0.200          0.200                        Bend Loss Coef: 0.00
 Manning's N: 0.012000       0.012000                   Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000          0.000                       Inlet Ctrl Spec: Use dn
Bot Clip(in): 0.000          0.000                     Stabilizer Option: None


Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall


=================================================================================
==== Drop Structures ============================================================
=================================================================================

        Name: 4A-4B              From Node: AREA 4A           Length(ft): 30.00
       Group: BASE                 To Node: AREA 4B                Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
    Geometry: Circular       Circular                  Solution Algorithm: Most Restrictive
    Span(in): 18.00          18.00                                 Flow: Both
    Rise(in): 18.00          18.00                     Entrance Loss Coef: 0.900
  Invert(ft): 3.250          3.250                        Exit Loss Coef: 1.000
 Manning's N: 0.012000       0.012000                   Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000          0.000                       Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000          0.000                         Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall


*** Weir 1 of 1 for Drop Structure 4A-4B ***
                                                                                  TABLE
                 Count: 1                       Bottom Clip(in): 0.000
                  Type: Horizontal                 Top Clip(in): 0.000
                  Flow: Both                     Weir Disc Coef: 3.200
              Geometry: Circular               Orifice Disc Coef: 0.600

              Span(in): 18.00                        Invert(ft): 7.340
              Rise(in): 18.00                  Control Elev(ft): 7.340


-----------------------------------------------------------------------------------------------
        Name: 4B-4C              From Node: AREA 4B           Length(ft): 20.00
       Group: BASE                 To Node: AREA 4C                Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
    Geometry: Circular       Circular                  Solution Algorithm: Most Restrictive
    Span(in): 18.00          18.00                                 Flow: Both
    Rise(in): 18.00          18.00                     Entrance Loss Coef: 0.900
  Invert(ft): 3.250          3.250                        Exit Loss Coef: 1.000
 Manning's N: 0.012000       0.012000                   Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000          0.000                       Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000          0.000                         Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall


*** Weir 1 of 1 for Drop Structure 4B-4C ***
                                                                                  TABLE
                 Count: 1                       Bottom Clip(in): 0.000
                  Type: Horizontal                 Top Clip(in): 0.000
                  Flow: Both                     Weir Disc Coef: 3.200
              Geometry: Circular               Orifice Disc Coef: 0.600
```

```
              Span(in): 18.00                        Invert(ft): 5.020
              Rise(in): 18.00                  Control Elev(ft): 5.020


-----------------------------------------------------------------------------------------------------
         Name: 4C-3                 From Node: AREA 4C            Length(ft): 100.00
        Group: BASE                   To Node: AREA 2-3                 Count: 1

              UPSTREAM        DOWNSTREAM                  Friction Equation: Automatic
     Geometry: Circular       Circular                   Solution Algorithm: Most Restrictive
     Span(in): 18.00          18.00                                  Flow: Both
     Rise(in): 18.00          18.00                     Entrance Loss Coef: 0.900
   Invert(ft): 1.000          1.000                         Exit Loss Coef: 1.000
  Manning's N: 0.012000       0.012000                    Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                        Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                          Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall


*** Weir 1 of 1 for Drop Structure 4C-3 ***
                                                                                          TABLE
                  Count: 1                        Bottom Clip(in): 0.000
                   Type: Horizontal                  Top Clip(in): 0.000
                   Flow: Both                      Weir Disc Coef: 3.200
               Geometry: Circular               Orifice Disc Coef: 0.600

              Span(in): 18.00                        Invert(ft): 4.490
              Rise(in): 18.00                  Control Elev(ft): 4.490


=================================================================================
==== Weirs ======================================================================
=================================================================================

         Name: OVERLAND FLOW        From Node: AREA SOUTH
        Group: BASE                   To Node: LAKE WORTH
         Flow: Both                      Count: 1
         Type: Vertical: Mavis       Geometry: Trapezoidal

           Bottom Width(ft): 0.00
       Left Side Slope(h/v): 7.50
      Right Side Slope(h/v): 750.00
                 Invert(ft): 5.100
      Control Elevation(ft): 5.100
     Struct Opening Dim(ft): 9999.00
                                                TABLE
             Bottom Clip(ft): 0.000
                Top Clip(ft): 0.000
        Weir Discharge Coef: 2.600
     Orifice Discharge Coef: 0.600

Natural ground exiting from depressional area to the east into Lake Worth.

=================================================================================
==== Hydrology Simulations ======================================================
=================================================================================

         Name: 25YR3D
     Filename: P:\17212\Permit\SCA\SWM\PRE-03\25yr-3day\25Y3D.R32

      Override Defaults: Yes
    Storm Duration(hrs): 72.00
          Rainfall File: Sfwmd72
    Rainfall Amount(in): 13.50

Time(hrs)        Print Inc(min)
---------------- ---------------
72.000           15.00

=================================================================================
==== Routing Simulations ========================================================
=================================================================================

         Name: 25YR3D                Hydrology Sim: 25YR3D
     Filename: P:\17212\Permit\SCA\SWM\PRE-03\25yr-3day\25Y3D.I32

      Execute: Yes          Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 0.10                      Delta Z Factor: 0.00500
```

```
    Time Step Optimizer: 1.000
        Start Time(hrs): 0.000                    End Time(hrs): 360.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 10.0000
        Boundary Stages: TW-25                    Boundary Flows:


Time(hrs)        Print Inc(min)
---------------- ---------------
24.000           30.000
96.000           15.000
144.000          60.000
360.000          120.000

Group            Run
---------------- -----
BASE             Yes

==========================================================================================
==== Boundary Conditions ================================================================
==========================================================================================

      Name: TW-25                 Node: Lake Worth            Type: Stage

      Time(hrs)        Stage(ft)
---------------- ---------------
           0.000           0.160
          60.000           0.160
         160.000           0.160
         999.000           0.160
```

Exhibit E.4

Pre-Development AdICPR Model Output

```
            Basin Name: AREA 2-3
            Group Name: BASE
             Node Name: AREA 2-3
            Basin Type: Santa Barbara

   Spec Time Inc (min): 15.00
   Comp Time Inc (min): 15.00
         Rainfall File: Sfwmd72
  Rainfall Amount (in): 13.500
  Storm Duration (hrs): 72.00
                Status: Onsite
    Time of Conc (min): 10.00
      Time Shift (hrs): 0.00
             Area (ac): 12.860
          Curve Number: 84.000
              DCIA (%): 0.000

        Time Max (hrs): 59.75
        Flow Max (cfs): 77.777
    Runoff Volume (in): 11.456
   Runoff Volume (ft3): 534776.283


-------------------------------------------------------------------------------

            Basin Name: AREA 4A
            Group Name: BASE
             Node Name: AREA 4A
            Basin Type: Santa Barbara

   Spec Time Inc (min): 15.00
   Comp Time Inc (min): 15.00
         Rainfall File: Sfwmd72
  Rainfall Amount (in): 13.500
  Storm Duration (hrs): 72.00
                Status: Onsite
    Time of Conc (min): 10.00
      Time Shift (hrs): 0.00
             Area (ac): 2.460
          Curve Number: 79.000
              DCIA (%): 0.000

        Time Max (hrs): 59.75
        Flow Max (cfs): 14.447
    Runoff Volume (in): 10.762
   Runoff Volume (ft3): 96105.324


-------------------------------------------------------------------------------

            Basin Name: AREA 4B
            Group Name: BASE
             Node Name: AREA 4B
            Basin Type: Santa Barbara

   Spec Time Inc (min): 15.00
   Comp Time Inc (min): 15.00
         Rainfall File: Sfwmd72
  Rainfall Amount (in): 13.500
  Storm Duration (hrs): 72.00
                Status: Onsite
    Time of Conc (min): 10.00
      Time Shift (hrs): 0.00
             Area (ac): 1.100
          Curve Number: 74.000
              DCIA (%): 0.000

        Time Max (hrs): 59.75
        Flow Max (cfs): 6.215
    Runoff Volume (in): 10.041
   Runoff Volume (ft3): 40092.233


-------------------------------------------------------------------------------

            Basin Name: AREA 4C
            Group Name: BASE
             Node Name: AREA 4C
            Basin Type: Santa Barbara

   Spec Time Inc (min): 15.00
   Comp Time Inc (min): 15.00
         Rainfall File: Sfwmd72
  Rainfall Amount (in): 13.500
  Storm Duration (hrs): 72.00
                Status: Onsite
    Time of Conc (min): 10.00
```

```
       Time Shift (hrs): 0.00
              Area (ac): 0.540
          Curve Number: 71.000
              DCIA (%): 0.000

         Time Max (hrs): 59.75
         Flow Max (cfs): 2.966
     Runoff Volume (in): 9.594
    Runoff Volume (ft3): 18805.290


-------------------------------------------------------------------------------

             Basin Name: AREA SOUTH
             Group Name: BASE
              Node Name: AREA SOUTH
             Basin Type: Santa Barbara

    Spec Time Inc (min): 15.00
    Comp Time Inc (min): 15.00
          Rainfall File: Sfwmd72
   Rainfall Amount (in): 13.500
   Storm Duration (hrs): 72.00
                 Status: Onsite
     Time of Conc (min): 10.00
       Time Shift (hrs): 0.00
              Area (ac): 2.900
          Curve Number: 56.000
              DCIA (%): 0.000

         Time Max (hrs): 59.75
         Flow Max (cfs): 12.899
     Runoff Volume (in): 7.192
    Runoff Volume (ft3): 75705.900
```

FPL-RIVIERA BEACH
PRE-DEVELOPMENT MODEL
NODE MAXIMUM

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
AREA 2-3	BASE	25YR3D	59.79	3.766	15.000	-0.0037	7845	59.75	85.315	59.79	81.411
AREA 4A	BASE	25YR3D	60.12	8.519	15.000	-0.0005	20281	59.75	14.446	59.74	8.024
AREA 4B	BASE	25YR3D	60.48	7.169	15.000	0.0006	22862	59.75	14.220	60.69	8.080
AREA 4C	BASE	25YR3D	59.96	5.800	15.000	0.0005	2614	59.75	9.673	60.05	9.615
AREA SOUTH	BASE	25YR3D	60.16	5.243	7.400	0.0005	24535	59.75	12.898	60.16	6.006
Lake Worth	BASE	25YR3D	0.00	0.160	15.000	0.0000	42	59.79	81.411	0.00	0.000

FPL-RIVIERA BEACH
PRE-DEVELOPMENT MODEL
LINK MAXIMUM

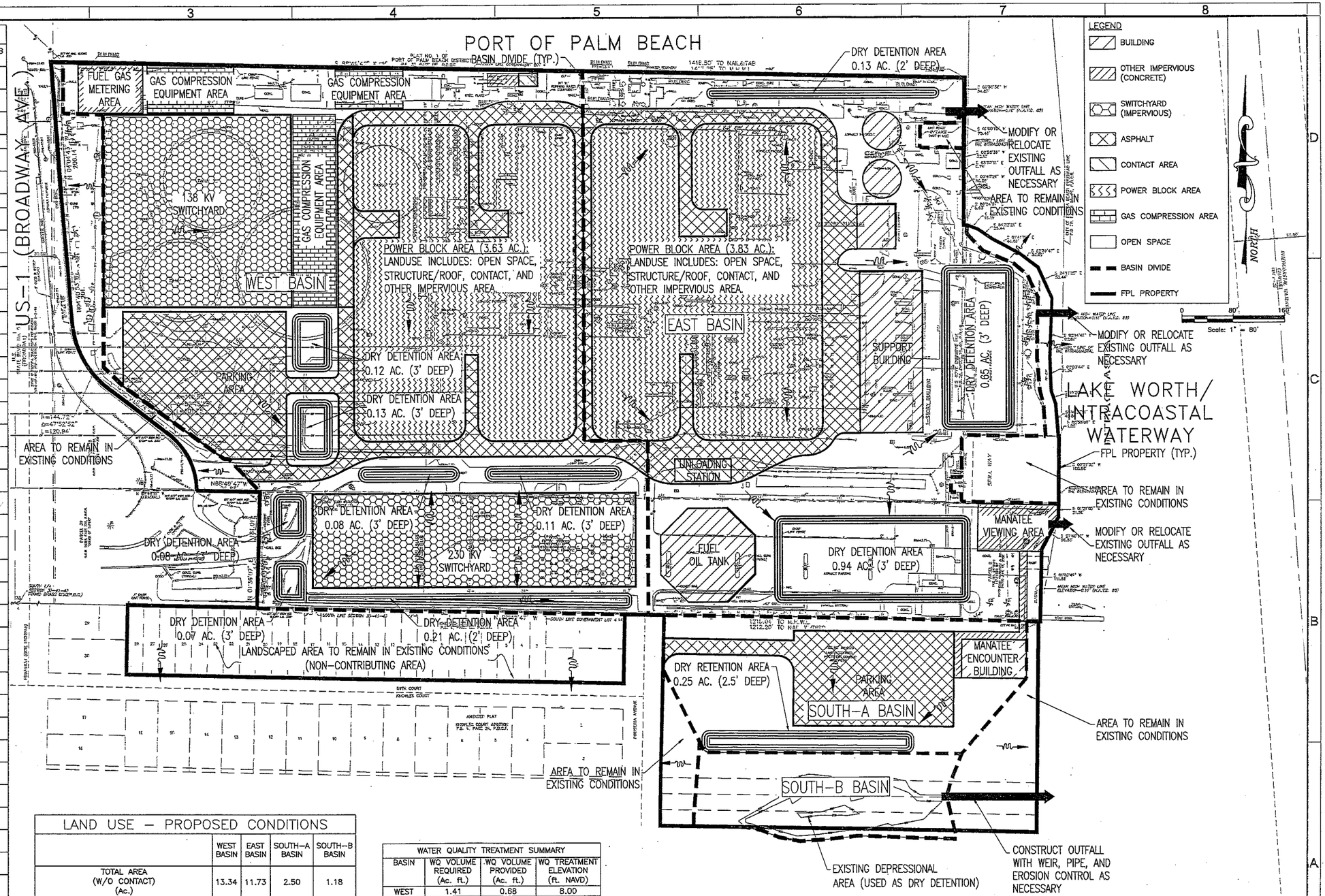
Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
4A-4B	BASE	25YR3D	59.74	8.024	-0.006	60.12	8.519	60.48	7.169
4B-4C	BASE	25YR3D	60.69	8.080	-0.004	60.48	7.169	59.96	5.800
4C-3	BASE	25YR3D	60.05	9.615	0.007	59.96	5.800	59.79	3.766
OUTFALL 1	BASE	25YR3D	59.79	19.312	-0.031	59.79	3.766	59.78	1.780
OUTFALL 2	BASE	25YR3D	59.79	9.390	-0.015	59.79	3.766	59.77	1.340
OUTFALL 3	BASE	25YR3D	59.79	11.670	-0.016	59.79	3.766	59.78	1.501
OUTFALL 4	BASE	25YR3D	59.79	15.472	-0.023	59.79	3.766	59.78	1.654
OUTFALL 5	BASE	25YR3D	59.79	3.129	-0.003	59.79	3.766	59.78	0.961
OUTFALL 6	BASE	25YR3D	59.79	14.765	-0.022	59.79	3.766	59.78	1.625
OUTFALL 7	BASE	25YR3D	59.79	7.673	-0.010	59.79	3.766	59.78	1.299
OVERLAND FLOW	BASE	25YR3D	60.16	6.006	0.008	60.16	5.243	0.00	0.160

Exhibit F.1

Post-Development Basin Map

LAND USE – PROPOSED CONDITIONS		WEST BASIN	EAST BASIN	SOUTH–A BASIN	SOUTH–B BASIN
OPEN SPACE (OUTSIDE POWER BLOCK)	AREA (Ac.)	1.87	3.26	1.09	–
	START ELEV. (ft. NAVD)	9.00	5.00	5.00	–
	END ELEV. (ft. NAVD)	13.00	10.00	9.00	–
OPEN SPACE (INSIDE POWER BLOCK)	AREA (AC)	2.18	2.83	–	–
	START ELEV. (ft. NAVD)	10.00	7.00	–	–
	END ELEV. (ft. NAVD)	12.00	11.00	–	–
SWITCHYARD	AREA (AC)	3.69	–	–	–
	START ELEV. (ft. NAVD)	9.50	–	–	–
	END ELEV. (ft. NAVD)	11.00	–	–	–
GAS COMPRESSION AREAS	AREA (AC)	0.83	–	–	–
	START ELEV. (ft. NAVD)	11.00	–	–	–
	END ELEV. (ft. NAVD)	12.00	–	–	–
STRUCTURE/ROOF (OUTSIDE POWER BLOCK)	AREA (Ac.)	–	1.20	–	–
	START ELEV. (ft. NAVD)	–	8.00	–	–
STRUCTURE/ROOF (INSIDE POWER BLOCK)	AREA (Ac.)	0.16	0.15	–	–
	START ELEV. (ft. NAVD)	12.00	11.00	–	–
OTHER IMPERVIOUS (CONCRETE)	AREA (Ac.)	1.34	1.22	0.05	–
	START ELEV. (ft. NAVD)	12.00	10.00	5.00	–
	END ELEV. (ft. NAVD)	–	–	8.00	–
ASPHALT	AREA (Ac.)	2.47	1.35	0.97	–
	START ELEV. (ft. NAVD)	9.00	7.00	6.50	–
	END ELEV. (ft. NAVD)	12.00	10.00	7.50	–
DRY DETENTION SLOPE (2' DEEP)	AREA (Ac.)	0.18	0.13	–	–
	START ELEV. (ft. NAVD)	7.00	4.00	–	–
	END ELEV. (ft. NAVD)	9.00	6.00	–	–
DRY DETENTION BOTTOM (2' DEEP)	AREA (Ac.)	0.03	–	–	–
	START ELEV. (ft. NAVD)	7.00	–	–	–
DRY DETENTION SLOPE (3' DEEP)	AREA (Ac.)	0.43	0.42	–	–
	START ELEV. (ft. NAVD)	6.00	3.00	–	–
	END ELEV. (ft. NAVD)	9.00	6.00	–	–
DRY DETENTION BOTTOM (3' DEEP)	AREA (Ac.)	0.16	1.17	–	–
	START ELEV. (ft. NAVD)	6.00	3.00	–	–
DRY RETENTION SLOPE (2.5' DEEP)	AREA (Ac.)	–	–	0.18	–
	START ELEV. (ft. NAVD)	–	–	4.00	–
	END ELEV. (ft. NAVD)	–	–	6.50	–
DRY RETENTION BOTTOM (2.5' DEEP)	AREA (Ac.)	–	–	0.07	–
	START ELEV. (ft. NAVD)	–	–	4.00	–
DEPRESSIONAL AREA	AREA (Ac.)	–	–	–	1.18
	START ELEV. (ft. NAVD)	–	–	–	1.40
	END ELEV. (ft. NAVD)	–	–	–	8.00

*CONTACT AREA IS CURBED WITH DRAINAGE TO BE COLLECTED IN A SUMP AND TREATED SEPARATELY. NOT INCLUDED IN CALCULATIONS.



LAND USE – PROPOSED CONDITIONS	WEST BASIN	EAST BASIN	SOUTH–A BASIN	SOUTH–B BASIN
TOTAL AREA (W/O CONTACT) (Ac.)	13.34	11.73	2.50	1.18
CONTACT AREA (Ac.)	0.29	0.29	0.00	0
TOTAL AREA (W/ CONTACT)	13.63	12.02	2.50	1.18

WATER QUALITY TREATMENT SUMMARY			
BASIN	WQ VOLUME REQUIRED (Ac. ft.)	WQ VOLUME PROVIDED (Ac. ft.)	WQ TREATMENT ELEVATION (ft. NAVD)
WEST	1.41	0.68	8.00
EAST	0.73	1.46	4.20
SOUTH–A	0.14	0.19	5.50
SOUTH–B	0.07	0.57	4.30
TOTAL	2.35	2.90	–

REV	DATE	DESCRIPTION	APPR
7			
6			
5			
4			
3			
2			
1			

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY BF
DRAWN BY RCF
CHECKED BY PL
DATE 8/27/2008
PROJECT ENGINEER
REG NUMBER
EXP DATE
PROJECT NUMBER 17212
CADD STANDARDS

BOYLE | AECOM
BOYLE ENGINEERING
3550 S.W. Corporate Parkway
Palm City, Florida 34990
T 772-286-3883 F 772-286-3925
BPR & FBPE License No's 2005 & LB7622
www.boyle.aecom.com

FLORIDA POWER & LIGHT
RIVIERA BEACH ENERGY CENTER

POST-DEVELOPMENT BASIN MAP

DRAWING 17212 LU POST EXHIBIT
SHEET F-1 OF SHEETS

Exhibit F.2

Post-Development Land Use / Stage-Storage Calculations

Boyle Engineering Corp.
3550 SW Corporate Pkwy.
Palm City, FL 34990
(772) 286-3883

Post-Development Land Use and Stage-Storage Calculations
FPL Riviera Beach - West Basin

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type: Land Use & Stage-Storage

Average Ground Elevation (EL_{grnd}) =	10.60	ft NAVD	
Soil Type =	Coastal		
Max. Available Soil Storage (S_{max}) =	10.9	in	(Per SFWMD Coastal soil category at 4' Depth)
Compaction Factor ($F_{compact}$) =	25%	%	(Use 25% for developed site)
Compacted Soil Storage ($S_{compact}$) =	8.18	in	(S_{max})($F_{compact}$)
Available Soil Storage (S_{avail}) =	2.60	in	(A_p)($S_{compact}$)/(A_t)
Curve Number (CN) =	79		1000 / (S_{avail}+10)
Required Water Quality Treatment Volume (V_{wq}) =	1.41	ac-ft	(SFWMD Dry Detention/Exfiltration WQ Treatment Requirement)
Water Quality Elevation (EL_{wq}) =	8.00	ft NAVD	Partial Water Quality Volume for West Basin is provided in West Basin. The remaining will be provided in basins located downstream.
Total Time of Concentration =	10.00	minutes	

Park	Open Space (Outside Power Block)	Open Space (Inside Power Block)	Switchyard	Gas Compression Areas	Concrete	Asphalt	Structure/Roof (Inside Power Block)	Detention 2' Deep (slope)	Detention 2' Deep (bottom)	Detention 3' Deep (slope)	Detention 3' Deep (bottom)	Total Area
	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)
Total Areas (A_t)	1.87	2.18	3.69	0.83	1.34	2.47	0.16	0.18	0.03	0.43	0.16	13.34
Bldg. %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	1.20%
Bldg. Area (A_r)	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.16
Pervious %	80.00%	80.00%	0.00%	25.00%	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	31.84%
Pervious Area (A_p)	1.50	1.74	0.00	0.21	0.00	0.00	0.00	0.18	0.03	0.43	0.16	4.25
Impervious %	20.00%	20.00%	100.00%	75.00%	100.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	66.96%
Impervious Area (A_i)	0.37	0.44	3.69	0.62	1.34	2.47	0.00	0.00	0.00	0.00	0.00	8.93
SWM %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
SWM Area (Ac.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Contact Area
(ac)
0.29
100.00%
0.29
0.00%
0.00
0.00%
0.00
0.00%
0.00

Boyle Engineering Corp.
3550 SW Corporate Pkwy.
Palm City, FL 34990
(772) 286-3883

Post-Development Land Use and Stage-Storage Calculations
FPL Riviera Beach - West Basin

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type: Land Use & Stage-Storage

Starting Stage = 6.00
Ending Stage = 13.00
Stage Increment = 0.25

Name	Open Space (Outside Power Block)	Open Space (Inside Power Block)	Switchyard	Gas Compression Areas	Concrete	Asphalt	Structure/Roof (Inside Power Block)	Detention 2' Deep (slope)	Detention 2' Deep (bottom)	Detention 3' Deep (slope)	Detention 3' Deep (bottom)		
Area	1.87	2.18	3.69	0.83	1.34	2.47	0.00	0.18	0.03	0.43	0.16		
Start Elev	9.00	10.00	9.50	11.00	12.00	9.00	12.00	7.00	7.00	6.00	6.00		
End Elev	13.00	12.00	11.00	12.00		12.00		9.00		9.00			
Stage Feet NAVD	Linear Storage Ac-ft	Linear Storage Ac-ft	Linear Storage Ac-ft	Linear Storage Ac-ft	Vert Storage Ac-ft	Linear Storage Ac-ft	Vert Storage Ac-ft	Linear Storage Ac-ft	Vert Storage Ac-ft	Linear Storage Ac-ft	Vert Storage Ac-ft	Total Storage ac-ft	Available WQ ac-ft
6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04
6.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.08	0.10	0.10
6.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.12	0.16	0.16
7.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.16	0.23	0.23
7.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.11	0.20	0.32	0.32
7.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.16	0.24	0.43	0.43
7.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.22	0.28	0.55	0.55
8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.29	0.32	0.68	0.68
8.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.04	0.36	0.36	0.83	0.83
8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.45	0.40	0.99	0.99
8.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.54	0.44	1.17	1.17
9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06	0.65	0.48	1.37	1.37
9.25	0.01	0.00	0.00	0.00	0.00	0.03	0.00	0.23	0.07	0.75	0.52	1.61	1.57
9.50	0.06	0.00	0.00	0.00	0.00	0.10	0.00	0.27	0.08	0.86	0.56	1.93	1.77
9.75	0.13	0.00	0.08	0.00	0.00	0.23	0.00	0.32	0.08	0.97	0.60	2.40	1.97
10.00	0.23	0.00	0.31	0.00	0.00	0.41	0.00	0.36	0.09	1.08	0.64	3.12	2.17
10.25	0.37	0.03	0.69	0.00	0.00	0.64	0.00	0.41	0.10	1.18	0.68	4.10	2.37
10.50	0.53	0.14	1.23	0.00	0.00	0.93	0.00	0.45	0.11	1.29	0.72	5.38	2.57
10.75	0.72	0.31	1.92	0.00	0.00	1.26	0.00	0.50	0.11	1.40	0.76	6.97	2.77
11.00	0.94	0.55	2.77	0.00	0.00	1.65	0.00	0.54	0.12	1.51	0.80	8.86	2.97
11.25	1.18	0.85	3.69	0.03	0.00	2.08	0.00	0.59	0.13	1.61	0.84	11.00	3.17
11.50	1.46	1.23	4.61	0.10	0.00	2.57	0.00	0.63	0.14	1.72	0.88	13.34	3.37
11.75	1.77	1.67	5.54	0.23	0.00	3.11	0.00	0.68	0.14	1.83	0.92	15.88	3.57
12.00	2.10	2.18	6.46	0.42	0.00	3.71	0.00	0.72	0.15	1.94	0.96	18.63	3.77
12.25	2.47	2.73	7.38	0.62	0.34	4.32	0.00	0.77	0.16	2.04	1.00	21.82	3.97
12.50	2.86	3.27	8.30	0.83	0.67	4.94	0.00	0.81	0.17	2.15	1.04	25.04	4.17
12.75	3.29	3.82	9.23	1.04	1.01	5.56	0.00	0.86	0.17	2.26	1.08	28.29	4.37
13.00	3.74	4.36	10.15	1.25	1.34	6.18	0.00	0.90	0.18	2.37	1.12	31.57	4.57

Boyle Engineering Corporation
3550 SW Corporate Pkwy.
Palm City, Florida 34990
(772) 286-3883

Stage-Area Calculations
FPL Riviera Beach - West Basin

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type Post-Development Stage-Area

Starting Stage 6.00
Ending Stage 13.00
Stage Increment 0.25 Note: Stage Increment < End Elev - Start Elev

Name	Open Space (Outside Power Block)	Open Space (Inside Power Block)	Switchyard	Gas Compression Areas	Concrete	Asphalt	Structure/Roof (Inside Power Block)	Detention 2' Deep (slope)	Detention 2' Deep (bottom)	Detention 3' Deep (slope)	Detention 3' Deep (bottom)
Area	1.87	2.18	3.69	0.83	1.34	2.47	0.00	0.18	0.03	0.43	0.16
Start Elev	9.00	10.00	9.50	11.00	12.00	9.00	12.00	7.00	7.00	6.00	6.00
End Elev	13.00	12.00	11.00	12.00	0.00	12.00	0.00	9.00	0.00	9.00	0.00

Stage Feet NAVD	Linear Area Ac	Linear Area Ac	Linear Area Ac	Linear Area Ac	Vert Area Ac	Linear Area Ac	Vert Area Ac	Linear Area Ac	Vert Area Ac	Linear Area Ac	Vert Area Ac	Total Area Ac
6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.16
6.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.16	0.20
6.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.16	0.23
6.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.16	0.27
7.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.14	0.16	0.33
7.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.18	0.16	0.39
7.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.22	0.16	0.45
7.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.03	0.25	0.16	0.51
8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.03	0.29	0.16	0.57
8.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.03	0.32	0.16	0.63
8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.03	0.36	0.16	0.68
8.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.03	0.39	0.16	0.74
9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.03	0.43	0.16	0.80
9.25	0.12	0.00	0.00	0.00	0.00	0.21	0.00	0.18	0.03	0.43	0.16	1.12
9.50	0.23	0.00	0.00	0.00	0.00	0.41	0.00	0.18	0.03	0.43	0.16	1.45
9.75	0.35	0.00	0.62	0.00	0.00	0.62	0.00	0.18	0.03	0.43	0.16	2.38
10.00	0.47	0.00	1.23	0.00	0.00	0.82	0.00	0.18	0.03	0.43	0.16	3.32
10.25	0.58	0.27	1.85	0.00	0.00	1.03	0.00	0.18	0.03	0.43	0.16	4.53
10.50	0.70	0.55	2.46	0.00	0.00	1.24	0.00	0.18	0.03	0.43	0.16	5.74
10.75	0.82	0.82	3.08	0.00	0.00	1.44	0.00	0.18	0.03	0.43	0.16	6.95
11.00	0.94	1.09	3.69	0.00	0.00	1.65	0.00	0.18	0.03	0.43	0.16	8.16
11.25	1.05	1.36	3.69	0.21	0.00	1.85	0.00	0.18	0.03	0.43	0.16	8.96
11.50	1.17	1.64	3.69	0.42	0.00	2.06	0.00	0.18	0.03	0.43	0.16	9.77
11.75	1.29	1.91	3.69	0.62	0.00	2.26	0.00	0.18	0.03	0.43	0.16	10.57
12.00	1.40	2.18	3.69	0.83	1.34	2.47	0.00	0.18	0.03	0.43	0.16	12.71
12.25	1.52	2.18	3.69	0.83	1.34	2.47	0.00	0.18	0.03	0.43	0.16	12.83
12.50	1.64	2.18	3.69	0.83	1.34	2.47	0.00	0.18	0.03	0.43	0.16	12.95
12.75	1.75	2.18	3.69	0.83	1.34	2.47	0.00	0.18	0.03	0.43	0.16	13.06
13.00	1.87	2.18	3.69	0.83	1.34	2.47	0.00	0.18	0.03	0.43	0.16	13.18

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(772) 286-3883

Post-Development Land Use and Stage-Storage Calculations
FPL Riviera Beach - East Basin

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type: Land Use & Stage-Storage

Average Ground Elevation (EL_{grnd}) =	7.67	ft NAVD	
Soil Type =	Coastal		
Max. Available Soil Storage (S_{max}) =	10.9	in	(Per SFWMD Coastal soil category at 4' Depth)
Compaction Factor ($F_{compact}$) =	25%	%	(Use 25% for developed site)
Compacted Soil Storage ($S_{compact}$) =	8.18	in	(S_{max})($F_{compact}$)
Available Soil Storage (S_{avail}) =	4.59	in	(A_p)($S_{compact}$)/(A_t)
Curve Number (CN) =	69		1000 / (S_{avail}+10)
Required Water Quality Treatment Volume for Basin (V_{wq}) =	0.73	ac-ft	(SFWMD Dry Detention/Exfiltration WQ Treatment Requirement)
Total Water Quality treatment	1.46	ac-ft	Additional Water Quality volume is required to be provided for the upstream West Basin. This additional volume
Water Quality Elevation (EL_{wq}) =	4.30	ft NAVD	is provided within the East Basin. See WQ calculations.
Total Time of Concentration =	10.00	minutes	

Park	Open Space (Outside Power Block)	Open Space (Inside Power Block)	Concrete	Asphalt	Structure/Roof (Inside Power Block)	Structure/Roof (Outside Power Block)	Detention 2' Deep (slope)	Detention 3' Deep (slope)	Detention 3' Deep (bottom)	Total Area
	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)
Total Areas (A_t)	3.26	2.83	1.22	1.35	0.15	1.20	0.13	0.42	1.17	11.73
Bldg. %	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	0.00%	0.00%	0.00%	11.51%
Bldg. Area (A_r)	0.00	0.00	0.00	0.00	0.15	1.20	0.00	0.00	0.00	1.35
Pervious %	80.00%	80.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	56.20%
Pervious Area (A_p)	2.61	2.26	0.00	0.00	0.00	0.00	0.13	0.42	1.17	6.59
Impervious %	20.00%	20.00%	100.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	32.29%
Impervious Area (A_i)	0.65	0.57	1.22	1.35	0.00	0.00	0.00	0.00	0.00	3.79
SWM %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
SWM Area (Ac.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Contact Area
(ac)
0.29
100.00%
0.29
0.00%
0.00
0.00%
0.00
0.00%
0.00

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3550 SW Corporate Pkwy.
Palm City, FL 34990
(772) 286-3883

Post-Development Land Use and Stage-Storage Calculations
FPL Riviera Beach - East Basin

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type: Land Use & Stage-Storage

Starting Stage = 3.00
Ending Stage = 10.00
Stage Increment = 0.25

Name	Open Space (Outside Power Block)	Open Space (Inside Power Block)	Concrete	Asphalt	Structure/Roof (Inside Power Block)	Structure/Roof (Outside Power Block)	Detention 2' Deep (slope)	Detention 3' Deep (slope)	Detention 3' Deep (bottom)		
Area	3.26	2.83	1.22	1.35	0.00	0.00	0.13	0.42	1.17		
Start Elev	5.00	7.00	10.00	7.00	11.00	8.00	4.00	3.00	3.00		
End Elev	10.00	11.00		10.00			6.00	6.00			
Stage Feet NAVD	Linear Storage Ac-ft	Linear Storage Ac-ft	Vert Storage Ac-ft	Linear Storage Ac-ft	Vert Storage Ac-ft	Vert Storage Ac-ft	Linear Storage Ac-ft	Linear Storage Ac-ft	Vert Storage Ac-ft	Total Storage ac-ft	Available WQ ac-ft
3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.30	0.30
3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.59	0.60	0.60
3.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.88	0.92	0.92
4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.17	1.24	1.24
4.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	1.46	1.57	1.57
4.50	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.16	1.76	1.92	1.92
4.75	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.21	2.05	2.28	2.28
5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.28	2.34	2.65	2.65
5.25	0.02	0.00	0.00	0.00	0.00	0.00	0.05	0.35	2.63	3.06	3.04
5.50	0.08	0.00	0.00	0.00	0.00	0.00	0.07	0.44	2.93	3.52	3.44
5.75	0.18	0.00	0.00	0.00	0.00	0.00	0.10	0.53	3.22	4.03	3.85
6.00	0.33	0.00	0.00	0.00	0.00	0.00	0.13	0.63	3.51	4.60	4.27
6.25	0.51	0.00	0.00	0.00	0.00	0.00	0.16	0.74	3.80	5.21	4.70
6.50	0.73	0.00	0.00	0.00	0.00	0.00	0.20	0.84	4.10	5.86	5.13
6.75	1.00	0.00	0.00	0.00	0.00	0.00	0.23	0.95	4.39	6.56	5.56
7.00	1.30	0.00	0.00	0.00	0.00	0.00	0.26	1.05	4.68	7.29	5.99
7.25	1.65	0.02	0.00	0.01	0.00	0.00	0.29	1.16	4.97	8.11	6.42
7.50	2.04	0.09	0.00	0.06	0.00	0.00	0.33	1.26	5.27	9.03	6.85
7.75	2.47	0.20	0.00	0.13	0.00	0.00	0.36	1.37	5.56	10.07	7.28
8.00	2.93	0.35	0.00	0.23	0.00	0.00	0.39	1.47	5.85	11.22	7.71
8.25	3.44	0.55	0.00	0.35	0.00	0.00	0.42	1.58	6.14	12.49	8.14
8.50	3.99	0.80	0.00	0.51	0.00	0.00	0.46	1.68	6.44	13.87	8.57
8.75	4.58	1.08	0.00	0.69	0.00	0.00	0.49	1.79	6.73	15.36	9.00
9.00	5.22	1.42	0.00	0.90	0.00	0.00	0.52	1.89	7.02	16.96	9.43
9.25	5.89	1.79	0.00	1.14	0.00	0.00	0.55	2.00	7.31	18.68	9.86
9.50	6.60	2.21	0.00	1.41	0.00	0.00	0.59	2.10	7.61	20.51	10.29
9.75	7.36	2.68	0.00	1.70	0.00	0.00	0.62	2.21	7.90	22.45	10.72
10.00	8.15	3.18	0.00	2.03	0.00	0.00	0.65	2.31	8.19	24.51	11.15

Boyle Engineering Corporation
3550 SW Corporate Pkwy.
Palm City, Florida 34990
(772) 286-3883

Stage-Area Calculations
FPL Riviera Beach - East Basin

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type Post-Development Stage-Area

Starting Stage 3.00
Ending Stage 10.00
Stage Increment 0.25 Note: Stage Increment < End Elev - Start Elev

Name	Open Space (Outside Power Block)	Open Space (Inside Power Block)	Concrete	Asphalt	Structure/Roof (Inside Power Block)	Structure/Roof (Outside Power Block)	Detention 2' Deep (slope)	Detention 3' Deep (slope)	Detention 3' Deep (bottom)	
Area	3.26	2.83	1.22	1.35	0.00	0.00	0.13	0.42	1.17	
Start Elev	5.00	7.00	10.00	7.00	11.00	8.00	4.00	3.00	3.00	
End Elev	10.00	11.00	0.00	10.00	0.00	0.00	6.00	6.00	0.00	
Stage Feet NAVD	Linear Area Ac	Linear Area Ac	Vert Area Ac	Linear Area Ac	Vert Area Ac	Vert Area Ac	Linear Area Ac	Linear Area Ac	Vert Area Ac	Total Area Ac
3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.17	1.17
3.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	1.17	1.21
3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.17	1.24
3.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	1.17	1.28
4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	1.17	1.31
4.25	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.18	1.17	1.36
4.50	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.21	1.17	1.41
4.75	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.25	1.17	1.46
5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.28	1.17	1.52
5.25	0.16	0.00	0.00	0.00	0.00	0.00	0.08	0.32	1.17	1.73
5.50	0.33	0.00	0.00	0.00	0.00	0.00	0.10	0.35	1.17	1.94
5.75	0.49	0.00	0.00	0.00	0.00	0.00	0.11	0.39	1.17	2.16
6.00	0.65	0.00	0.00	0.00	0.00	0.00	0.13	0.42	1.17	2.37
6.25	0.82	0.00	0.00	0.00	0.00	0.00	0.13	0.42	1.17	2.54
6.50	0.98	0.00	0.00	0.00	0.00	0.00	0.13	0.42	1.17	2.70
6.75	1.14	0.00	0.00	0.00	0.00	0.00	0.13	0.42	1.17	2.86
7.00	1.30	0.00	0.00	0.00	0.00	0.00	0.13	0.42	1.17	3.02
7.25	1.47	0.18	0.00	0.11	0.00	0.00	0.13	0.42	1.17	3.48
7.50	1.63	0.35	0.00	0.23	0.00	0.00	0.13	0.42	1.17	3.93
7.75	1.79	0.53	0.00	0.34	0.00	0.00	0.13	0.42	1.17	4.38
8.00	1.96	0.71	0.00	0.45	0.00	0.00	0.13	0.42	1.17	4.83
8.25	2.12	0.88	0.00	0.56	0.00	0.00	0.13	0.42	1.17	5.29
8.50	2.28	1.06	0.00	0.68	0.00	0.00	0.13	0.42	1.17	5.74
8.75	2.45	1.24	0.00	0.79	0.00	0.00	0.13	0.42	1.17	6.19
9.00	2.61	1.42	0.00	0.90	0.00	0.00	0.13	0.42	1.17	6.64
9.25	2.77	1.59	0.00	1.01	0.00	0.00	0.13	0.42	1.17	7.10
9.50	2.93	1.77	0.00	1.13	0.00	0.00	0.13	0.42	1.17	7.55
9.75	3.10	1.95	0.00	1.24	0.00	0.00	0.13	0.42	1.17	8.00
10.00	3.26	2.12	1.22	1.35	0.00	0.00	0.13	0.42	1.17	9.67

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3550 SW Corporate Pkwy.
Palm City, FL 34990
(772) 286-3883

Post-Development Land Use and Stage-Storage Calculations
FPL Riviera Beach - South-A Basin (Manatee Viewing Area)

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/28/2009

Computation Type: Land Use & Stage-Storage

Average Ground Elevation (EL_{grnd}) =	6.65	ft NAVD	
Soil Type =	Coastal		
Max. Available Soil Storage (S_{max}) =	10.9	in	(Per SFWMD Coastal soil category at 4' Depth)
Compaction Factor ($F_{compact}$) =	25%	%	(Use 25% for developed site)
Compacted Soil Storage ($S_{compact}$) =	8.18	in	$(S_{max})(F_{compact})$
Available Soil Storage (S_{avail}) =	3.67	in	$(A_p)(S_{compact})/(A_t)$
Curve Number (CN) =	73		$1000 / (S_{avail}+10)$
Required Water Quality Treatment Volume (V_{wq}) =	0.14	ac-ft	(SFWMD Dry Retention WQ Treatment Requirement)
Water Quality Elevation (EL_{wq}) =	5.50	ft NAVD	
Total Time of Concentration =	10.00	minutes	

Park	Open Space	Asphalt	Concrete	Building	Dry Retention Bottom	Dry Retention Slope	Total
	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)
Total Areas (A_t)	1.09	0.97	0.05	0.14	0.07	0.18	2.50
Bldg. %	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	5.60%
Bldg. Area (A_r)	0.00	0.00	0.00	0.14	0.00	0.00	0.14
Pervious %	80.00%	0.00%	0.00%	0.00%	100.00%	100.00%	44.88%
Pervious Area (A_p)	0.87	0.00	0.00	0.00	0.07	0.18	1.12
Impervious %	20.00%	100.00%	100.00%	0.00%	0.00%	0.00%	49.52%
Impervious Area (A_i)	0.22	0.97	0.05	0.00	0.00	0.00	1.24
SWM %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
SWM Area (Ac.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Starting Stage = 4.00
Ending Stage = 9.00
Stage Increment = 0.25

Name	Open Space	Asphalt	Concrete	Building	Dry Retention Bottom	Dry Retention Slope
Area	1.09	0.97	0.05	0.00	0.07	0.18
Start Elev	5.00	6.50	5.00	8.00	4.00	4.00
End Elev	9.00	7.50	8.00			6.50

Stage Feet NAVD	Linear Storage Ac-ft	Linear Storage Ac-ft	Linear Storage Ac-ft	Vert Storage Ac-ft	Vert Storage Ac-ft	Linear Storage Ac-ft	Total Storage ac-ft	Available WQ ac-ft
4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.25	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.02
4.50	0.00	0.00	0.00	0.00	0.04	0.01	0.04	0.04
4.75	0.00	0.00	0.00	0.00	0.05	0.02	0.07	0.07
5.00	0.00	0.00	0.00	0.00	0.07	0.04	0.11	0.11
5.25	0.01	0.00	0.00	0.00	0.09	0.06	0.15	0.14
5.50	0.03	0.00	0.00	0.00	0.11	0.08	0.22	0.19
5.75	0.08	0.00	0.00	0.00	0.12	0.11	0.31	0.23
6.00	0.14	0.00	0.01	0.00	0.14	0.14	0.43	0.28
6.25	0.21	0.00	0.01	0.00	0.16	0.18	0.57	0.34
6.50	0.31	0.00	0.02	0.00	0.18	0.23	0.73	0.40
6.75	0.42	0.03	0.03	0.00	0.19	0.27	0.94	0.46
7.00	0.55	0.12	0.03	0.00	0.21	0.32	1.22	0.53
7.25	0.69	0.27	0.04	0.00	0.23	0.36	1.59	0.59
7.50	0.85	0.49	0.05	0.00	0.25	0.41	2.04	0.65
7.75	1.03	0.73	0.06	0.00	0.26	0.45	2.53	0.71
8.00	1.23	0.97	0.08	0.00	0.28	0.50	3.05	0.78
8.25	1.44	1.21	0.09	0.00	0.30	0.54	3.58	0.84
8.50	1.67	1.46	0.10	0.00	0.32	0.59	4.12	0.90
8.75	1.92	1.70	0.11	0.00	0.33	0.63	4.69	0.96
9.00	2.18	1.94	0.13	0.00	0.35	0.68	5.27	1.03

Boyle Engineering Corporation
3550 SW Corporate Pkwy.
Palm City, Florida 34990
(772) 286-3883

Stage-Area Calculations
FPL Riviera Beach - South-A Basin (Manatee Viewing Area)

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type	Post-Development Stage-Area	
Starting Stage	4.00	
Ending Stage	9.00	
Stage Increment	0.25	Note: Stage Increment < End Elev - Start Elev

Name	Open Space	Asphalt	Concrete	Building	Dry Retention Bottom	Dry Retention Slope
Area	1.09	0.97	0.05	0.00	0.07	0.18
Start Elev	5.00	6.50	5.00	8.00	4.00	4.00
End Elev	9.00	7.50	8.00	0.00	0.00	6.50

Stage Feet NAVD	Linear Area Ac	Linear Area Ac	Linear Area Ac	Vert Area Ac	Vert Area Ac	Linear Area Ac	Total Area Ac
4.00	0.00	0.00	0.00	0.00	0.07	0.00	0.07
4.25	0.00	0.00	0.00	0.00	0.07	0.02	0.09
4.50	0.00	0.00	0.00	0.00	0.07	0.04	0.11
4.75	0.00	0.00	0.00	0.00	0.07	0.05	0.12
5.00	0.00	0.00	0.00	0.00	0.07	0.07	0.14
5.25	0.07	0.00	0.00	0.00	0.07	0.09	0.23
5.50	0.14	0.00	0.01	0.00	0.07	0.11	0.32
5.75	0.20	0.00	0.01	0.00	0.07	0.13	0.41
6.00	0.27	0.00	0.02	0.00	0.07	0.14	0.50
6.25	0.34	0.00	0.02	0.00	0.07	0.16	0.59
6.50	0.41	0.00	0.03	0.00	0.07	0.18	0.68
6.75	0.48	0.24	0.03	0.00	0.07	0.18	1.00
7.00	0.55	0.49	0.03	0.00	0.07	0.18	1.31
7.25	0.61	0.73	0.04	0.00	0.07	0.18	1.63
7.50	0.68	0.97	0.04	0.00	0.07	0.18	1.94
7.75	0.75	0.97	0.05	0.00	0.07	0.18	2.02
8.00	0.82	0.97	0.05	0.00	0.07	0.18	2.09
8.25	0.89	0.97	0.05	0.00	0.07	0.18	2.16
8.50	0.95	0.97	0.05	0.00	0.07	0.18	2.22
8.75	1.02	0.97	0.05	0.00	0.07	0.18	2.29
9.00	1.09	0.97	0.05	0.00	0.07	0.18	2.36

Boyle Engineering Corp.
3550 SW Corporate Pkwy.
Palm City, FL 34990
(772) 286-3883

Post-Development Land Use and Stage-Storage Calculations
FPL Riviera Beach - South-B Basin (Depressional Area)

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type: Land Use & Stage-Storage

Average Ground Elevation (EL_{grnd}) =	4.58	ft NAVD	
Soil Type =	Coastal		
Max. Available Soil Storage (S_{max}) =	10.9	in	(Per SFWMD Coastal soil category at 4' Depth)
Compaction Factor ($F_{compact}$) =	25%	%	(Use 25% for developed site)
Compacted Soil Storage ($S_{compact}$) =	8.18	in	$(S_{max})(F_{compact})$
Available Soil Storage (S_{avail}) =	8.18	in	$(A_p)(S_{compact})/(A_t)$
Curve Number (CN) =	55		$1000 / (S_{avail}+10)$
Required Water Quality Treatment Volume (V_{wq}) =	0.07	ac-ft	(SFWMD Dry Detention/Exfiltration WQ Treatment
Water Quality Elevation (EL_{wq}) =	4.30	ft NAVD	
Total Time of Concentration =	10.00	minutes	

Park	Depressional Area (5-8) Slope	Depressional Area (1.4-3)	Depressional Area (3-4)	Depressional Area (4-5)	---	---	Total
	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)
Total Areas (A_t)	0.68	0.21	0.15	0.14	0.00	0.00	1.18
Bldg. %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Bldg. Area (A_r)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pervious %	100.00%	100.00%	100.00%	100.00%	0.00%	0.00%	100.00%
Pervious Area (A_p)	0.68	0.21	0.15	0.14	0.00	0.00	1.18
Impervious %	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	0.00%
Impervious Area (A_i)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SWM %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
SWM Area (Ac.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Starting Stage =	1.40
Ending Stage =	8.40
Stage Increment =	0.50

Name	Depressional Area (5-8) Slope	Depressional Area (1.4-3)	Depressional Area (3-4)	Depressional Area (4-5)	---	---
Area	0.68	0.21	0.15	0.14	0.00	0.00
Start Elev	5.00	1.40	3.00	4.00	0.00	0.00
End Elev	8.00	3.00	4.00	5.00		

Stage Feet NAVD	Linear Storage Ac-ft	Linear Storage Ac-ft	Linear Storage Ac-ft	Linear Storage Ac-ft	Vert Storage Ac-ft	Vert Storage Ac-ft	Total Storage ac-ft	Available WQ ac-ft
1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.90	0.00	0.02	0.00	0.00	0.00	0.00	0.02	0.02
2.40	0.00	0.07	0.00	0.00	0.00	0.00	0.07	0.07
2.90	0.00	0.15	0.00	0.00	0.00	0.00	0.15	0.15
3.40	0.00	0.25	0.01	0.00	0.00	0.00	0.26	0.26
3.90	0.00	0.36	0.06	0.00	0.00	0.00	0.42	0.42
4.40	0.00	0.46	0.14	0.01	0.00	0.00	0.61	0.61
4.90	0.00	0.57	0.21	0.06	0.00	0.00	0.83	0.83
5.40	0.02	0.67	0.29	0.13	0.00	0.00	1.10	1.08
5.90	0.09	0.78	0.36	0.20	0.00	0.00	1.42	1.33
6.40	0.22	0.88	0.44	0.27	0.00	0.00	1.81	1.58
6.90	0.41	0.99	0.51	0.34	0.00	0.00	2.24	1.83
7.40	0.65	1.09	0.59	0.41	0.00	0.00	2.74	2.08
7.90	0.95	1.20	0.66	0.48	0.00	0.00	3.29	2.33
8.40	1.29	1.30	0.74	0.55	0.00	0.00	3.88	2.58

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(772) 286-3883

Stage-Area Calculations

FPL Riviera Beach - South-B Basin (Depressional Area)

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type Post-Development Stage-Area

Starting Stage 1.40
Ending Stage 8.40
Stage Increment 0.50 Note: Stage Increment < End Elev - Start Elev

Name	Depressional Area	Depressional Area (1.4-3)	Depressional Area (3-4)	Depressional Area (4-5)	---	---
Area	0.68	0.21	0.15	0.14	0.00	0.00
Start Elev	5.00	1.40	3.00	4.00	0.00	0.00
End Elev	8.00	3.00	4.00	5.00	0.00	0.00

Stage Feet NAVD	Linear Area Ac	Linear Area Ac	Linear Area Ac	Linear Area Ac	Vert Area Ac	Vert Area Ac	Total Area Ac
1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.90	0.00	0.07	0.00	0.00	0.00	0.00	0.07
2.40	0.00	0.13	0.00	0.00	0.00	0.00	0.13
2.90	0.00	0.20	0.00	0.00	0.00	0.00	0.20
3.40	0.00	0.21	0.06	0.00	0.00	0.00	0.27
3.90	0.00	0.21	0.14	0.00	0.00	0.00	0.35
4.40	0.00	0.21	0.15	0.06	0.00	0.00	0.42
4.90	0.00	0.21	0.15	0.13	0.00	0.00	0.49
5.40	0.09	0.21	0.15	0.14	0.00	0.00	0.59
5.90	0.20	0.21	0.15	0.14	0.00	0.00	0.70
6.40	0.32	0.21	0.15	0.14	0.00	0.00	0.82
6.90	0.43	0.21	0.15	0.14	0.00	0.00	0.93
7.40	0.54	0.21	0.15	0.14	0.00	0.00	1.04
7.90	0.66	0.21	0.15	0.14	0.00	0.00	1.16
8.40	0.68	0.21	0.15	0.14	0.00	0.00	1.18

Exhibit F.3

Post-Development Water Quality Calculations

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Water Quality Calculations
FPL Riviera Beach - West Basin

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type WQ Calculations
County: Palm Beach

Discharge to Outstanding Florida Water (OFW)? No

Water Quality (WQ) Treatment Method Dry Detention
Commercial/Industrial Project? Yes

Total Area (A_t) =	13.34	ac	
Total Area for WQ (A_{wq})=	13.34	ac	sum of all basins to be treated in this basin
Pass-Through Area (A_{pass}) =	0.00	ac	sum of all basins to be passed through
Total SWM area @CE (A_{swm}) =	0.00	ac	sum of lake and ditch areas at CE
Total Roof Area (A_r) =	0.16	ac	sum of all roof areas
Total Pervious Area (A_p) =	4.25	ac	sum of all pervious areas
Total Developed Area (A_{dev}) =	13.34	ac	total area less areas left in natural, undisturbed state.
Impervious Area for WQ ($A_{wq.SFWMD}$) =	8.93	ac	$A_{wq} - A_{swm} - A_p - A_r$
% Impervious (%imp, SFWMD) =	67.77%		$A_{wq.SFWMD}/(A_{wq} - A_{swm} - A_r)$
		ac	

Water Quality Volume:

1" over the site =	0.83	ac-ft	(75%)(Adev/12); (SFWMD: Dry Detention/Exfiltration)
2.5" x % Impervious Area (SFWMD) =	1.41	ac-ft	(75%)(2.5)(%imperv SFWMD)(Awq-Aswm); (SFWMD: Dry Detention/Exfiltration)

OFW WQ Volume (if applicable; SFWMD requirement):

OFW Considerations Not Applicable

Governing Volume:

Prop'd Dry Detention/Exfiltration Volume =	1.41	ac-ft	(SFWMD Dry Detention/Exfiltration WQ Treatment Requirement)

Dry Pre-Treatment (if applicable; SFWMD requirement)::

Required WQ Pre-Treatment Volume (as Dry Detention/Exfiltration) =	0.56	ac-ft	(0.5 in)(Awq)(ft/12 in); SFWMD: Dry Pre-Treatment WQ Volume Requirement)

Design Elevations:

Water Quality Volume Elev. (El_{wq}) =	**8.00**	ft NAVD	
Water Quality Volume Provided in West Basin =	**0.68**	ac-ft	
Water Quality Volume not Provided in West Basin =	**0.73**	ac-ft	To be provided in downstream basins

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(772) 286-3883

Water Quality Calculations
FPL Riviera Beach - East Basin

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type	WQ Calculations	
County:	Palm Beach	
Discharge to Outstanding Florida Water (OFW)?	No	
Water Quality (WQ) Treatment Method	Dry Detention	
Commercial/Industrial Project?	Yes	

Total Area (A_t) =	11.73	ac	
Total Area for WQ (A_{wq})=	11.73	ac	sum of all basins to be treated in this basin
Pass-Through Area (A_{pass}) =	13.64	ac	sum of all basins to be passed through
Total SWM area @CE (A_{swm}) =	0.00	ac	sum of lake and ditch areas at CE
Total Roof Area (A_r) =	1.35	ac	sum of all roof areas
Total Pervious Area (A_p) =	6.59	ac	sum of all pervious areas
Total Developed Area (A_{dev}) =	11.73	ac	total area less areas left in natural, undisturbed state.
Impervious Area for WQ ($A_{wq,SFWMD}$) =	3.79	ac	$A_{wq} - A_{swm} - A_p - A_r$
% Impervious (%imp, SFWMD) =	36.49%		$A_{wq,SFWMD}/(A_{wq} - A_{swm} - A_r)$
		ac	

Water Quality Volume:

1" over the site =	0.73	ac-ft	(75%)(Adev/12); (SFWMD: Dry Detention/Exfiltration)
2.5" x % Impervious Area (SFWMD) =	0.67	ac-ft	(75%)(2.5)(%imperv SFWMD)(Awq-Aswm); (SFWMD: Dry Detention/Exfiltration)

OFW WQ Volume (if applicable; SFWMD requirement):

OFW Considerations Not Applicable

Governing Volume:

Prop'd Dry Detention/Exfiltration Volume =	0.73	ac-ft	(SFWMD Dry Detention/Exfiltration WQ Treatment Requirement)

Dry Pre-Treatment (if applicable; SFWMD requirement)::

Required WQ Pre-Treatment Volume (as Dry Detention/Exfiltration) =	0.49	ac-ft	(0.5 in)(Awq)(ft/12 in); SFWMD: Dry Pre-Treatment WQ Volume Requirement)

Design Elevations:

Water Quality Volume Elev. (El_{wq}) =	**4.20**	ft NAVD	
Water Quality Volume from East Basin =	**0.73**	ac-ft	
Remaining Water Quality Volume from West Basin =	**0.73**	ac-ft	WQ from Upstream Basin
Total Water Quality Volume Provided in East Basin =	**1.46**	**ac-ft**	**Total WQ Provided in East Basin**
Control Elevation =	**2.00**	ft	

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(772) 286-3883

Water Quality Calculations
FPL Riviera Beach - East Basin

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type WQ Calculations
County: Palm Beach

Discharge to Outstanding Florida Water (OFW)? No

Water Quality (WQ) Treatment Method Dry Detention
Commercial/Industrial Project? Yes

Bleeder Sizing & Configuration

Calculate allowable 24-hour discharge rate based on 0.5 in/day for the basin area and add 0.5 in/day "pass-through" discharge for any previously treated upstream basins and offsite areas

Drainage Area =	11.73	ac	
Allowable Water Quality Discharge (Q_{wq}) =	0.25	cfs	(0.5 in/d)(A_{wq})(43560 ft^2/ac)(ft/12 in)(d/24 hrs)(hr/3600 s)
Pass-Through Drainage Area (A_{pass}) =	13.34	ac	Sum of all previously treated basins or offsite basins not requiring WQ treatment
Pass Through Discharge (Q_{pass}) =	0.28	cfs	(0.5 in/d)(A_{pass})(43560 ft^2/ac)(ft/12 in)(d/24 hrs)(hr/3600 s)
Total Discharge (Q_{bleed}) =	0.53	cfs	$Q_{wq} + Q_{pass}$
Selected Bleeder Type:	**0.27**	**ft diameter orifice**	

V-Notch Weir - Using Method provided in SFWMD Vol. IV

V_{DET} =	1.04	ac-ft	(A_{wq})(0.5 in)(ft/12 in) + (Q_{pass})(3600 s/hr)(24 hr/d)(ac/43560 ft^2
H =	2.20	ft	EL_{wq} - EL_{CE}
θ =	8.19	degrees	V-notch < 20 degrees, use alternate bleeder configuration
Top Width =	0.31	ft	
Side Slope =	0.07	:1	

Circular Orifice

Orifice Equation $Q = Ca(2gh)^{1/2}$

D =	0.27	ft	
Q =	0.53	cfs	
C =	0.60		
g =	32.20	ft/s^2	
h =	2.07	ft	EL_{wq} - [EL_{CE} + (0.5D)]
a_1 =	0.06	ft^2	
a_2 =	0.08	ft^2	Iteratively change D until $a_1 = a_2$; if no solution possible, use alternate bleeder configuration

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(772) 286-3883

Water Quality Calculations
FPL Riviera Beach - East Basin

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type WQ Calculations
County: Palm Beach

Discharge to Outstanding Florida Water (OFW)? No

Water Quality (WQ) Treatment Method Dry Detention
Commercial/Industrial Project? Yes

Rectangular Bleeder

Orifice Equation $Q = Ca(2gh)^{1/2}$

H =	0.25	ft	
W =	0.22	ft	
Q =	0.53	cfs	
C =	0.60		
g =	32.20	ft/sec^2	
h =	2.08	ft	$EL_{wq} - [EL_{CE} + (0.5H)]$
a_1 =	0.06	ft^2	
a_2 =	0.08	ft^2	Iteratively change W until $a_1 = a_2$; if no solution possible, use alternate bleeder configuration

Rectangular Weir

Weir Equation $Q = CLH^{3/2}$

Q =	0.53	cfs	
C =	3.13		
L =	**0.052**	ft	width < 2 inches, use alternate bleeder configuration
H =	2.20	ft	$EL_{wq} - EL_{CE}$

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Water Quality Calculations
FPL Riviera Beach - South-A Basin (Manatee Viewing Area)

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type	WQ Calculations		
County:	Palm Beach		
Discharge to Outstanding Florida Water (OFW)?	No		
Water Quality (WQ) Treatment Method	Dry Retention		
Commercial/Industrial Project?	Yes		
Total Area (A_t) =	2.50	ac	
Total Area for WQ (A_{wq})=	2.50	ac	sum of all basins to be treated in this basin
Pass-Through Area (A_{pass}) =	0.00	ac	sum of all basins to be passed through
Total SWM area @CE (A_{swm}) =	0.00	ac	sum of lake and ditch areas at CE
Total Roof Area (A_r) =	0.14	ac	sum of all roof areas
Total Pervious Area (A_p) =	1.12	ac	sum of all pervious areas
Total Developed Area (A_{dev}) =	2.50	ac	total area less areas left in natural, undisturbed state.
Impervious Area for WQ ($A_{wq.SFWMD}$) =	1.24	ac	$A_{wq} - A_{swm} - A_p - A_r$
% Impervious (%imp, SFWMD) =	52.46%		$A_{wq.SFWMD}/(A_{wq} - A_{swm} - A_r)$
		ac	

Water Quality Volume:

1" over the site =	0.10	ac-ft	(50%)(Adev/12); (SFWMD: Dry Retention)
2.5" x % Impervious Area (SFWMD) =	0.14	ac-ft	(50%)(2.5)(%imperv SFWMD)(Awq-Aswm); (SFWMD: Dry Retention)

OFW WQ Volume (if applicable; SFWMD requirement):

OFW Considerations Not Applicable

Governing Volume:

Prop'd Dry Retention Volume =	0.14	ac-ft	(SFWMD Dry Retention WQ Treatment Requirement)

Dry Pre-Treatment (if applicable; SFWMD requirement)::

Required WQ Pre-Treatment Volume (as Dry Detention/Exfiltration) =	0.10	ac-ft	(0.5 in)(Awq)(ft/12 in); SFWMD: Dry Pre-Treatment WQ Volume Requirement)

Design Elevations:

Water Quality Volume Elev. (El_{wq}) =	**5.50**	ft NAVD
Water Quality Volume Provided	**0.19**	ac-ft

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(772) 286-3883

Water Quality Calculations
FPL Riviera Beach - South-B Basin (Depressional Area)

Project Name: FPL Riviera Beach
Project #: 17212.00
Engineer: BF
Date: 1/8/2009

Computation Type	WQ Calculations	
County:	Palm Beach	
Discharge to Outstanding Florida Water (OFW)?	No	
Water Quality (WQ) Treatment Method	Dry Detention	
Commercial/Industrial Project?	No	

Total Area (A_t) =	1.18	ac	
Total Area for WQ (A_{wq})=	1.18	ac	sum of all basins to be treated in this basin
Pass-Through Area (A_{pass}) =	0.00	ac	sum of all basins to be passed through
Total SWM area @CE (A_{swm}) =	0.00	ac	sum of lake and ditch areas at CE
Total Roof Area (A_r) =	0.00	ac	sum of all roof areas
Total Pervious Area (A_p) =	1.18	ac	sum of all pervious areas
Total Developed Area (A_{dev}) =	1.18	ac	total area less areas left in natural, undisturbed state.
Impervious Area for WQ ($A_{wq,SFWMD}$) =	0.00	ac	$A_{wq} - A_{swm} - A_p - A_r$
% Impervious (%imp, SFWMD) =	0.00%		$A_{wq,SFWMD}/(A_{wq} - A_{swm} - A_r)$
		ac	

Water Quality Volume:

1" over the site =	0.07	ac-ft	(75%)(Adev/12); (SFWMD: Dry Detention/Exfiltration)
2.5" x % Impervious Area (SFWMD) =	0.00	ac-ft	(75%)(2.5)(%imperv SFWMD)(Awq-Aswm); (SFWMD: Dry Detention/Exfiltration)

OFW WQ Volume (if applicable; SFWMD requirement):

OFW Considerations Not Applicable

Governing Volume:

Prop'd Dry Detention/Exfiltration Volume =	0.07	ac-ft	(SFWMD Dry Detention/Exfiltration WQ Treatment Requirement)

Dry Pre-Treatment (if applicable; SFWMD requirement)::

WQ Pre-Treatment Volume Not Required

Design Elevations:

Water Quality Volume Elev. (El_{wq}) =	**4.30**	ft NAVD
Water Quality Volume Provided	**0.57**	ac-ft

==== Basins ====

Name: EAST BASIN
Group: BASE
Node: EAST BASIN
Type: Santa Barbara CN
Status: Onsite

Rainfall File: Sfwmd72
Rainfall Amount(in): 16.500
Area(ac): 11.730
Curve Number: 69.00
DCIA(%): 0.00
Storm Duration(hrs): 72.00
Time of Conc(min): 10.00
Time Shift(hrs): 0.00
Time Increment(min): 15.00
Max Allowable Q(cfs): 999999.000

Name: SOUTH A BASIN
Group: BASE
Node: SOUTH A BASIN
Type: Santa Barbara CN
Status: Onsite

Rainfall File: Sfwmd72
Rainfall Amount(in): 16.500
Area(ac): 2.500
Curve Number: 73.00
DCIA(%): 0.00
Storm Duration(hrs): 72.00
Time of Conc(min): 10.00
Time Shift(hrs): 0.00
Time Increment(min): 15.00
Max Allowable Q(cfs): 999999.000

Name: SOUTH B BASIN
Group: BASE
Node: SOUTH B BASIN
Type: Santa Barbara CN
Status: Onsite

Rainfall File: Sfwmd72
Rainfall Amount(in): 16.500
Area(ac): 1.180
Curve Number: 55.00
DCIA(%): 0.00
Storm Duration(hrs): 72.00
Time of Conc(min): 10.00
Time Shift(hrs): 0.00
Time Increment(min): 15.00
Max Allowable Q(cfs): 999999.000

Name: WEST BASIN
Group: BASE
Node: WEST BASIN
Type: Santa Barbara CN
Status: Onsite

Rainfall File: Sfwmd72
Rainfall Amount(in): 16.500
Area(ac): 13.340
Curve Number: 79.00
DCIA(%): 0.00
Storm Duration(hrs): 72.00
Time of Conc(min): 10.00
Time Shift(hrs): 0.00
Time Increment(min): 15.00
Max Allowable Q(cfs): 999999.000

==== Nodes ====

Name: EAST BASIN
Group: BASE
Type: Stage/Area
Base Flow(cfs): 0.000
Init Stage(ft): 2.000
Warn Stage(ft): 8.000

Stage(ft)	Area(ac)
2.000	0.0000
2.990	0.0010
3.000	1.1700
3.250	1.2100
3.500	1.2400
3.750	1.2800
4.000	1.3100
4.250	1.3600
4.500	1.4100
4.750	1.4600
5.000	1.5200
5.250	1.7300
5.500	1.9400
5.750	2.1600
6.000	2.3700
6.250	2.5400
6.500	2.7000
6.750	2.8600
7.000	3.0200
7.250	3.4800
7.500	3.9300
7.750	4.3800
8.000	4.8300

8.250	5.2900
8.500	5.7400
8.750	6.1900
9.000	6.6400
9.250	7.1000
9.500	7.5500
9.750	8.0000
10.000	9.6700

Name: LAKE WORTH Base Flow(cfs): 0.000 Init Stage(ft): 0.200
Group: BASE Warn Stage(ft): 0.200
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	0.200
999.00	0.200

Name: SOUTH A BASIN Base Flow(cfs): 0.000 Init Stage(ft): 4.000
Group: BASE Warn Stage(ft): 8.000
Type: Stage/Area

Stage(ft)	Area(ac)
4.000	0.0700
4.250	0.0900
4.500	0.1100
4.750	0.1200
5.000	0.1400
5.250	0.2300
5.500	0.3200
5.750	0.4100
6.000	0.5000
6.250	0.5900
6.500	0.6800
6.750	1.0000
7.000	1.3100
7.250	1.6300
7.500	1.9400
7.750	2.0200
8.000	2.0900
8.250	2.1600
8.500	2.2200
8.750	2.2900
9.000	2.3600

Name: SOUTH B BASIN Base Flow(cfs): 0.000 Init Stage(ft): 1.400
Group: BASE Warn Stage(ft): 7.000
Type: Stage/Area

Stage(ft)	Area(ac)
1.400	0.0000
1.900	0.0700
2.400	0.1300
2.900	0.2000
3.400	0.2700
3.900	0.3500
4.400	0.4200
4.900	0.4900
5.400	0.5900
5.900	0.7000
6.400	0.8200
6.900	0.9300
7.400	1.0400
7.900	1.1600
8.400	1.1800

Name: WEST BASIN Base Flow(cfs): 0.000 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 12.000
Type: Stage/Area

Stage(ft)	Area(ac)
5.000	0.0000

5.990	0.0010
6.000	0.1600
6.250	0.2000
6.500	0.2300
6.750	0.2700
7.000	0.3300
7.250	0.3900
7.500	0.4500
7.750	0.5100
8.000	0.5700
8.250	0.6300
8.500	0.6800
8.750	0.7400
9.000	0.8000
9.250	1.1200
9.500	1.4500
9.750	2.3800
10.000	3.3200
10.250	4.5300
10.500	5.7400
10.750	6.9500
11.000	8.1600
11.250	8.9600
11.500	9.7700
11.750	10.5700
12.000	12.7100
12.250	12.8300
12.500	12.9500
12.750	13.0600
13.000	13.1800

==========
==== Drop Structures ==========
==========

```
        Name: EAST-LAKE WORTH     From Node: EAST BASIN         Length(ft): 50.00
       Group: BASE                  To Node: LAKE WORTH              Count: 3

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
    Geometry: Circular       Circular                  Solution Algorithm: Most Restrictive
    Span(in): 21.00          21.00                                 Flow: None
    Rise(in): 21.00          21.00                   Entrance Loss Coef: 0.500
  Invert(ft): 0.300          0.200                       Exit Loss Coef: 1.000
 Manning's N: 0.012000       0.012000                  Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000          0.000                      Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000          0.000                        Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall


*** Weir 1 of 3 for Drop Structure EAST-LAKE WORTH ***
                                                                          TABLE
                 Count: 3                       Bottom Clip(in): 0.000
                  Type: Vertical: Mavis            Top Clip(in): 0.000
                  Flow: Both                     Weir Disc Coef: 3.200
              Geometry: Rectangular            Orifice Disc Coef: 0.600

              Span(in): 36.00                        Invert(ft): 4.200
              Rise(in): 19.20                  Control Elev(ft): 4.200

*** Weir 2 of 3 for Drop Structure EAST-LAKE WORTH ***
                                                                          TABLE
                 Count: 1                       Bottom Clip(in): 0.000
                  Type: Vertical: Mavis            Top Clip(in): 0.000
                  Flow: Both                     Weir Disc Coef: 3.200
              Geometry: Circular               Orifice Disc Coef: 0.600

              Span(in): 3.25                         Invert(ft): 2.000
              Rise(in): 3.25                   Control Elev(ft): 2.000

*** Weir 3 of 3 for Drop Structure EAST-LAKE WORTH ***
                                                                          TABLE
                 Count: 3                       Bottom Clip(in): 0.000
                  Type: Horizontal                 Top Clip(in): 0.000
                  Flow: Both                     Weir Disc Coef: 3.200
              Geometry: Rectangular            Orifice Disc Coef: 0.600

              Span(in): 41.10                        Invert(ft): 5.900
              Rise(in): 41.10                  Control Elev(ft): 5.900
```

```
        Name: SOUTH B-L WORTH     From Node: SOUTH B BASIN      Length(ft): 120.00
       Group: BASE                  To Node: LAKE WORTH              Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
    Geometry: Circular       Circular                  Solution Algorithm: Most Restrictive
    Span(in): 24.00          24.00                                 Flow: Both
    Rise(in): 24.00          24.00                   Entrance Loss Coef: 0.500
  Invert(ft): 0.600          0.200                       Exit Loss Coef: 1.000
 Manning's N: 0.012000       0.012000                  Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000          0.000                      Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000          0.000                        Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall


*** Weir 1 of 2 for Drop Structure SOUTH B-L WORTH ***
                                                                          TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Horizontal                Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Circular               Orifice Disc Coef: 0.600

              Span(in): 3.00                         Invert(ft): 2.000
              Rise(in): 3.00                    Control Elev(ft): 2.000

*** Weir 2 of 2 for Drop Structure SOUTH B-L WORTH ***
                                                                          TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular            Orifice Disc Coef: 0.600

              Span(in): 30.00                        Invert(ft): 4.300
              Rise(in): 999.00                  Control Elev(ft): 4.300


-----------------------------------------------------------------------------------------------
        Name: WEST-EAST           From Node: WEST BASIN         Length(ft): 300.00
       Group: BASE                  To Node: EAST BASIN              Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
    Geometry: Circular       Circular                  Solution Algorithm: Most Restrictive
    Span(in): 24.00          24.00                                 Flow: Both
    Rise(in): 24.00          24.00                   Entrance Loss Coef: 0.500
  Invert(ft): 3.300          3.000                       Exit Loss Coef: 1.000
 Manning's N: 0.012000       0.012000                  Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000          0.000                      Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000          0.000                        Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall


*** Weir 1 of 2 for Drop Structure WEST-EAST ***
                                                                          TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular            Orifice Disc Coef: 0.600

              Span(in): 54.00                        Invert(ft): 8.000
              Rise(in): 999.00                  Control Elev(ft): 8.000

*** Weir 2 of 2 for Drop Structure WEST-EAST ***
                                                                          TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Circular               Orifice Disc Coef: 0.600

              Span(in): 3.00                         Invert(ft): 5.000
              Rise(in): 3.00                    Control Elev(ft): 5.000

==================================================================================
==== Weirs =======================================================================
==================================================================================
```

```
        Name: PERIMETER BERM      From Node: EAST BASIN
       Group: BASE                  To Node: LAKE WORTH
        Flow: Both                    Count: 1
        Type: Vertical: Mavis      Geometry: Rectangular

                   Span(in): 5700.00
                   Rise(in): 999.00
                 Invert(ft): 6.600
      Control Elevation(ft): 6.600
                                                TABLE
            Bottom Clip(in): 0.000
               Top Clip(in): 0.000
        Weir Discharge Coef: 2.600
     Orifice Discharge Coef: 0.600
```

Broad-Crested weir to simulate over-topping of detention ponds and flow into Lake Worth during events greater than 25 year event

```
---------------------------------------------------------------------------------------------------
        Name: SOUTH A-SOUTH B     From Node: SOUTH A BASIN
       Group: BASE                  To Node: SOUTH B BASIN
        Flow: Both                    Count: 1
        Type: Vertical: Mavis      Geometry: Rectangular

                   Span(in): 24.00
                   Rise(in): 999.00
                 Invert(ft): 5.500
      Control Elevation(ft): 5.500
                                                TABLE
            Bottom Clip(in): 0.000
               Top Clip(in): 0.000
        Weir Discharge Coef: 3.200
     Orifice Discharge Coef: 0.600


=================================================================================
==== Hydrology Simulations ======================================================
=================================================================================

        Name: 100YR3D
    Filename: P:\17212\Permit\SCA\SWM\POST-03\100YR3D.R32

     Override Defaults: Yes
   Storm Duration(hrs): 72.00
         Rainfall File: Sfwmd72
   Rainfall Amount(in): 16.50

Time(hrs)        Print Inc(min)
---------------- ---------------
72.000           15.00

---------------------------------------------------------------------------------------------------
        Name: 100YR3D-0
    Filename: P:\17212\Permit\SCA\SWM\POST-03\100YR3D-0.R32

     Override Defaults: Yes
   Storm Duration(hrs): 72.00
         Rainfall File: Sfwmd72
   Rainfall Amount(in): 16.50

Time(hrs)        Print Inc(min)
---------------- ---------------
72.000           15.00

---------------------------------------------------------------------------------------------------
        Name: 10YR1D
    Filename: P:\17212\Permit\SCA\SWM\POST-03\10YR1D.R32

     Override Defaults: Yes
   Storm Duration(hrs): 24.00
         Rainfall File: Flmod
   Rainfall Amount(in): 9.50

Time(hrs)        Print Inc(min)
---------------- ---------------
24.000           15.00

---------------------------------------------------------------------------------------------------
        Name: 25YR3D
    Filename: P:\17212\Permit\SCA\SWM\POST-03\25YR3D.R32

     Override Defaults: Yes
   Storm Duration(hrs): 72.00
         Rainfall File: Sfwmd72
   Rainfall Amount(in): 13.50

Time(hrs)        Print Inc(min)
```

```
--------------- ---------------
72.000          15.00

==========================================================================================
==== Routing Simulations ================================================================
==========================================================================================

         Name: 100YR3D              Hydrology Sim: 100YR3D
     Filename: P:\17212\Permit\SCA\SWM\POST-03\100YR3D.I32

      Execute: No          Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                     End Time(hrs): 360.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
        Boundary Stages:                          Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
360.000         15.000

Group           Run
--------------- -----
BASE            Yes

-------------------------------------------------------------------------------------------------
         Name: 100YR3D-0            Hydrology Sim: 100YR3D-0
     Filename: P:\17212\Permit\SCA\SWM\POST-03\100YR3D-0.I32

      Execute: No          Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                     End Time(hrs): 360.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
        Boundary Stages:                          Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
360.000         15.000

Group           Run
--------------- -----
BASE            Yes

-------------------------------------------------------------------------------------------------
         Name: 10YR1D               Hydrology Sim: 10YR1D
     Filename: P:\17212\Permit\SCA\SWM\POST-03\10YR1D.I32

      Execute: No          Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                     End Time(hrs): 336.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
        Boundary Stages:                          Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
336.000         15.000

Group           Run
--------------- -----
BASE            Yes

-------------------------------------------------------------------------------------------------
         Name: 25YR3D               Hydrology Sim: 25YR3D
     Filename: P:\17212\Permit\SCA\SWM\POST-03\25YR3D.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
```

```
      Start Time(hrs): 0.000                    End Time(hrs): 360.00
   Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
      Boundary Stages:                          Boundary Flows:


Time(hrs)        Print Inc(min)
---------------- ----------------
360.000          15.000

Group            Run
---------------- -----
BASE             Yes
```

Exhibit F.5

Post-Development AdICPR Model Output

```
            Basin Name: EAST BASIN
            Group Name: BASE
             Node Name: EAST BASIN
            Basin Type: Santa Barbara

   Spec Time Inc (min): 15.00
   Comp Time Inc (min): 15.00
         Rainfall File: Sfwmd72
  Rainfall Amount (in): 16.500
  Storm Duration (hrs): 72.00
                Status: Onsite
    Time of Conc (min): 10.00
      Time Shift (hrs): 0.00
             Area (ac): 11.730
          Curve Number: 69.000
              DCIA (%): 0.000

        Time Max (hrs): 59.75
        Flow Max (cfs): 80.368
    Runoff Volume (in): 12.113
   Runoff Volume (ft3): 515779.096

-------------------------------------------------------------------------------

            Basin Name: SOUTH A BASIN
            Group Name: BASE
             Node Name: SOUTH A BASIN
            Basin Type: Santa Barbara

   Spec Time Inc (min): 15.00
   Comp Time Inc (min): 15.00
         Rainfall File: Sfwmd72
  Rainfall Amount (in): 16.500
  Storm Duration (hrs): 72.00
                Status: Onsite
    Time of Conc (min): 10.00
      Time Shift (hrs): 0.00
             Area (ac): 2.500
          Curve Number: 73.000
              DCIA (%): 0.000

        Time Max (hrs): 59.75
        Flow Max (cfs): 17.659
    Runoff Volume (in): 12.765
   Runoff Volume (ft3): 115839.261

-------------------------------------------------------------------------------

            Basin Name: SOUTH B BASIN
            Group Name: BASE
             Node Name: SOUTH B BASIN
            Basin Type: Santa Barbara

   Spec Time Inc (min): 15.00
   Comp Time Inc (min): 15.00
         Rainfall File: Sfwmd72
  Rainfall Amount (in): 16.500
  Storm Duration (hrs): 72.00
                Status: Onsite
    Time of Conc (min): 10.00
      Time Shift (hrs): 0.00
             Area (ac): 1.180
          Curve Number: 55.000
              DCIA (%): 0.000

        Time Max (hrs): 59.75
        Flow Max (cfs): 6.868
    Runoff Volume (in): 9.587
   Runoff Volume (ft3): 41063.264

-------------------------------------------------------------------------------

            Basin Name: WEST BASIN
            Group Name: BASE
             Node Name: WEST BASIN
            Basin Type: Santa Barbara

   Spec Time Inc (min): 15.00
   Comp Time Inc (min): 15.00
         Rainfall File: Sfwmd72
  Rainfall Amount (in): 16.500
  Storm Duration (hrs): 72.00
                Status: Onsite
    Time of Conc (min): 10.00
```

```
      Time Shift (hrs): 0.00
            Area (ac): 13.340
        Curve Number: 79.000
            DCIA (%): 0.000

       Time Max (hrs): 59.75
       Flow Max (cfs): 97.635
   Runoff Volume (in): 13.689
 Runoff Volume (ft3): 662902.418

-------------------------------------------------------------------------------

           Basin Name: EAST BASIN
           Group Name: BASE
            Node Name: EAST BASIN
           Basin Type: Santa Barbara

  Spec Time Inc (min): 15.00
  Comp Time Inc (min): 15.00
        Rainfall File: Sfwmd72
 Rainfall Amount (in): 16.500
 Storm Duration (hrs): 72.00
               Status: Onsite
   Time of Conc (min): 10.00
     Time Shift (hrs): 0.00
            Area (ac): 11.730
        Curve Number: 69.000
            DCIA (%): 0.000

       Time Max (hrs): 59.75
       Flow Max (cfs): 80.368
   Runoff Volume (in): 12.113
 Runoff Volume (ft3): 515779.096

-------------------------------------------------------------------------------

           Basin Name: SOUTH A BASIN
           Group Name: BASE
            Node Name: SOUTH A BASIN
           Basin Type: Santa Barbara

  Spec Time Inc (min): 15.00
  Comp Time Inc (min): 15.00
        Rainfall File: Sfwmd72
 Rainfall Amount (in): 16.500
 Storm Duration (hrs): 72.00
               Status: Onsite
   Time of Conc (min): 10.00
     Time Shift (hrs): 0.00
            Area (ac): 2.500
        Curve Number: 73.000
            DCIA (%): 0.000

       Time Max (hrs): 59.75
       Flow Max (cfs): 17.659
   Runoff Volume (in): 12.765
 Runoff Volume (ft3): 115839.261

-------------------------------------------------------------------------------

           Basin Name: SOUTH B BASIN
           Group Name: BASE
            Node Name: SOUTH B BASIN
           Basin Type: Santa Barbara

  Spec Time Inc (min): 15.00
  Comp Time Inc (min): 15.00
        Rainfall File: Sfwmd72
 Rainfall Amount (in): 16.500
 Storm Duration (hrs): 72.00
               Status: Onsite
   Time of Conc (min): 10.00
     Time Shift (hrs): 0.00
            Area (ac): 1.180
        Curve Number: 55.000
            DCIA (%): 0.000

       Time Max (hrs): 59.75
       Flow Max (cfs): 6.868
   Runoff Volume (in): 9.587
 Runoff Volume (ft3): 41063.264

-------------------------------------------------------------------------------
```

```
            Basin Name: WEST BASIN
            Group Name: BASE
             Node Name: WEST BASIN
            Basin Type: Santa Barbara

   Spec Time Inc (min): 15.00
   Comp Time Inc (min): 15.00
         Rainfall File: Sfwmd72
  Rainfall Amount (in): 16.500
  Storm Duration (hrs): 72.00
                Status: Onsite
    Time of Conc (min): 10.00
      Time Shift (hrs): 0.00
             Area (ac): 13.340
          Curve Number: 79.000
              DCIA (%): 0.000

        Time Max (hrs): 59.75
        Flow Max (cfs): 97.635
    Runoff Volume (in): 13.689
   Runoff Volume (ft3): 662902.418

-------------------------------------------------------------------------------

            Basin Name: EAST BASIN
            Group Name: BASE
             Node Name: EAST BASIN
            Basin Type: Santa Barbara

   Spec Time Inc (min): 15.00
   Comp Time Inc (min): 15.00
         Rainfall File: Flmod
  Rainfall Amount (in): 9.500
  Storm Duration (hrs): 24.00
                Status: Onsite
    Time of Conc (min): 10.00
      Time Shift (hrs): 0.00
             Area (ac): 11.730
          Curve Number: 69.000
              DCIA (%): 0.000

        Time Max (hrs): 12.00
        Flow Max (cfs): 43.295
    Runoff Volume (in): 5.650
   Runoff Volume (ft3): 240585.158

-------------------------------------------------------------------------------

            Basin Name: SOUTH A BASIN
            Group Name: BASE
             Node Name: SOUTH A BASIN
            Basin Type: Santa Barbara

   Spec Time Inc (min): 15.00
   Comp Time Inc (min): 15.00
         Rainfall File: Flmod
  Rainfall Amount (in): 9.500
  Storm Duration (hrs): 24.00
                Status: Onsite
    Time of Conc (min): 10.00
      Time Shift (hrs): 0.00
             Area (ac): 2.500
          Curve Number: 73.000
              DCIA (%): 0.000

        Time Max (hrs): 12.00
        Flow Max (cfs): 9.952
    Runoff Volume (in): 6.160
   Runoff Volume (ft3): 55898.755

-------------------------------------------------------------------------------

            Basin Name: SOUTH B BASIN
            Group Name: BASE
             Node Name: SOUTH B BASIN
            Basin Type: Santa Barbara

   Spec Time Inc (min): 15.00
   Comp Time Inc (min): 15.00
         Rainfall File: Flmod
  Rainfall Amount (in): 9.500
  Storm Duration (hrs): 24.00
                Status: Onsite
```

```
     Time of Conc (min): 10.00
       Time Shift (hrs): 0.00
              Area (ac): 1.180
          Curve Number: 55.000
              DCIA (%): 0.000

         Time Max (hrs): 12.00
         Flow Max (cfs): 2.995
     Runoff Volume (in): 3.854
    Runoff Volume (ft3): 16507.580


-------------------------------------------------------------------------------

             Basin Name: WEST BASIN
             Group Name: BASE
              Node Name: WEST BASIN
             Basin Type: Santa Barbara

    Spec Time Inc (min): 15.00
    Comp Time Inc (min): 15.00
          Rainfall File: Flmod
   Rainfall Amount (in): 9.500
   Storm Duration (hrs): 24.00
                 Status: Onsite
     Time of Conc (min): 10.00
       Time Shift (hrs): 0.00
              Area (ac): 13.340
          Curve Number: 79.000
              DCIA (%): 0.000

         Time Max (hrs): 12.00
         Flow Max (cfs): 58.307
     Runoff Volume (in): 6.918
    Runoff Volume (ft3): 334993.135


-------------------------------------------------------------------------------

             Basin Name: EAST BASIN
             Group Name: BASE
              Node Name: EAST BASIN
             Basin Type: Santa Barbara

    Spec Time Inc (min): 15.00
    Comp Time Inc (min): 15.00
          Rainfall File: Sfwmd72
   Rainfall Amount (in): 13.500
   Storm Duration (hrs): 72.00
                 Status: Onsite
     Time of Conc (min): 10.00
       Time Shift (hrs): 0.00
              Area (ac): 11.730
          Curve Number: 69.000
              DCIA (%): 0.000

         Time Max (hrs): 59.75
         Flow Max (cfs): 63.096
     Runoff Volume (in): 9.289
    Runoff Volume (ft3): 395545.793


-------------------------------------------------------------------------------

             Basin Name: SOUTH A BASIN
             Group Name: BASE
              Node Name: SOUTH A BASIN
             Basin Type: Santa Barbara

    Spec Time Inc (min): 15.00
    Comp Time Inc (min): 15.00
          Rainfall File: Sfwmd72
   Rainfall Amount (in): 13.500
   Storm Duration (hrs): 72.00
                 Status: Onsite
     Time of Conc (min): 10.00
       Time Shift (hrs): 0.00
              Area (ac): 2.500
          Curve Number: 73.000
              DCIA (%): 0.000

         Time Max (hrs): 59.75
         Flow Max (cfs): 13.999
     Runoff Volume (in): 9.893
    Runoff Volume (ft3): 89777.124
```

```
Basin Name: SOUTH B BASIN
Group Name: BASE
Node Name: SOUTH B BASIN
Basin Type: Santa Barbara

Spec Time Inc (min): 15.00
Comp Time Inc (min): 15.00
Rainfall File: Sfwmd72
Rainfall Amount (in): 13.500
Storm Duration (hrs): 72.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 1.180
Curve Number: 55.000
DCIA (%): 0.000

Time Max (hrs): 59.75
Flow Max (cfs): 5.148
Runoff Volume (in): 7.021
Runoff Volume (ft3): 30075.187
```

```
Basin Name: WEST BASIN
Group Name: BASE
Node Name: WEST BASIN
Basin Type: Santa Barbara

Spec Time Inc (min): 15.00
Comp Time Inc (min): 15.00
Rainfall File: Sfwmd72
Rainfall Amount (in): 13.500
Storm Duration (hrs): 72.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 13.340
Curve Number: 79.000
DCIA (%): 0.000

Time Max (hrs): 59.75
Flow Max (cfs): 78.343
Runoff Volume (in): 10.762
Runoff Volume (ft3): 521156.538
```

FPL RIVIERA BEACH
POST-DEVELOPMENT MODEL
NODE MAXIMUM

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
EAST BASIN	BASE	100YR3D	60.11	5.987	8.000	0.0049	102768	59.75	103.043	60.11	66.743
EAST BASIN	BASE	100YR3D-0	59.80	6.782	8.000	0.0050	125478	59.75	99.931	59.80	96.009
EAST BASIN	BASE	10YR1D	12.43	5.413	8.000	0.0050	81316	12.00	66.917	12.43	38.901
EAST BASIN	BASE	25YR3D	60.11	5.769	8.000	-0.0048	94784	59.75	85.494	60.11	56.882
LAKE WORTH	BASE	100YR3D	0.00	0.200	0.200	0.0000	0	60.14	74.174	0.00	0.000
LAKE WORTH	BASE	100YR3D-0	0.00	0.200	0.200	0.0000	0	59.80	96.009	0.00	0.000
LAKE WORTH	BASE	10YR1D	0.00	0.200	0.200	0.0000	0	12.43	39.209	0.00	0.000
LAKE WORTH	BASE	25YR3D	0.00	0.200	0.200	0.0000	0	60.16	60.544	0.00	0.000
SOUTH A BASIN	BASE	100YR3D	60.15	6.675	8.000	-0.0030	39381	59.75	17.646	60.15	8.152
SOUTH A BASIN	BASE	100YR3D-0	72.02	7.813	8.000	0.0028	88764	59.75	17.644	0.00	0.000
SOUTH A BASIN	BASE	10YR1D	12.35	6.260	8.000	0.0033	25851	12.00	9.951	12.35	4.237
SOUTH A BASIN	BASE	25YR3D	60.15	6.517	8.000	-0.0027	30551	59.75	13.999	60.15	6.561
SOUTH B BASIN	BASE	100YR3D	60.51	5.314	7.000	0.0050	24952	59.91	12.944	60.51	8.584
SOUTH B BASIN	BASE	100YR3D-0	72.02	5.095	7.000	0.0038	23041	59.75	6.862	0.00	0.000
SOUTH B BASIN	BASE	10YR1D	14.42	4.595	7.000	0.0031	19484	12.10	6.184	14.42	1.662
SOUTH B BASIN	BASE	25YR3D	60.73	5.061	7.000	0.0050	22746	59.96	10.054	60.73	5.723
WEST BASIN	BASE	100YR3D	60.39	10.344	12.000	-0.0050	217169	59.75	97.561	61.18	24.372
WEST BASIN	BASE	100YR3D-0	60.44	10.388	12.000	0.0050	226368	59.75	97.550	60.52	21.513
WEST BASIN	BASE	10YR1D	12.36	9.913	12.000	0.0050	130406	12.00	58.305	11.94	23.904
WEST BASIN	BASE	25YR3D	60.26	10.112	12.000	-0.0050	168294	59.75	78.342	60.82	23.693

FPL RIVIERA BEACH
POST-DEVELOPMENT MODEL
LINK MAXIMUM

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
EAST-LAKE WORTH	BASE	100YR3D	60.11	66.743	0.191	60.11	5.987	0.00	0.200
EAST-LAKE WORTH	BASE	100YR3D-0	0.00	0.000	0.000	0.00	0.000	0.00	0.000
EAST-LAKE WORTH	BASE	10YR1D	12.43	38.901	0.113	12.43	5.413	0.00	0.200
EAST-LAKE WORTH	BASE	25YR3D	60.11	56.882	0.165	60.11	5.769	0.00	0.200
PERIMETER BERM	BASE	100YR3D	0.00	0.000	0.000	60.11	5.987	0.00	0.200
PERIMETER BERM	BASE	100YR3D-0	59.80	96.009	0.711	59.80	6.782	0.00	0.200
PERIMETER BERM	BASE	10YR1D	0.00	0.000	0.000	12.43	5.413	0.00	0.200
PERIMETER BERM	BASE	25YR3D	0.00	0.000	0.000	60.11	5.769	0.00	0.200
SOUTH A-SOUTH B	BASE	100YR3D	60.15	8.152	-0.026	60.15	6.675	60.51	5.314
SOUTH A-SOUTH B	BASE	100YR3D-0	0.00	0.000	0.000	0.00	0.000	0.00	0.000
SOUTH A-SOUTH B	BASE	10YR1D	12.35	4.237	0.011	12.35	6.260	14.42	4.595
SOUTH A-SOUTH B	BASE	25YR3D	60.15	6.561	-0.023	60.15	6.517	60.73	5.061
SOUTH B-L WORTH	BASE	100YR3D	60.51	8.584	0.032	60.51	5.314	0.00	0.200
SOUTH B-L WORTH	BASE	100YR3D-0	0.00	0.000	0.000	0.00	0.000	0.00	0.000
SOUTH B-L WORTH	BASE	10YR1D	14.42	1.662	0.008	14.42	4.595	0.00	0.200
SOUTH B-L WORTH	BASE	25YR3D	60.73	5.723	0.026	60.73	5.061	0.00	0.200
WEST-EAST	BASE	100YR3D	61.18	24.372	-0.115	60.39	10.344	60.11	5.987
WEST-EAST	BASE	100YR3D-0	60.52	21.513	0.096	60.44	10.388	59.80	6.782
WEST-EAST	BASE	10YR1D	11.94	23.904	-0.106	12.36	9.913	12.43	5.413
WEST-EAST	BASE	25YR3D	60.82	23.693	-0.112	60.26	10.112	60.11	5.769

APPENDIX 10.5

LAND USE PLAN DESCRIPTIONS

"The best place in which to live, work and play."

COMPREHENSIVE PLAN

Adopted November 7, 2001
Ordinance No. 2898

Text Amended: December 19, 2001, by Ordinance No. 2910 (School Concurrency)
April 3, 2002, by Ordinance No. 2914 [Compliance Agreement (2898)]
December 18, 2002, by Ordinance No. 2923
December 17, 2003, by Ordinance No. 2947 (TCEA)
April 7, 2004, by Ordinance No. 2964 [Compliance Agreement (2923)]
April 21, 2004, by Ordinance No. 2953

FUTURE LAND USE ELEMENT
GOALS, OBJECTIVES AND POLICIES

GOAL **To protect and enhance the residential, commercial, industrial and natural resource areas of Riviera Beach.**

OBJECTIVE 1.1: Public Facility Availability

The City shall continue to insure that all development and redevelopment is coordinated with the availability of facilities and services, and is compatible with soil conditions and topography.

Policy 1.1.1: As new development occurs within the City, continue to use the development code to require a tie-in to the sanitary sewer and public water systems.

Policy 1.1.2: The City shall supply water and sewer to new development in the Reserve Annexation Area, subject to receipt of a petition for voluntary annexation. If contiguous, it shall be annexed prior to connection to the City's water and sewer system; otherwise, it shall be annexed when the development becomes contiguous.

Policy 1.1.3: The City shall continue to use the flood plain provisions of the Land Development Code to assure new development at topographic elevations sufficient to minimize flood impact.

Policy 1.1.4: Periodically review all development codes to determine needed refinements relative to on-site drainage, open-space and parking lot design standards.

Policy 1.1.5: The City shall continue to use the adopted Concurrency Management System, contained in "Article X" of the Land Development Code, to implement requirements contained in 9J-5.0055 and to insure that public facilities are in place concurrent with the impacts of any development, and levels of service continue to be maintained.

OBJECTIVE 1.2: Redevelopment

By 2001, the City shall adopt a new redevelopment plan for the community redevelopment area, and shall continue to place a high priority on redevelopment of these areas through the support and approval of projects to revitalize these areas.

Policy 1.2.1: By 2001 the City Community Redevelopment Agency (CRA) shall prepare a redevelopment plan for the community redevelopment area, with a prioritized strategy for redevelopment.

Policy 1.2.2: In keeping with the above objective, the Community Redevelopment Agency (CRA) shall assist at least one private redeveloper to implement a downtown redevelopment project to the point of groundbreaking.

Policy 1.2.3: The City and CRA shall continue to monitor the Port's compliance with the interlocal agreement to insure that the Port does not expand past 10th Street, and that Port's expansion is complimentary to redevelopment.

Policy 1.2.4: By 2001, the City will expand the redevelopment boundaries to include all practical and economically feasible blighted areas contiguous to the defined Community Redevelopment Area.

Policy 1.2.5: By 2001, by way of the new redevelopment plan, the City will begin to expedite the phasing out of all dilapidated housing within the Community Redevelopment Area and to insure decent, safe, sound, sanitary housing for all residents of the community redevelopment area.

Policy 1.2.6: The 2001 Redevelopment Plan shall be designed to change the image of the Riviera Beach community redevelopment area from a depressed district suffering from loss of residential and business vitality into one respected for community purpose and pride, and to reshape the City into a desirable place to live, work, shop, enjoy recreation, relax and visit, with special places, events, and experiences, not available anywhere else in the Lake Worth Lagoon Area.

Policy 1.2.7: The 2001 Redevelopment Plan will include a process that simplifies and expedites the ability to implement the redevelopment plan for both residents, and developers alike, is economically feasible, and can be developed in a series of phases that has elements that can start immediately upon the approval of the plan.

Policy 1.2.8: The 2001 Redevelopment Plan shall provide a mix of land uses that will create unique, ideal opportunities and settings for residents and visitors alike.

Policy 1.2.9: The 2001 Redevelopment Plan shall provide for improved public access, beach visibility, improved image and uses to promote family activities and resident and visitor attractions to the Riviera Beach (Ocean Mall) area of Singer Island.

Policy 1.2.10: The 2001 Redevelopment Plan will include controls and guidelines for all public and private development within the community redevelopment area. These controls will provide for a unique image and character with setbacks, height, density, parking, architectural elements, landscaping, colors and materials, and construction timing and procedures that assure design excellence and quality in the final development projects.

Policy 1.2.11: The 2001 Redevelopment Plan shall provide for an active pedestrian and bicycle circulation environment linking the major neighborhoods within the community redevelopment area and stimulating continuity of the circulation system outside the community redevelopment area to existing neighborhoods.

Policy 1.2.12: The 2001 Redevelopment Plan shall promote the creation of a public transportation system capable of serving all of the neighborhoods and providing convenient access to all parks, beaches, schools and commercial activities within and adjacent to the community redevelopment area.

Policy 1.2.13: The 2001 Redevelopment Plan shall attempt to make Riviera Beach a model environmentally conscious city among the cities surrounding the Lake Worth Lagoon.

Policy 1.2.14: The 2001 Redevelopment Plan shall enhance the image of Riviera Beach as a place for tourists and visitors.

Policy 1.2.15: The 2001 Redevelopment Plan shall rebuild Riviera Beach into the most desirable urban place to live in Palm Beach County and to create outstanding community facilities for all the residents of Riviera Beach.

Policy 1.2.16: The 2001 Redevelopment Plan shall provide the opportunity for every qualified "stakeholder" in the community to participate in the opportunities evolving from the redevelopment process.

Policy 1.2.17: The 2001 Redevelopment Plan shall assure that no resident will be displaced unless housing is available and adequately sized to meet their needs, and that equals or improves their quality of life.

Policy 1.2.18: The 2001 Redevelopment Plan shall provide a relocation plan that allows every qualified resident to relocate into decent, safe and sanitary housing within his or her means.

Policy 1.2.19: The 2001 Redevelopment Plan shall create priorities for and encouragement to qualified businesses currently conducting business in the community redevelopment area to relocate or expand within the City of Riviera Beach.

Policy 1.2.20: The 2001 Redevelopment Plan shall identify within the community redevelopment area socioeconomic conditions contributing to the continuing decline of residential and retail vitality and provide recommendations to eliminate these conditions.

Policy 1.2.21: The 2001 Redevelopment Plan shall pursue the planning and development of the working waterfront to optimize Riviera Beach's unique historic waterfront location (nearby ocean entry and; intracoastal waterfront). The plan shall also create opportunities for uses, such as high quality boat building and repair, marine industry uses requiring easy access to the ocean, support businesses for the marine industry, boat sales and related businesses and wet boat storage and dry storage requiring "in & out" services with priorities for businesses with dependence on the proximity to deep water.

Policy 1.2.22: The 2001 Redevelopment Plan shall use the CRA/City resources to initiate and consolidate citywide dredging, shore-edge construction, environmental studies, design and permitting to expedite the redevelopment and expansion of the waterfront facilities.

Policy 1.2.23: The 2001 Redevelopment Plan may include a waterfront lagoon area, north of the existing City marina, for the economic and recreational enhancement of the waterfront area.

Policy 1.2.24: The 2001 Redevelopment Plan shall integrate the public oriented port activities with the redevelopment plan for the mutual benefit of the Port and the City to the greatest extent possible.

Policy 1.2.25: The 2001 Redevelopment Plan shall integrate specific development projects that mutually benefit the Port and the CRA such as joint parking facilities and joint financing techniques, to the extent feasible.

Policy 1.2.26: In order to further many of the 2001 Redevelopment Plan elements, the City shall create continuing, regular, planning sessions with the public, City staff, CRA staff, Port staff and consultants, to exchange necessary information and to resolve conflicts.

Policy 1.2.27: The City of Riviera Beach shall ensure that prior to issuing any development approvals in the City, including the Community Redevelopment Area, that the necessary public facilities will be in place or funding committed.

Policy 1.1.20: By 2004, the City, in coordination with the CRA, shall evaluate continuing the existing waterfront land uses within the Future Land Use Map Mixed Use areas, in the context of the overall goals and objectives of redevelopment.

OBJECTIVE 1.3: Incompatible Land Uses

The City shall continue to take/support actions which reduce uses which are inconsistent or incompatible with the future land use map and city's adopted objectives, measured by the following policies:

Policy 1.3.1: By 2002, the development code shall be reviewed and revised to eliminate any potentially incompatible land uses including non conforming uses within zoning districts, and to contain updated land development regulations.

Policy 1.3.2: As part of the above review, the City shall continue to assess the adequacy of the non-residential zoning districts provisions in terms of their ability to protect adjacent housing from existing and future incompatible uses.

Policy 1.3.3: Redevelopment shall be considered a tool to assist in elimination of incompatible uses, and to this end the 2001 Redevelopment Plan shall include an assessment and prioritization of the reduction of such uses which would be inconsistent with new redevelopment.

Policy 1.3.4: The City Council shall formally request the Town of Lake Park to use rezoning and code enforcement to upgrade the incompatible uses on the north side of Silver Beach Road.

Policy 1.3.5: The City planning and CRA staff shall continue to work with the Port staff to find alternatives to ensure that the Port does not expand past 10th Street (the northern boundaries of the Port), instead looking to the industrial areas to the west and south and insure future port development and that its traffic does not have a detrimental affect on downtown redevelopment and the Port Road residential areas.

Policy 1.3.6: By 2002, the City shall adopt code provisions to require appropriate and efficient storage of construction aggregate for all facilities in the City that store this type of material.

Policy 1.3.7: In the case of the non-residential land use designations along a) 7th and 9th Streets in the Port Road commercial area, b) the west side of Lake Shore Drive, c) the south side of 27th Street east of Broadway and d) the office designation along 25th and 27th Streets (between Avenue H and E), special site plan review criteria shall prohibit curb cuts from local streets and require landscaped buffers; access to these parcels shall not be from local residential streets.

Policy 1.3.8: Existing water dependent uses (i.e., uses that cannot exist or occur without ocean or estuarine association) shall be maintained through compatible zoning policies.

OBJECTIVE 1.4: Natural Resources

Development activities shall ensure protection of natural resources, and the city shall continue to enforce the Land Development Code and amend if necessary to assure adequate protection of natural resources and environmentally sensitive land; particularly mangroves, significant estuarine bottomlands, wetlands, the beach and wellfields.

Policy 1.4.1: In order to achieve protection of the natural Singer Island lakefront habitat (particularly mangroves, adjacent wetlands and significant estuarine bottomlands) the City shall continue to enforce the Wetlands Preservation Ordinance and shall continue to pursue public acquisition of submerged lands.

Policy 1.4.2: The City shall continue to enforce the Palm Beach County Wellfield Protection Ordinance, and by 2002 amend the Land Development Code to prohibit any uses within wellhead protection areas which would be detrimental. In the interim the City shall continue to review any uses at time of development request, for compliance with the County Wellfield Protection Ordinance.

Policy 1.4.3: The City shall continue to implement the use of native vegetation, through the Land Development Code.

OBJECTIVE 1.5: Hurricane Evacuation

Grant no land use plan amendments that would increase residential land use density and intensity in the Coastal High Hazard Area (CHHA [9J-5.006(3)(b)5, F.A.C.]

Policy 1.5.1: Evaluate plan amendments and rezoning requests that would increase residential population densities permitted by the Comprehensive Plan in the CHHA in order to avoid further burdens on the hurricane evacuation process. Vacant parcels shall be developed at densities and intensities consistent with the Future Land Use. Map; and will adhere to Objective 2.2 and related policies of the Coastal Management Element.

Policy 1.5.2: The City of Riviera Beach shall adopt the hurricane evacuation routes and times as stated in the Palm Beach County Comprehensive Emergency Management Plan.

OBJECTIVE 1.6: Annexation

Continue to annex pockets and enclaves, east of the City's western limits, to create a unified, compact pattern of municipal development and efficiency of service delivery.

Policy 1.6.1: The City shall work with land owners to complete at least one additional annexation annually (either City or landowner initiated).

Policy 1.6.2: The City shall work with the Florida League of Cities to achieve State legislation to facilitate annexation of all enclaves in Riviera Beach.

Policy 1.6.3: The City shall pursue interlocal agreements with the County to allow the annexations of all enclaves.

OBJECTIVE 1.7: Innovative Land Development

The City shall continue to develop and encourage utilization of innovative land regulations and zoning districts, including PUD, mixed use development, and new urbanist approaches, as measured below:

Policy 1.7.1: By June 2002, complete a review of the existing Planned Unit Development districts of the Zoning Ordinance to assess their effectiveness in encouraging and achieving such projects, and shall adopt additional districts in accordance with Land Use designations (see Objective 1.8)

Policy 1.7.2: By 2004, the City shall consider a development code revision to address the development of resort hotels/motels/timeshares at 30 suites (60 rooms) per acre [40 suites (80 rooms) when MEAHOP bonus provision is used] in the Resort Hotel land use designation and 60 suites per acre in the expanded community redevelopment area.[1]

Policy 1.7.3 The City shall incorporate crime prevention through environmental design, into the review of all development projects.

OBJECTIVE 1.8: Future Land Use Categories

The City shall continue to ensure that its Land Development regulations are consistent with and further the provisions of the Comprehensive Plan, and shall incorporate densities and intensities of Future Land Use Categories into the Land Development Code.

Maximum Floor Area Ratios (F.A.R.s) for Non Residential Land Use Categories

Future Land Use Category	Floor Area Ratio's Maximum	Standard
Commercial	1.4	0.4
Working Waterfront	0.6	0.4
Downtown Mixed Use	2.0	1.0
General Mixed Use	2.0	1.0
Office	1.0	0.4
Industrial	0.8	0.4
Recreational	0.6	0.2
Utilities	0.8	0.4
Special Preservation	0.0	0.0
Port:	As set out in the Port Master Plan	

[1] Ordinance 2953

Policy 1.8.1: The Future Land Use Map designations shall include the following land use categories, densities and intensities, which shall be implemented through land development regulations. The City shall take the necessary actions to implement the categories in accordance with criteria described below:

Residential

There are 5 residential land-use categories, which include predominantly single-family and multiple family uses. Institutional uses such as parks, and other governmental facilities are appropriate, subject to criteria to ensure compatibility with the residential character. Manufactured housing and mobile home parks are allowed within this use in accordance with Land Development Regulations.

- ***Single-Family Residential*** : Up to 6 units per acre; churches in residential districts shall require special exception approval. Implemented through the RS-5 zoning district.

- ***Low Density Multiple Family Residential: Up to 10 units per acre:*** This category is intended to provide for mixed density type residential. It will be implemented through the RS-8, RS-6, and RD-15 Two-family zoning districts.

By 2002 the zoning districts, which implements this use shall be revised to implement the following objectives:

1. In keeping with the low density nature of this district and to address compatibility, the low density multi-family unit height shall not exceed three stories.
2. Insure compatibility with adjacent nonresidential land uses through development standards, locational and buffer requirements being particularly sensitive to residential areas adjacent to such sites. In cases where multi-family abuts single family, or conversely industrial or commercial, buffer requirements shall be greater.
3. The general objective of these districts shall be to provide a flexible mixed type residential district, which allows for innovative housing types and helps further Housing Element goals.

- ***Medium Density Multiple Family Residential: Up to 15 units per acre;*** A medium density category that includes hotels as special exceptions. It will be implemented by the RML-12, RM-15 and RMH-15 districts.

- ***High Density Multiple Family Residential: Up to 20 units per acre;*** This is the highest density category, available when the Minority Employment and Affordable Housing Opportunity Plan (MEAHOP) bonus provision is used; otherwise, 17 units per acre without the MEAHOP provision. It will be implemented by the RM-20 and RMH-20 districts, which reflect a graduated density allocation between the 1979 Coastal Construction Line (CCCL), the vegetation line, and the mean high water line.[2]

- ***Resort Hotel: Up to 40 suites per acre;*** This category is primarily resort commercial in character and is intended to promote resort and tourist related activities. The highest density available is 40 suites (80 rooms) per acre, when the Minority Employment and Affordable Housing Opportunity Plan (MEAHOP) bonus provision is used, otherwise the

[2] Ordinance 2953

density shall be 30 suites (60 rooms) per acre. This category is restricted to the areas between the two municipal beaches located on Singer Island east of A1A. A special Resort Hotel zoning district allowing resort/hotels/timeshares of up to 30 suites (60 rooms) per acre (40 suites, 80 rooms/acre with MEAHOP) which may include accessory restaurant and accessory retail shall be adopted for a section of the Singer Island beachfront east of A1A between the two (2) public beaches. This density may be increased to 60 suites per acre for Resort Hotel land use parcels within the Community Redevelopment Area on Singer Island.[3]

Multi-family residential dwellings may be permitted under this category at a density of 17 dwelling units per acre or a maximum of 20 dwelling units per acre if the Minority Employment and Affordable Housing Opportunity Plan (MEAHOP) bonus provision is used."

Mixed Use

- ***Downtown Mixed Use***: A range of uses including office, retail, residential, restaurant, entertainment, parks and boardwalks; Each use shall be distributed as delineated in the chart below:[4]

Land Use	**Percent Distribution**	
Downtown Mixed Use	**Minimum**	**Maximum**
Office	0	60
Commercial Retail	20	70
Residential	20	70
Restaurant / Entertainment	20	70

- By 2002, following the Redevelopment Study currently underway, the City planning and redevelopment staffs shall prepare a zoning district with urban design controls for this district, including height and intensity limits.

- ***General Mixed Use:*** Mixed use projects including residential, office, restaurant, hotel, entertainment, parks, marinas, boat storage facilities, boat ramps, health clubs, and retail commercial in a planned development format with high urban design and site plan standards shall be incorporated in the Land Development Code: Each use shall be distributed as delineated in the chart below:[5]

Land Use	**Percent Distribution**	
General Mixed Use	**Minimum**	**Maximum**
Office	0	60
Commercial Retail	10	70
Residential	30	70
Restaurant / Entertainment	10	70
Parks	20	60
Waterfront / Marina	0	70

- By 2002, following the Redevelopment Study currently underway, the City planning and redevelopment staffs shall prepare a zoning district with urban design controls for this district, including height and intensity limits.

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[3] Ordinance 2953
[4] Ordinance 2953
[5] Ordinance 2953

Commercial and Office

- ***Office:*** A transition category, intended to encourage office development along corridors and in the commercial centers, that also permits multifamily housing. Implemented through the OP Zoning district. Use intensity is moderate, and shall vary depending on adjacent uses. The maximum, impervious area shall be 70%. Height standards shall relate to adjacent uses, being more restrictive in proximity to single family land use areas, as described in the Land Development Code.

Locational Criteria: When considering an office designation, the location should be located on a collector or arterial, and have the ability to provide an adequate buffer from any residential area.

- ***Commercial:*** Uses predominantly connected with the sale, rental or consumption of products, or performances of professional or non-professional services. The maximum impervious area shall be 70%. A range of zoning districts from a commercial neighborhood district (CN) to general commercial districts. (CG) shall implement this land use category.

Industrial and Related Uses

- ***Working Waterfront:*** Commercial fishing, boat construction and repair, marine-related repair, marine services and sales, marine related construction uses and similar or related uses including marinas and in and out storage. CM and IG districts implement this Land Use category.

Land Use	**Percent Distribution**	
Working Waterfront	**Minimum**	**Maximum**
Commercial Fishing	0	50
Boat Construction / Repair	10	70
Marine Related Sales / Service	10	70
Marine Construction / Storage	10	70

Marina siting should be based on upland, shoreline and in-water characteristics, as well as submerged land ownership. At a minimum, the following general criteria should be used in the zoning code special permit review process to determine the appropriateness of sites within the coastal area for marina projects:

a) Construction of any marina/water-dependent project shall not be permitted on Lake Worth bottomlands along northern Singer Island. Furthermore construction and subsequent operation of any marina/water-dependent project shall result in no net degradation of:
   1) Lake Worth bottomlands;
   2) Mangrove preservation areas; or
   3) Habitats used by endangered, threatened or rare species.

b) The proposed marina/water dependent project site should have:
   1) Marina basin and access channel, and direct access to the Intracoastal Waterway.
   2) Adequate landside accessibility and service areas.

c) The proposed marina/water dependent facility should be:
   1) Compatible with existing surrounding land uses; and
   2) Of sufficient size to accommodate the required parking; and
   3) Avoid use not dependent on water.

d) The proposed marina/water dependent facility should:
   1) Preserve or improve traditional public shoreline uses, and public access to estuarine waters, and
   2) Preserve or enhance the quality of the estuarine waters, water circulation, tidal flushing and light penetration, and
   3) Require minimal dredging, and
   4) Provide a hurricane contingency plan, and
   5) Provide sewage pumpout facilities, and
   6) Provide a fuel management or spill contingency plan if fuel is to be dispensed.
   7) Be built within the parameters of the National Fire Protection Association codes for marinas and boatyards.

- ***Port:*** Uses related to the Port of Palm Beach cruise and cargo ships.

This Land Use is assigned to property within the Port of Palm Beach District only.

- ***General Industrial***: Includes both the limited industrial district (light manufacturing, automotive uses, construction firms, wholesaling, etc.) to general industrial districts which include heavier manufacturing and petroleum storage. The maximum impervious area shall be 80%. Mining shall continue to be prohibited, and the City shall amend the IG zoning district to reflect this change, by 2002.

Public-related Land Uses

- ***Community Facilities***: Schools and municipal, State and Federal uses. Implemented by CF Zoning District.

- ***Special Preservation***: Mangrove, wetlands and special estuarine bottomlands. These mangroves and special estuarine bottomlands are protected by Federal, State and local agencies involved in wetlands preservation, dredge and fill permitting, and other hydrological modifications. It is the expressed policy objective of the City to preclude any development of Submerged Lands except as specifically permitted by this section, including but not limited to mangroves, wetlands and estuarine bottomlands, to the maximum extent permissible by law.

Private residential fishing or viewing platforms and docks for non-motorized boats may be permitted subject to the following regulations:

1. Platforms and docks shall not extend outward past the mean low water line.

2. Construction must be fully achievable from an on-shore location.

3. Permits must be obtained from all other applicable regulatory agencies.

By 2002,The City shall adopt Land Development regulations addressing the use of the bottomlands for purposes listed above and which are compatible with the City's preservation policies 3.1.5 and 3.3.5 contained in the Conservation Element, which mandates no loss of the natural shoreline bordering the estuary on Singer Island.

It is further the policy of the City to oppose any application for dredge or fill permits pending before applicable State or Federal agencies for lands in the Preservation Area. This policy objective shall not be construed nor implemented to impair or preclude judicially determined vested rights to develop or alter submerged lands.

- ***Recreation:*** Public parks and selected commercial recreation uses including commercial uses with parks subject to City review and control. It will be implemented through the RO district.

- ***Utilities:*** Municipal water and sewer, electrical and communications uses. It will be implemented through the U District, although utilities may be allowed elsewhere per the Land Development Code.

Policy 1.8.2: By 2002, review and revise the Land Development Code and other code provisions including, but not limited to zoning, subdivision control, sign controls, landscaping, lot width, litter, vacant lot maintenance, and floodplain protection to assure their compatibility with the intent of this plan. A provision shall be adopted whereby annual business license renewals are granted only if required landscaping is adequately maintained.

Policy 1.8.3: The Land Development Code shall continue to include ~~of~~ special buffer requirements for all industrial properties that abut residential districts and all multifamily residential development that abuts single family. This shall include landscaping on the lower intensity side of any walls.

OBJECTIVE 1.9: Community Enhancement

The City shall direct its efforts to enhance the community and improve quality of life, focusing on programs to 1.) Stabilize neighborhoods and reduce land use conflicts, and 2.) to improve the appearance of major corridors.

Policy 1.9.1: The City shall continue streetscape efforts along its "gateways", and shall initiate the following projects by 2001:

- Enhancement of Blue Heron Boulevard.
- Initiate a joint effort with the County, FEC Railroad and adjacent property owners to landscape the railroad right-of-way along Dixie Highway and to beautify and landscape the medians on Old Dixie Highway.
- Establish a beautification plan for U.S.#1.
- Participate with efforts of other north county municipalities to encourage a means to fund/place transmission lines underground.

Policy 1.9.2: By 2003, the City shall establish a comprehensive approach to neighborhood enhancement and stabilization, on a neighborhood by neighborhood basis. Land development regulations shall be used to assist in this approach, set out in "Objective 1.7 Neighborhood Revitalization/Stabilization" of the Housing Element.

Policy 1.9.3: Land Use and zoning requests that increase density or intensity in/ adjacent to residential neighborhoods, shall be required to demonstrate a benefit to that neighborhood.

Policy 1.9.4: Commercial and other non-residential uses adjacent to residential neighborhoods shall not be expanded into those areas unless such uses do not diminish or degrade the residential character of the neighborhood.

Policy 1.9.5: By 2003, the City shall initiate a program to identify those non-conforming uses which are not compatible with residential areas and not in conformance with the Comprehensive Plan, and develop a strategy (with incentives or other means) to replace the uses or encourage adaptive re-use of structures.

OBJECTIVE 1.10: Water and Sewer System Land Needs

The City shall coordinate its Utility Capital Improvement Plans with the Land Development Code to insure adequate provision of water and sewer facilities.

Policy 1.10.1: By 2002, review the Utilities zoning district, other districts and utilities map to assure adequate provisions for sewer lift stations and other utility land requirements.

OBJECTIVE 1.11: Historic Preservation

The City shall consider the historic value and character of the downtown in the context of redevelopment efforts. Moreover, to the extent structurally feasible, the City shall preserve and adaptively reuse the restored Spanish Courts Motel Buildings. Structural feasibility shall be determined by a certified structural engineer, in consultation with the Florida Division of Historical Resources and the Florida Trust for Historic Preservation. The City shall also preserve any readily accessible artifacts located in the archeological site.

Policy 1.11.1: No later than the end of 2002, the City, in coordination with the CRA, shall perform an archeological and historic survey of the downtown redevelopment area. No structural disturbance of the restored Spanish Courts will occur prior to completion of the survey.

OBJECTIVE 1.12: School Siting

In Coordination with the Palm Beach County School Board, the City has made, and will continue to make, every effort to provide sufficient land on the Future Land Use Map and within the City's Zoning code proximate to residential development to meet the projected needs for schools. This Objective shall be made measurable by its implementing policies, which guide the location of all private, public, and charter educational facilities.

Policy 1.12.1: Public, Private, and Charter schools shall be allowed in the Community Facility land use category in the Future Land Use Element.

Policy 1.12.2: The City shall ensure that proposed school sites will be compatible with present and projected use of adjacent property.

Policy 1.12.3: [8]All proposed school sites shall be located away from industrial uses, major arterial roadways, railroads, airports, seaports, and similar land uses to avoid noise, odors, dust, and traffic impacts and hazards. School sites may be located away from the above areas and hazards by providing buffering including but not limited to: open spaces, landscaped areas, fences, walls, berms or any combination thereof used to physically separate or screen one use or property from another so as

[8] Ordinance 2923

to visually shield, or to block noise, lights or other nuisances, and by taking measures deemed necessary to ensure safety from any hazardous or noxious conditions.[7]

Policy 1.12.4: The City shall continue to coordinate with the Palm Beach County School Board to maintain the historical character of existing schools and to ensure their use as public facilities.

Policy 1.12.5: The City shall coordinate with Palm Beach County School Board to plan and establish, future school sites throughout the City; ensure adequate lands proximate to urban residential areas, and to collocate public facilities, such as parks, libraries, and community centers, with schools to the extent possible.

Policy 1.12.6: By August 2001, the City shall adopt Land Development Regulations to include criteria for school siting.

OBJECTIVE 1.13: Hazard Mitigation

The City shall coordinate future land uses as necessary to encourage the reduction or elimination of uses that the City determines are inconsistent with the adopted County-wide Hazard Mitigation plan.

Policy 1.13.1: By 2001, the City shall review the Hazard Mitigation Plan and determine and implement any necessary actions.

Policy 1.13.2: The City shall prioritize a list of hazard-mitigation related projects, and seek funding assistance through the program.

Note: When a deadline is provided for accomplishment, (i.e. 2001) this shall be construed to mean by the end of that year.

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[7] Ordinance 2964

FUTURE LAND USE MAP OF THE CITY OF RIVIERA BEACH, FLORIDA

Map created on February 16, 2005 by the City of Riviera Beach Community Development Department

Adopted by City Council, Ordinance Number 2898

Source of Land Use Districts, Annexation Area, and Railroads: City of Riviera Beach Community Development
Source of Street and Parcel Centerlines: Palm Beach County Information Systems Services (The GIS Data used to create this map is property of Palm Beach County, Florida Copyright 2000. All rights reserved. Any use of Palm Beach County GIS Data is subject to a license agreement and the data and map disclaimer found on the bottom right hand corner of this map.)

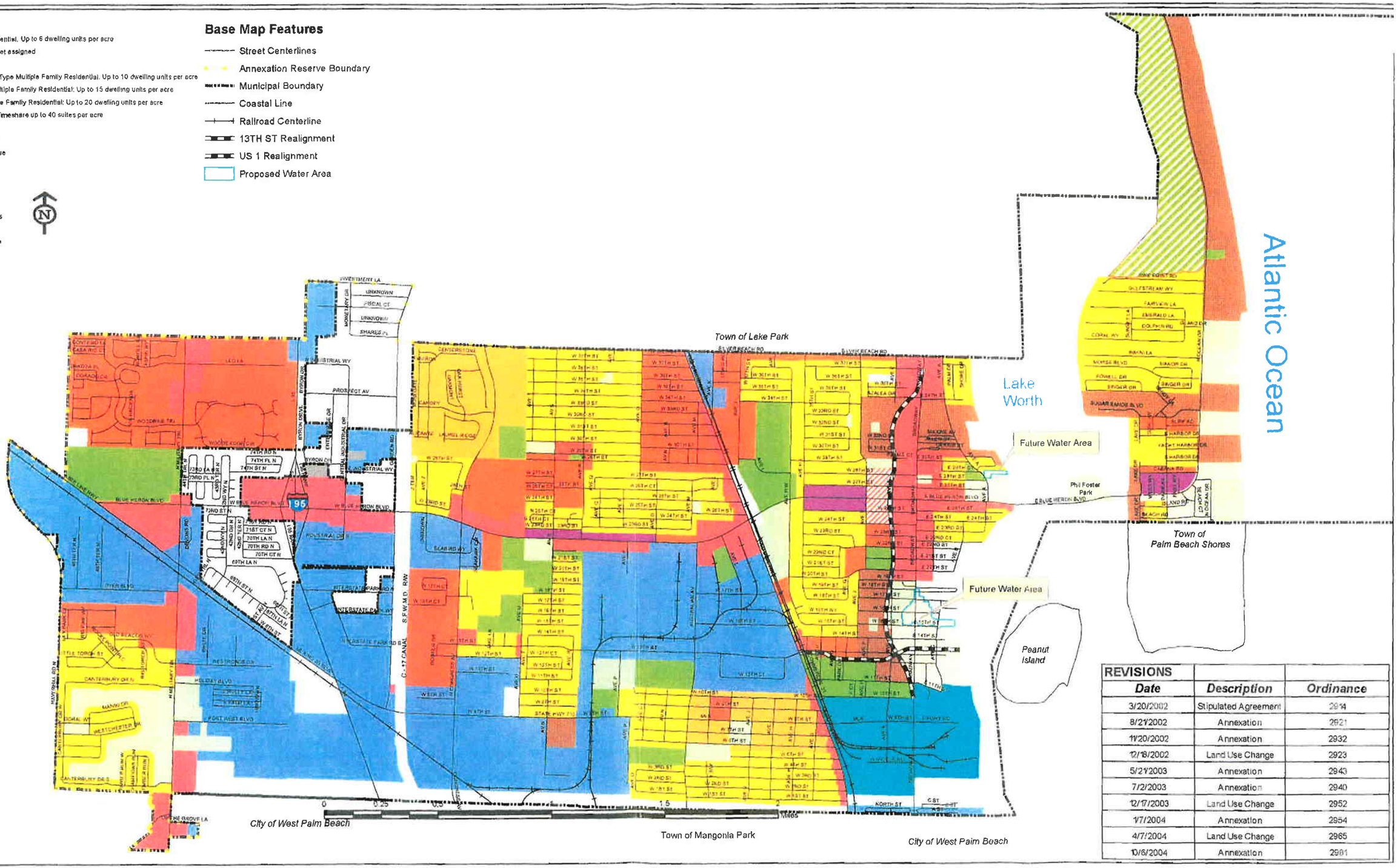
D:projects/planning & zoning/land use/land use 17 x 11

Future Land Use

- Single Family Residential: Up to 6 dwelling units per acre
- Annexed, FLU not yet assigned
- Resort Hotel
- Low Density Mixed Type Multiple Family Residential: Up to 10 dwelling units per acre
- Medium Density Multiple Family Residential: Up to 15 dwelling units per acre
- High Density Multiple Family Residential: Up to 20 dwelling units per acre
- Resort, Hotel, and Timeshare up to 40 suites per acre
- Commercial
- Working Waterfront
- Downtown Mixed Use
- General Mixed Use
- Office
- Port
- Industrial
- Community Facilities
- Recreational
- Special Preservation
- Utilities

Base Map Features

- Street Centerlines
- Annexation Reserve Boundary
- Municipal Boundary
- Coastal Line
- Railroad Centerline
- 13TH ST Realignment
- US 1 Realignment
- Proposed Water Area



REVISIONS		
Date	**Description**	**Ordinance**
3/20/2002	Stipulated Agreement	2914
8/21/2002	Annexation	2921
11/20/2002	Annexation	2932
12/18/2002	Land Use Change	2923
5/21/2003	Annexation	2943
7/2/2003	Annexation	2940
12/17/2003	Land Use Change	2952
1/7/2004	Annexation	2954
4/7/2004	Land Use Change	2965
10/6/2004	Annexation	2981

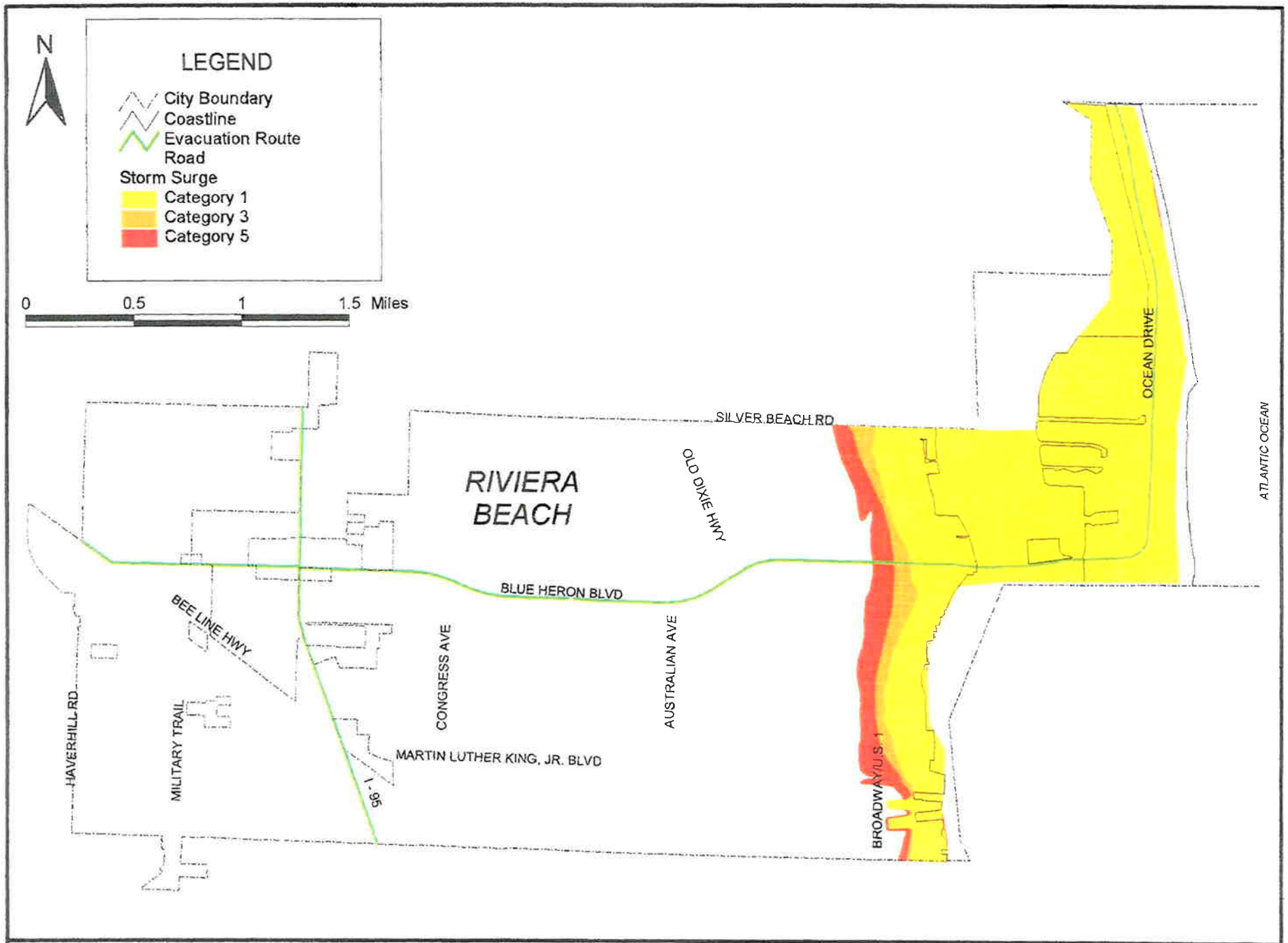


Figure FLU-2 Evacuation routes and storm surge for category 1, 3, and 5 hurricanes based on SLOSH modeling. Source: Florida Department of Community Affairs.

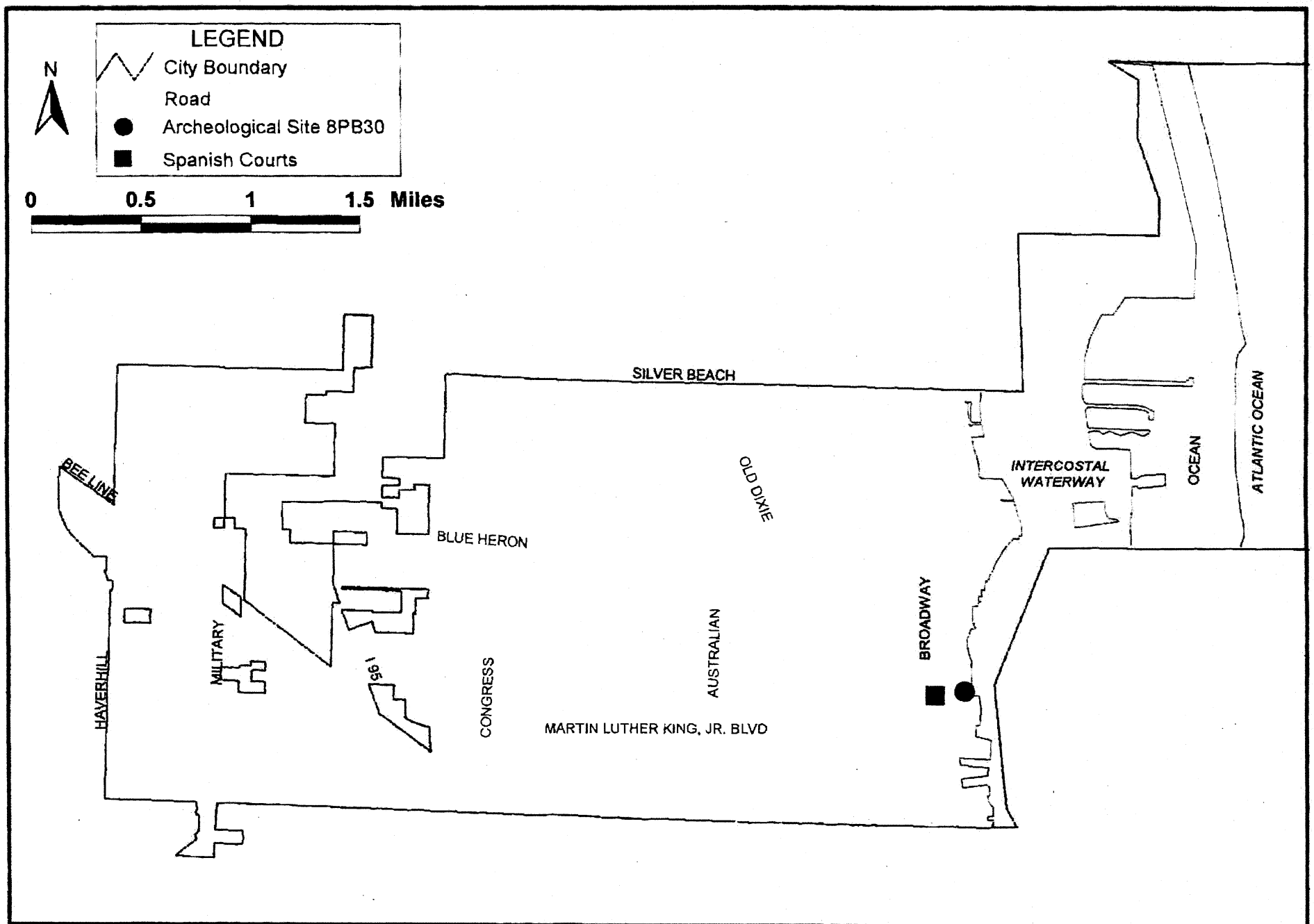


Figure FLU-3. Historic Resources. Source: Florida Department of Historic Resources, March 2002

FUTURE LAND USE ELEMENT

INTRODUCTION

In conformity and in furtherance of the provisions specified in the "Local Government Comprehensive Planning and Land Development Regulation Act," Chapter 163, Florida Statutes (FS) and Chapter 9J-5, Florida Administrative Code (FAC), "Minimum Criteria for Review of Local Government Comprehensive Plans and Determination of Compliance," this Future Land Use Element has been prepared to guide the growth and future development of the City of West Palm Beach. The Element is intended to regulate the density and location of all land uses in the City through the year 2010. As specified in Chapter 163, Florida Statutes, the Future Land Use Element is intended to:

* Preserve and enhance present advantages.
* Encourage the most appropriate use of land, water and resources consistent with the public interest.
* Overcome present handicaps.
* Deal effectively with future problems that may result from the use and development of land within the City.
* Preserve, promote, protect, and improve the public health, safety, comfort, good order, appearance, convenience, law enforcement and fire protection, and general welfare.
* Prevent the overcrowding of land and avoid undue concentration of population.
* Facilitate the adequate and efficient provision of transportation, water, sewerage, schools, parks, recreational facilities, housing, and other requirements and services.
* Conserve, develop, utilize, and protect natural resources within their jurisdictions.

The goals, objectives and policies pertaining to the future development of the City will be analyzed for two distinct planning periods. The first, covering the span from 1996 to 2001, is considered the short-term period, while the long-term planning phase will consist of the span from 2001 to 2010. A Capital Improvements Element, Chapter 12 of this Comprehensive Plan, will be prepared to summarize the proposed improvement, timing and funding source of each short-term project identified in this and other elements of the Plan. All policies of this Plan will be consistent with the City's Future Land Use Map, prepared for the year 2010, as well as the other elements of the Plan.

Since the City's future development will be in accordance with the concepts of Eastward Ho!, a discussion of this initiative follows this Introduction. After this review, the "Existing Conditions and Future Analysis" section of this Element provides a demographic and economic overview of the City as well as a discussion of transportation, annexation, land uses and natural resources. Subarea profiles also offer a more specific look at the eight major areas of the City. Finally, goals, objectives and policies will be formulated, along with a series of recommendations, to guide the future development of West Palm Beach.

EASTWARD HO!

As stated in a subsequent Section of this Element, much of the City's residential growth has recently occurred west of Interstate 95. At the present time, the majority of new residential development comprises a Planned Development program at the Western Redevelopment Area of the City. This type of development is suburban in nature: focuses on mainly townhome, zero lot

line, apartment or duplex dwelling units located within "pods"; does not include mixtures of different types of land uses; and is accessed only by major arterial roadways. This type of project usually requires filling wetland areas; building detention ponds as lakes; similar, if not the same, styles of architecture from one project to another or from one pod to another; garage doors usually line the street; and houses which are close together and away from the street frontage.

Although there is a market for this type of residential development, this type of development may demonstrate some characteristics typical for suburban developments. For instance, the residents' daily needs are usually met by driving to and from either retail establishments or service providers; the residents of the planned developments must continually use the arterial roadways upon which the pod development fronts to commute to work; it is difficult for the residents to walk or bike to work or services; the public transportation system cannot attract large numbers of users, as those living in the Western Development Area must all own a vehicle for transport; etc. Additionally, new schools must be built within these locations to service the continuing expansion of the population under the age of eighteen. This may require a possible shift of financial resources from the inner city schools to the suburbs and fosters overcrowding of the schools located within the western suburb areas, as there are limited resources that a school district can use to build new schools or additions to existing schools.

Based on these effects of this type of western sprawl development, the City's long-term goal is to encourage development which parallels the goals found in the Governor's initiative known as "Eastward Ho!" The Governor's Office established the Eastward Ho! movement to eliminate the trend of extending urban sprawl to the Everglades. The Governor's Office is attempting to attract development to the geographic area between and adjacent to the CSX and FEC Railroad tracks, as well as within the downtowns, airports and seaports of the existing urban areas within South Florida. Palm Beach County is included within this boundary, and more particularly, the City of West Palm Beach.

The City subscribes to this initiative because it fits in strongly with the "New Urbanism" direction toward which the City is rapidly moving. According to the New Urbanism, cities are divided into three constituent parts: the neighborhood; the district; and the corridor. The neighborhood generally has a balanced blend of enterprises, both retail and residential. The neighborhood permits daily interaction in the form of business and personal contacts, etc. The district can be several neighborhoods which, when combined, form a coherent and complementary mix of land uses all aimed at fulfilling one purpose, such as a financial district or governmental district. The corridor may be a transportation route or other system (e.g. recreational parks) which connects the neighborhoods and the districts.

The City's New Urbanism attempts to realize a concept and pattern of growth which creates a place of unity to which its residents and tourists may feel attached; to establish a character of development and architectural heritage which is unique, with many useable public spaces; a place of common vision and a physical predictability for all new development; to allow some form of security of investment in the City's Eastward Ho! Region, as defined in this Comprehensive Plan; and to ensure a memorable and safe place for human interaction, commercial and cultural worth. The New Urbanism will reinforce the identity of each neighborhood, district and corridor and balance different modes of transportation, particularly pedestrians.

Specifically, the City encourages development which allows complementary land uses to locate in close proximity to each other. The main focus is to protect and enhance existing neighborhoods and to build new neighborhoods which have a mixture of residential dwelling unit types and a mixture of neighborhood retail land uses which will service those neighborhoods. Neighborhood commercial uses include, but are not limited to, the following examples: art merchandising; art and drafting supplies; beauty salons; book and stationary stores; personal and convenience sales; day care facilities; florists; food stores; mail services; newspaper and magazine shops; laundry and dry cleaning facilities; medical offices; drug stores; professional service offices; restaurants; etc.

The purpose of this development is not only to foster higher densities within the Eastward Ho! boundaries, but also to preserve a quality of life which is not overburdened by the automobile and its corresponding infrastructure. This type of development permits bicycle and pedestrian activity, and allows different, yet complementary land uses to locate next to each other to foster the internal capture of vehicle trips, as well as to induce more varied and increased human interaction. Essentially, the goal of the City's New Urbanism is to bolster the City's existing neighborhoods, districts and corridors, as well as build new neighborhoods which are walkable, livable and attractive to a regional and local population. (Some of the concepts regarding New Urbanism, cited in this, and the three preceding paragraphs, represent selected written material created by Duany Plater-Zyberk, Architects and Town Planners, as well as information from the Seaside Institute).

The City's redevelopment goals within the urbanized inner city, east of Interstate 95, directly coincide with the Eastward Ho! boundaries. It also parallels the City's implementation of its Downtown Master Plan (DMP). The DMP subscribes to the mixing of land uses within the Downtown, in a manner which is similar to the city and town building of the late 19th and early 20th centuries. This works well within the City as it reflects the development pattern, which was popular during West Palm Beach's infancy. More importantly, a city's downtown should permit a wide variety of commercial and residential land uses. The traditional Euclidean-type zoning code, popular during the mid-1920s until today, does not serve the traditional downtown well, as it separates land use categories from each other. With the exception of industrial land uses, the majority of commercial, retail and residential land uses should locate next to, or in close proximity to, each other in an urbanized area.

In order to encourage mixed uses outside of the Downtown and further the goals of the Eastward Ho! Initiative and New Urbanism, the City allows limited residential uses to occur in areas with a Commercial (C) Future Land Use designation. This residential development typically consists of second story residential units or live/work units located above ground floor commercial.

The reason for this is that such a development pattern permits people to interact on a daily basis, thereby creating more chances for business, personal and casual relationships. The pattern also yields opportunities for the use of different modes of transportation. Other effects of this development model include advancing environmental protection via the construction of denser development in already developed regions of the City, as well as reducing development pressure in wetlands and the Everglades to the west of Interstate 95 and the Florida Turnpike.

The City has implemented the Downtown Master Plan through the approval of a Transportation Concurrency Exception Area (TCEA), which generally eliminates the need to

satisfy traffic concurrency standards promulgated by the Palm Beach County Department of Engineering and Public Works, within the City's Downtown. This permits developers to construct denser commercial and residential developments Downtown, without the need to build new street facilities or reconstruct intersections in order to handle the additional traffic volumes generated by the new development.

The City possesses many options to implement the Eastward Ho! Initiative. Of these options, there are several that are imperative to execute in order to succeed in the revitalization of the urban core of West Palm Beach. Among these are housing, recreation and open space, transportation, infrastructure, education, employment, and public safety. Most of these are discussed in the other Elements of the Comprehensive Plan; however, a brief explanation of each is given below in order to show the relationship of these Elements to the Eastward Ho! Initiative.

* Housing - This is a very important issue since housing is a major contributor toward the success of Eastward Ho! The area involved in the initiative has become victim to the mass exodus of its population to the suburbs within the western portion of the City; with the population followed the commercial development as well. However, the Mayor and the City staff have made great strides to reduce this by encouraging both residential and commercial development east of Interstate 95. (Please see the Housing Element of this Plan.)

  The City's Historic Preservation Division has been successful in designating neighborhoods, within the initiative's boundary, as historic districts. This creates an empowerment within the designated neighborhoods to maintain the quality of existing homes and proposed development, and to participate in land use decisions within the neighborhoods. This develops a stable and more attractive neighborhood, resulting in a better, alternative real estate market to that of the western suburbs. Grassroots organizations existing as neighborhood associations, which support this effort, also need backing in order for them to be fully utilized. (See the Historic Preservation Element of this Plan.)

* Recreation and Open Space - If the City wishes to attract people to live in the initiative's boundaries, there must be an adequate park system to service those residents. Parks must be clean, safe and fulfill the needs of the community. The Recreation Open Space Element, based on the City's Strategic Recreation Plan, provides the City with such a park system. (For more specific information refer to the Recreation and Open Space Element of this Plan.)

* Transportation - There needs to be an increase in the utilization of the public transit systems in the Downtown area. Some examples of this would be encouraging through incentives to increase ridership for both Tri-Rail and Palm Tran. Another method currently under review by the City Transportation Planner is to link the whole Downtown with a light rail system. In addition to these public transportation alternatives, there is also a need to develop a more pedestrian-friendly road infrastructure. There are several plans currently underway which will alter the current street design of several of the Downtown streets. As an example, the City is implementing the modification of the current one-way designated streets to two-way streets. This would necessitate the reduction of speeds throughout the City, as well as permit the increase of current sidewalk widths. Each of these outcomes presents an environment, which is more conducive to pedestrian activities. (For an in-depth look at these options, refer to the Transportation Element of the Comprehensive Plan.)

* Infrastructure - Higher density development is more energy efficient and infrastructure is less

expensive and easier to maintain than uncontrolled sprawl. It becomes very expensive for the City to provide the infrastructure needs of its residents when development is spread outside a central core. Utilities and roads must service these areas, and extensions as well as the repairs to them become very costly. Although the City is currently looking toward the theories of Eastward Ho! to redevelop and increase its tax base, there is a market for those who do not wish to live in the more urban areas. The City must service these people with utilities, such as stormwater, water and sewer lines, in order to continue its environmental preservation. It is more desirable for residents to have a controlled source of water and sewerage disposal, than for thousands of residents to use their own individual wells and septic systems, such as the Acreage Subdivision, west of the Florida's Turnpike, in the Unincorporated Area.

* Educational Facilities - The promotion and retention of the existing educational facilities in the Eastward Ho! area is not only economically viable, but necessary to ensure stable and vibrant neighborhoods. It also enables the residents of the area to increase their potential for employment through general education, vocational/technical education, and continuing education. It is the City's view that existence of educational facilities within this corridor will provide the necessary conditions for stable neighborhoods, as well as meeting places for the community at-large. The schools contain recreational areas, open space and meeting rooms and class rooms which can all be used by people within the community for sports, gathering spaces and continued learning.

  Another important aspect of the educational facilities is the necessity of preserving the existing urban schools. It is commonly accepted that the more development which occurs in the western areas, outside of previously urbanized areas, the higher the increases of the cost of providing education to children. The Palm Beach County School District possesses finite funds and must allocate its financial resources within the areas with the most demand. Should the population of the urbanized schools decrease, the funding for those schools will also decrease. This decrease in funding could create a loss in the continuity of neighborhoods which existing schools provide. For instance, there would be a loss in neighborhood meeting places, urban open space and recreational facilities. The City needs its urban and neighborhood schools and subscribing to the provisions of Eastward Ho! will assist in preserving these schools.

* Employment - The addition of more commercial development would mean an increase in both the amount of jobs for the future and the present employment pool in the area. Further, the location of commercial establishments within the urban core of the City, particularly neighborhood services, assists in attracting people to move to this core. Convenience of shopping for food, dry cleaning, etc. provides a necessary impetus to live in more dense environments. The City is on a course to provide grocery stores in both the Downtown and the "Congress Lakes" area of the City, at the current Stadium site. This property, along with the City's Auditorium, has recently been sold to the Watchtower Group, who will undertake the redevelopment of the Stadium site. The Watchtower Group and the City have worked extraordinarily closely to obtain the type of development which will stabilize neighborhoods: provide necessary residential services in an underserved area; meet the criteria of "New Urbanism"; and match the goals of the Eastward Ho! Initiative. The additional commercial ventures will provide innumerable opportunities for employment of the City's population, and may encourage spin-off type new retail or commercial opportunities to develop.

* Public Safety - Connected to the neighborhood stabilizing effects of historic preservation, public transportation, establishment of neighborhood commercial uses and employment opportunities, is one other extremely important element. It is public safety, and more particularly, police protection. The City has instituted continual increases in the visibility of police. This has been done through Community Oriented Policing (COP) Program. The focus of this Program has historically been the older existing neighborhoods of the urban core. It is extremely necessary to instill a sense of personal safety to residents, as well as visitors, to fully provide the safe environment which will attract people to live in the boundaries of the Eastward Ho! corridor.

The promotion of the Eastward Ho! development strategy may be controversial to some; however, the City is committed to the idea and goal of "Sustainable Development." In order to understand the City's direction, the following discussion describes the City's definition of Sustainable Development.

Sustainable Development is defined as encouraging economic and physical development which will increase the City's quality of life, for its business, citizenry and visitors, and which will continue the ongoing redevelopment momentum of the City of West Palm Beach. It is the City's goal to develop in a manner which safeguards the physical and social environments of the City today, without jeopardizing the quality of life for residents and visitors through the next century.

This definition requires the preservation and protection of the City's water supply, natural resources such as Clear Lake and the Intracoastal Waterway, as well as the creation and preservation of a strong business and economic life which provides the financial resources to maintain a prosperous City. Therefore, the City must stimulate new development which is an outgrowth of this definition.

The City continues to work on fulfilling its dream of development which creates a strong and vibrant downtown, a downtown which is a solid economic engine for the whole City. More importantly, a downtown which can support exciting economic and social activity for twenty-four hours per day. This activity will support itself and create spin-offs which supplies a momentum to continue redevelopment throughout the City for the next century. As the great City builders of the early 20th Century envisioned, this downtown will be the seat of commercial operations, government decision-making and partnerships with both the business community and the neighborhood associations.

Further, the City's strategy toward the environment will be one which ensures that the City will successfully survive for the next five plus generations. This strategy will include the following: the preservation and maintenance of its Water Catchment Area (WCA) for storing and filtering of the City's water supply needs: the preservation of important wetland areas by permitting development which only enhances those wetlands; the continuing search for better ways to recycle waste products; and the use of current technologies to provide environmentally safe methods to treat and dispose sewage.

Finally, the City must continue on a course of financial freedom in order to realize the goals of preserving the City's economic and environmental health for the coming generations. Mayor Nancy Graham has proceeded in this direction by eliminating the large-scale debt which the city faced in 1993. The City has also begun to and is succeeding to reduce crime downtown,

create the necessary momentum to obtain an economically prosperous Downtown, etc. The City is holding the line on tax increases and has reached the goal of fiscal prudence.

Based on the preceding discussion, the City's definition of Sustainable Development focuses on preserving the City for its future generations, in all respects, from fiscal policy to environmental policy. This sustainability meshes with the Eastward Ho! theory in that the primary way to develop the City for the future generations is to refocus much of its efforts east of Interstate 95. That is the location of the Downtown and coastal neighborhoods: it is where the City's historic fabric exists, which demonstrates the City's past and its foundation; this location is where the most stable neighborhoods can be encouraged, and it is where much of the City's industry and commercial activity occurs. A great portion of the City's water treatment facilities and water storage area exists east of Interstate 95, as well as the City's institutional land uses, such as hospitals, schools, churches, etc. In summary, the core of the City's economic, social and environmental success must exist within the Eastward Ho! boundaries.

The remainder of the following text describes the City's past, and updates the text to show current conditions. The goals, objectives and policies, at the end of this Element, will address the goals of the Eastward Ho! Initiative.

EXISTING CONDITIONS AND FUTURE ANALYSIS

A. GENERAL SETTING OF WEST PALM BEACH

The City of West Palm Beach is located 67 miles north of Miami in the northern part of what is often referred to as Florida's "Gold Coast" (see Figure 4-1). The City encompasses approximately 56 square miles and has been designated as a "coastal community," by the Florida Department of Community Affairs (DCA), because of its proximity to Lake Worth and the Atlantic Ocean. Of this total, the Water Catchment Area (WCA) comprises 19.3 square miles. This area, along with two other lakes, Clear Lake and Lake Mangonia, serves as a source of water for City residents. West Palm Beach is approximately eight miles long adjacent to the Intracoastal Waterway (Lake Worth) and nearly ten miles wide from that water body to the western edge of the Water Catchment Area.

West Palm Beach is the largest populated municipality of the 38 located within Palm Beach County, and serves as the county seat. Adjacent municipalities include Palm Beach, Riviera Beach, Mangonia Park, Palm Beach Gardens, Glenridge, Lake Clarke Shores and Lake Worth. The Port of Palm Beach and the Palm Beach International Airport are also both contiguous to the City.

Land development in West Palm Beach was originally confined to the Coastal Ridge area, located along the coast, which blocked surface drainage from the west. As a result, by 1950, development had given the City a linear characteristic. Residential subdivisions had been added in tiers extending northward and southward from the original townsite, commercial developments were established along U.S. Route 1, which served as the spine for this area, and most industrial activities had located along the north-south rail lines.

A second period of development began after the City purchased a private water system in 1955. In this purchase, the City acquired much of what is today the 19.3-square-mile Water Catchment Area, as well as Clear Lake and Lake Mangonia and the land between these bodies of

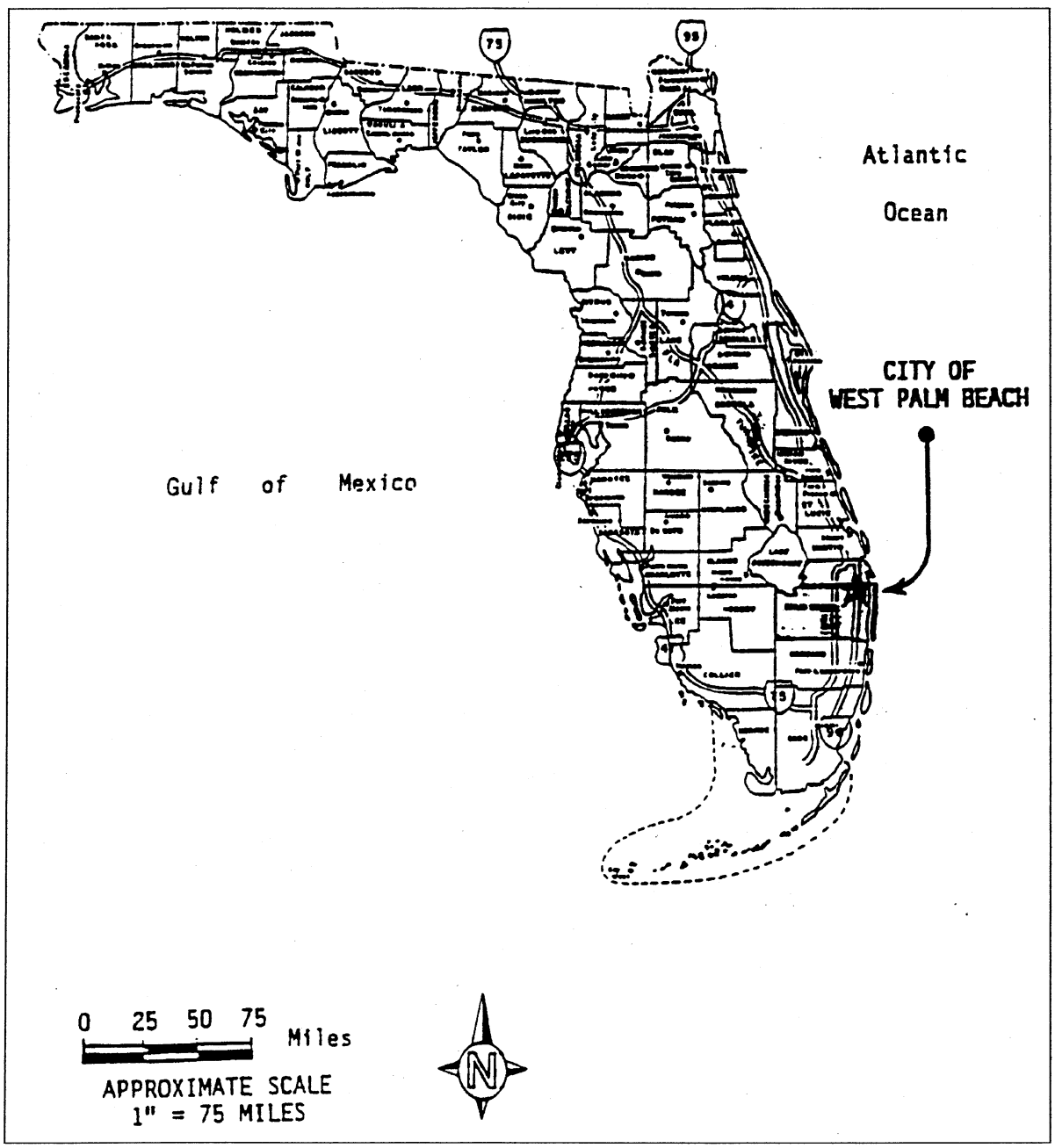
water and the WCA. With construction of some drainage improvements, much of the land between the lakes and WCA, known as the "Westward Expansion" area, became available for development.

Many areas developed during the initial period of City growth are now old and in need of both public and private modifications. Moreover, concern for the environment, coupled with changes in economic and energy conditions, have made such older areas more desirable than they once were. As a result, there is increasing interest in the conservation or redevelopment of the older, linear part of the community. Certain residential neighborhoods within this linear area, such as Northwood, Palm Beach Heights and Hillcrest, are severely impacted by problems of crime, deteriorating housing stock and environmental concerns. Attention must be given to these residential communities in order to ameliorate these negative conditions which threaten the neighborhood. Consequently, the City's future plans must balance these needs of redevelopment with those of the continuing Westward Expansion effort (See discussion regarding Eastward Ho! in the preceding Section).

B. HISTORY

The first permanent residents of present day Palm Beach County arrived during the 1870s. Most settled on the east shore of Lake Worth, now the site of the Town of Palm Beach. In 1892, Henry M. Flagler visited the Lake Worth area, investigating a route to Miami for the expansion of his Jacksonville, St. Augustine and Indian River Railroad. Impressed with the beauty of the area, Flagler decided to create an exclusive resort community on Palm Beach. Flagler envisioned the resort as a paradise, isolated from commercial activity and purchased property from Captain O.S. Porter and Louis Hillhouse on the west shore of Lake Worth in order to establish a town that would serve as the business district of Palm Beach. {Source: Curl, Donald W., Palm Beach County: An Illustrated History, 1986, p. 37}

FIGURE 4-1
CITY OF WEST PALM BEACH: GENERAL LOCATION



Source: City of West Palm Beach Planning, Zoning and Building Department, July 1997.

In November 1893, Flagler filed the original plat for the Town of West Palm Beach. The town extended from Lake Worth to Clear Lake. The streets were laid out in alphabetical order from Althea on the north to Fern on the south. The avenues ran alphabetically from Lantana on the east to Water on the west (neither of these was ever developed). Flagler's newly-named Florida East Coast (F.E.C.) Railroad reached West Palm Beach the same year, bringing building materials, tourists, workers and settlers. The first lots in the town were sold in February 1894 and a construction boom was underway. On November 5, 1894, the community voted to incorporate as the Town of West Palm Beach. The first census of the town the following year recorded 1,192 persons living in the City, with a property value of $133,926. Two fires in the downtown commercial area in 1896 prompted the Town Council to enact a new building code. This code required all buildings in the downtown be built either of brick or stone, or veneered with brick or stone. As a result, West Palm Beach soon had many masonry and masonry-veneered commercial buildings.

By 1900, West Palm Beach had electricity, a sewer system, a water pumping station, paved streets and telephone service. At the same time, the population dropped to 564 as a result of a decline in construction activity on Palm Beach; the freeze of 1894-95 which devastated the state's citrus industry; and nationwide recessions in the late 1890's.

The Town Council petitioned the Florida Legislature for a city charter, which was granted in 1903. By 1920, West Palm Beach was well established, not only as the center for commercial activity in Palm Beach County, but also as a tourist spot for the middle class. The completion of the Palm Beach Canal in 1917, provided access to inland farming areas and made West Palm Beach the shipping point for the County's agricultural products, both by rail and by water.

During the 1920s, West Palm Beach was caught up in the fever of the Florida Land Boom. By 1927, the entire city east of Australian Avenue had been platted, although little building had occurred north of Thirty-Sixth Street or south of Belvedere Road. Commercial activity focused on Clematis Street, while residences were built south of Datura Street and west of the present Florida East Coast (FEC) railroad tracks. Major office and commercial projects were erected including the City's first "skyscrapers." These were the Guaranty Building, 120 South Olive Avenue, seven stories, 1922; the Citizens Building, 105 South Narcissus, eight stories, 1923; the Dixie Court Hotel, 301 North Dixie Highway, seven stories, 1925; the Comeau Building, 319 Clematis Street, 10 stories, 1925; and the George W. Harvey Building, 226 Datura Street, at fourteen stories the tallest in the city when it opened January 1, 1927. The Harvey Building went into bankruptcy the day it was finished, testimony that the Florida Land Boom had gone bust.

The Land Boom peaked in the winter of 1924-1925. Four major factors contributed to the subsequent failure of the Florida real estate market. First, dishonest Florida real estate ventures were widely publicized in northern newspapers beginning in the spring of 1925, causing many investors to cancel all Florida real estate transactions. Second, the F.E.C. Railroad placed an embargo on all but perishable goods in August 1925, making building materials unavailable in the state. Third, two terrible hurricanes struck South Florida in quick succession. On September 16, 1928, a devastating hurricane swept across Palm Beach County. Winds estimated in excess of 130 miles per hour destroyed nearly 8,000 homes, leaving more than 2,500 families homeless and killing as many as 2,000. Hundreds of commercial buildings were leveled and property damage was estimated at $13 million. Fourth, speculators had pushed prices so high, no

buyers could be found. When the Stock Market crashed in October 1929, the Florida real estate market was left nearly valueless.

At the beginning of the Depression, West Palm Beach entered a period of moderate growth which lasted from 1930 until 1960. Population increased 25% to 30% each decade. By 1960, the City was completely built out east of Australian Avenue. The City had sold 4,200 acres of undeveloped swamp-like land west of Interstate 95 to the Perini Land and Development Company in 1957. The development of this area during the 1960's was a catalyst for suburban growth and marked the beginning of the shift in the City's population and economic base away from the downtown. The majority of this development lies within the 1,422-acre Villages of Palm Beach Lakes project consisting of approximately 7,317 residential units, 99 acres of commercial properties and two golf courses {Source: Perini Land and Development Company}.

In the 1980s, a resurgence of growth focused on the central business district (CBD). Large office buildings, hotels, retail centers and condominiums were beginning to reshape the skyline of the City. This new growth helped return the economic base to the CBD, making it a hub of activity once again. Specifically, the West Palm Beach Community Redevelopment Agency purchased the properties which comprised the former "Downtown/Uptown" Development of Regional Impact (DRI) and awarded the development rights for a revised DRI to Himmel & Company of Boston, et. al., for the construction of an urban entertainment district known as the "CityPlace" development. This proposal is located within the City's Downtown and includes cultural arts, residential, retail, office and commercial uses. Additionally, a convention center and a hotel are planned for the southern portion of the CityPlace Project.

The City obtained approval of two Notifications of Proposed Change (NOPC) to the DRI, one each in January and April of 1998. The former NOPC changed the project name from Downtown/Uptown to CityPlace and revised the development so that it reflected the CityPlace proposal to construct at least: 850,000 square feet of commercial/retail; 800 residential dwelling units; 4,000 seats of entertainment uses, such as a cinema and/or an opera house; 1,250,000 square feet of office uses; 800 hotel rooms, etc. This development, connected to the current development proceeding at Clematis Street, will ensure that the City's prosperity. The second NOPC permitted the inclusion of about five acres of land into the DRI, as buffer areas, but did not affect the project's density or intensity.

The City is expecting the submittal of at least a 300,000-square foot County Convention Center by Palm Beach County, in the near future. This will be located within the CityPlace boundaries, just south of Okeechobee Boulevard.

C. POPULATION

The City's population has increased steadily since the turn of the century. Virtually all of this population was concentrated in the area east of the existing C.S.X. Railroad tracks prior to 1950. As mentioned earlier, the purchase of land for the City's Water Catchment Area encouraged development westward. The majority of population growth in the past twenty years has occurred west of Interstate 95, primarily in the Villages of Palm Beach Lakes. However, the City is currently attempting to temper and reverse this trend using the concepts of both "New Urbanism," and more particularly, the Governor's Office initiative known as "Eastward Ho!" The CityPlace project is a primary step in this direction, as it will provide a minimum of 800 dwelling units, all located east of Interstate 95. The CityPlace development is discussed further

in the preceding Section B of this Element.

Palm Beach County, on the other hand, has been growing at a tremendous rate and is considered one of the fastest growing counties in the United States. Between 1970 and 1980, Palm Beach County grew by 65.4%, while West Palm Beach grew by 10.0%. Between 1980 and 1990, Palm Beach County grew by 51.0%, while West Palm Beach grew by 7.2%. Without changes in the current County policies regarding land development, and more particularly, its location, the growth in the County is expected to continue as unincorporated areas become fully developed.

The County has established an Urban Service Boundary Area which outlines the County's infrastructure and surrounding lands that it serves. This Urban Service Boundary Area is extended when the County's infrastructure is extended. A task force for growth management has been formed and convened on August 4-8, 1997, to discuss the need for a Growth Management Boundary. It is anticipated that the County will use a "Tier" approach to manage its future growth. The Tiers will most likely range from urban to rural and agricultural, with densities and intensities of development to match the appropriate Tier. The County and City have cooperated, and will continue to cooperate, on issues relating to the Growth Management Boundary and any Growth Management strategies formulated by the County.

Table 4-1 reveals the growth in population in the City during the late 1900s. Section 9J-5.005 of the F.A.C. requires projections for seasonal, as well as resident population. Seasonal visitors were estimated using data obtained from hotels, motels, boarding houses, and with the assumption that some seasonal residents live with friends. The West Palm Beach Planning, Zoning and Building Department chose to prepare its own estimates and projections. The results of these projections are shown in Table 4-1, as well as in the subarea analysis.

TABLE 4-1
CITY OF WEST PALM BEACH POPULATION 1980 - 2010

YEAR	RESIDENT POPULATION	SEASONAL POPULATION	PERCENT INCREASE **
2010	101,578 *	18,100 *	8.3%
2005	93,751 *	16,427 *	10.9%
2000	84,757 *	12,350 *	10.7%
1995	76,341	9,983 *	12.9%
1990	67,643	N/A	7.2%
1980	63,108	N/A	10.0%

* Planning and Zoning Division estimate for fiscal year
** Percent increase refers to resident population only
N/A Not Available
Source: City of West Palm Beach Planning, Zoning and Building Dept. July 1997, U.S. Bureau of the Census, 1980, 1990, and 1995.

The City has also collected demographic data by neighborhood area by participating in the United States Bureau of the Census' Neighborhood Statistics Program (NSP). In this program, the City of West Palm Beach was subdivided into 36 separate neighborhoods and 1980 Census data was provided for each neighborhood. Table 4-2 provides data pertaining to population, housing units, persons per unit, vacancies, and race.

D. EMPLOYMENT

According to the U.S. Department of Labor, the total labor force in West Palm Beach was 35,885 persons in 1989. The unemployment rate in 1989 was 6.9% (2,331 persons) which was higher than the overall Palm Beach County unemployment rate of 5.2%. The U.S. Department of Labor states that services and retail trade continue to grow and serve as the base of the local economy. The Bureau of Economic and Business Research (BEBR), at the University of Florida, state the three leading employment sectors in the state during 1986 as services, retail trade, and manufacturing.

The City had considered an Areawide Development of Regional Impact (ADRI) to determine the amount of development that can be supported by existing and future infrastructure (i.e., roads, etc.). However, after much discussion, the City elected to hold several design charrettes and to write a new plan for the Downtown. The resultant Downtown Master Plan (DMP) was prepared and adopted on December 4, 1995, and made effective on August 27, 1997. The DMP provided a cap, as a guideline, on development square footage and dwelling units within the Downtown boundaries between Palm Beach Lakes Boulevard to the north; Clear Lake to the west; generally, Okeechobee Boulevard to the south, including the CityPlace DRI; and the Intracoastal Waterway to the east. The DMP formed one of the strategies established to redevelop the City's Downtown. The second strategy was to invest and provide assistance to reinvigorate the project formerly known as Downtown/Uptown. In late 1996, the City Community Redevelopment Agency awarded the project to Himmel and Company, et.al. As described in the preceding Section B, this firm renamed the development proposal to "CityPlace." This development is anticipated to create 2,904 construction jobs and approximately 3,220 permanent jobs.

The proposed CityPlace multi-use project, located on either side of Okeechobee Boulevard between Tamarind Avenue and South Dixie Highway, is estimated to provide a minimum of: 1,250,000 square feet in office space, 850,000 square feet in supporting retail, 800 residential units and 800 hotel rooms over a 77 acre area. Figure 4-2 indicates the proposed master development plan for the CityPlace project {Source: Proposal submitted by CityPlace Partners dated August 1, 1996.}.

The Palm Beach International Airport ("Airport") is currently undergoing a review for its application to amend the Airport Development of Regional Impact (DRI). This will most likely be a substantial deviation, as defined in Chapter 380 of the Florida Statutes. Currently, the Florida Department of Community Affairs and the Treasure Coast Regional Planning Council are prepared to review the Airport's submittal.

In the area north of the Airport, two major Commercial Planned Unit Developments (CPUDs) are either under construction or approved. These developments include the Airport Industrial Park (a total of 1.1 million square feet of industrial space and a 134-room hotel have been approved. Servico Center and the 222-room Omni Hotel have been completed), and Centrepark (an office research park under construction with approval for 1.4 million square feet of office space, 75,000 square feet of commercial, and 225,000 square feet of hotel space).

TABLE 4-2
WEST PALM BEACH DEMOGRAPHIC DATA 1995

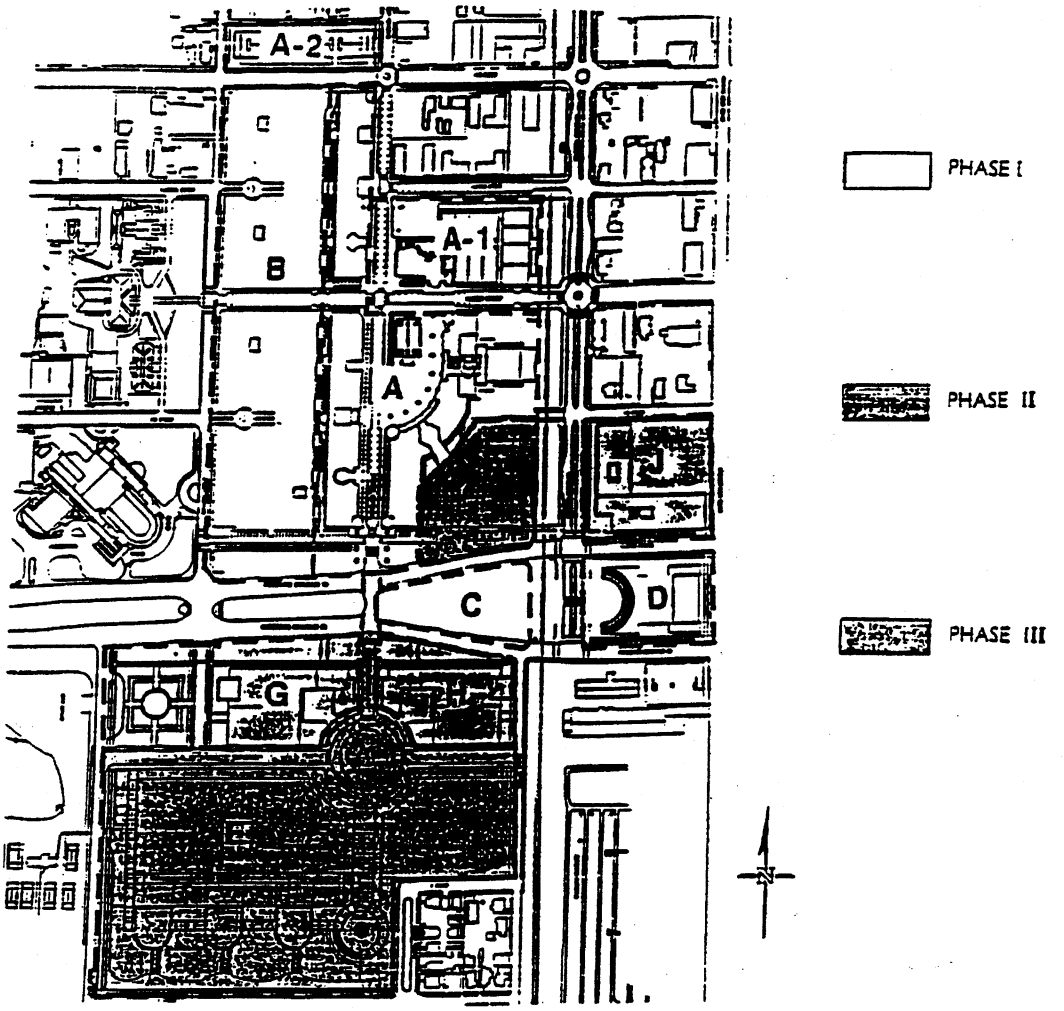
(Persons, Housing Units, Race)

NEIGHBORHOOD	PERSONS	HOUSING UNITS	PERSONS PER HOUSING UNIT	% VACANT	% WHITE	% BLACK	% OTHER	% SPANISH ORIGIN
1,2,3,4	5,397	2,410	2.24	21.2	47.4	46.3	1.8	6.8
5	14,216	8,021	1.77	12.2	81.6	14.4	3.8	5.9
6	1,794	552	3.25	13.2	30.9	63.4	5.6	10.5
7	3,736	1,911	1.95	18.1	39.5	54.9	5.6	6.0
8	1,058	410	2.58	10.7	14.7	81.7	3.6	1.3
9,11,12,14	7,356	3,366	2.18	14.8	42.0	45.1	9.5	16.2
10	1,241	442	2.81	8.6	1.8	77.7	4.4	3.8
13	1,592	773	2.05	23.4	1.1	97.9	1.0	1.4
15	615	375	1.64	39.7	0.7	95.4	3.9	2.1
16	1,840	677	2.72	4.4	49.6	44.7	5.7	10.2
17	1,133	459	2.47	16.6	37.9	39.8	22.3	34.1
18,19	2,759	1,414	1.95	16.2	88.6	6.0	5.4	21.5
20	2,224	1,074	2.07	11.1	84.9	12.5	2.7	25.9
21,22	3,845	1,561	2.07	4.8	78.2	7.4	14.4	52.6
23,24	3,295	1,827	1.80	5.5	86.9	5.1	8.0	22.5
25	721	257	2.81	9.4	54.5	24.1	21.4	36.2
26	2,161	1,013	2.72	6.3	97.7	0.3	2.0	46.9
27,28	3,113	1,446	2.15	8.8	85.1	34.3	13.3	39.3
29,30,31	6,476	2,791	2.32	5.7	91.9	2.1	6.0	28.3
32	1,660	530	3.13	3.6	18.4	78.7	2.8	4.3
33	3,643	2,596	1.40	23.4	75.0	14.6	2.8	4.8
34,35	3,715	1,301	2.85	6.9	2.1	97.0	1.2	1.3
36	2,751	1,662	1.47	16.4	63.4	32.8	3.8	7.4
TOTAL	**76,341**	**36,868**	**2.08**	**13.0**	**62.0**	**32.0**	**5.9**	**16.1**

Source: 1995 U.S. Census and the City of West Palm Beach Department of Planning, Zoning, and Building, July 1997.

Note: Rows may not add to 100 percent due to rounding.

FIGURE 4-2
PROPOSED "CITYPLACE"
MASTER DEVELOPMENT PLAN



Phase I - Parcels a, A-1, A-2, B, C, D

Total Land Area 1,381,837
Land Use Type
- Cultural
- Retail
- Service
- Cinema/IMAX
- Housing
- Housing Parking
- Retail Parking

Phase II - Parcels E, F

Total Land Area 1,045,839
Land Use Type
- Hotel
- Hotel Parking
- Convention
- Convention Parking

Phase III - Parcels G, H, J

Total Land Area 503,015
Land Use Type
- Office
- Parking

Source: City of West Palm Beach Planning, Zoning and Building Department, July 1997.

Another future major employment area is expected on both sides of 45th Street just west of I-95. In this area, three other major CPUDs have been approved or are under construction. These developments include Northpoint, currently under construction, with a total of approximately 1.4 million square feet (500,000 square feet of industrial, 55,000 square feet of commercial, 710,000 square feet of office, and 125,000 square feet of hotel space); 45th Street Business Park, approved with 1.4 million square feet of industrial and office uses; and Metrocentre Corporate Park, approved with 570,500 square feet of office, retail, and hotel uses (Figure 4-3).

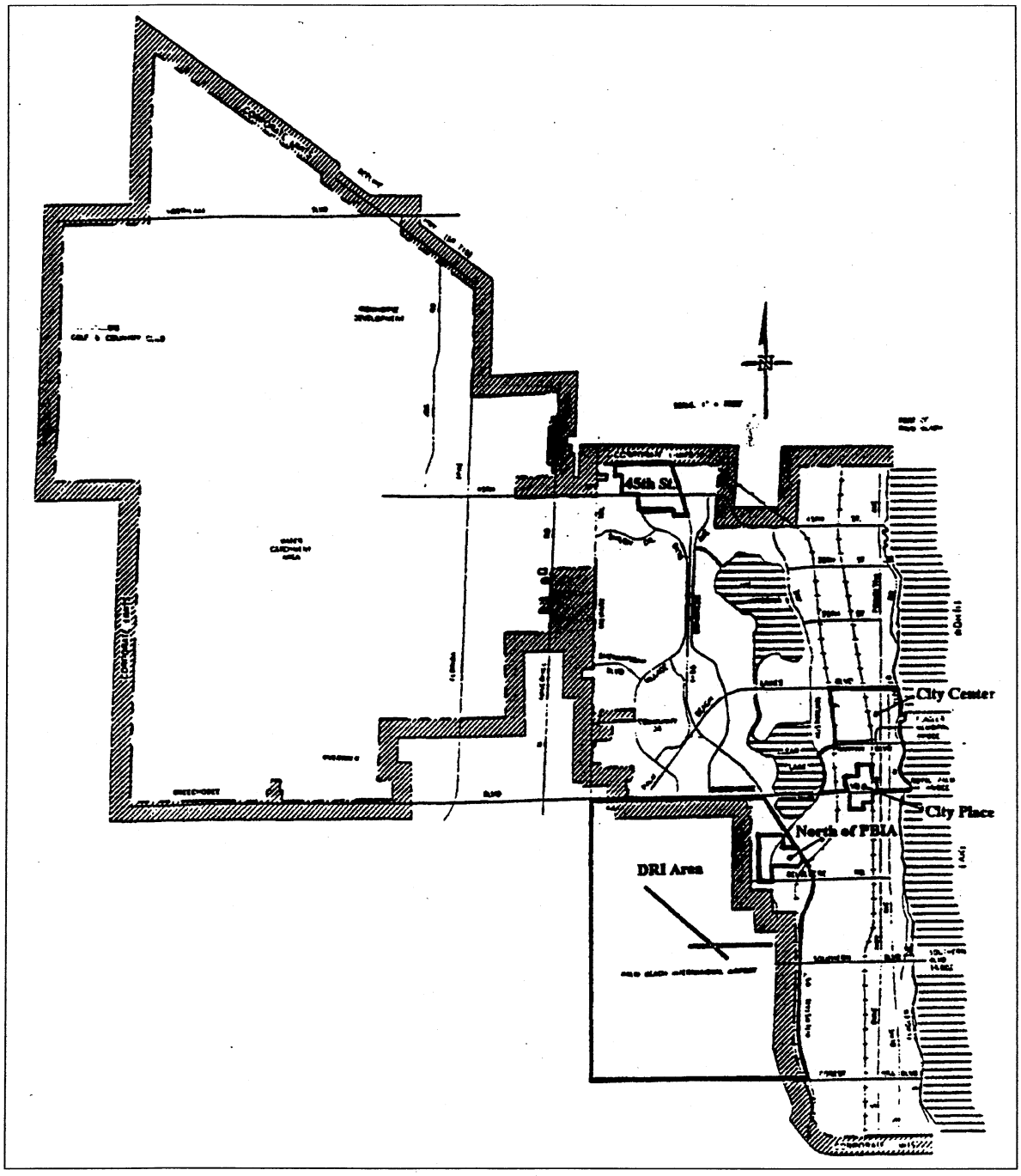
E. TRANSPORTATION

The City of West Palm Beach constantly modifies its roadway network in an effort to accommodate the rapid growth, development and redevelopment within its boundaries. However, at this point, the City has changed its transportation goals, as evidenced by the revised Transportation Element contained herein and briefly summarized in a following Section of this Element. Although, the City and Palm Beach County were involved in an interlocal agreement to expand certain roadways within the detailed below Downtown, the City has obtained approval for a Transportation Concurrency Exception Area (TCEA) for the Downtown (Figure 4-3A), and does not intend to expand the streets for increased motor vehicle mobility. In fact, the City's goal is to make all streets, Citywide, more attractive for use by pedestrians and bicyclists and is planning on returning one way to two-way streets and expanding sidewalk widths on many of the existing streets, including those located within the Downtown. In the past, the City completed a transportation corridor study for Palm Beach Lakes and Okeechobee Boulevards to determine future motor vehicle use and motor vehicle capacity levels. The City included the recommended street and intersection modifications as part of that report.

In 1997, the City applied to the Florida Department of Community Affairs (DCA) for approval of a TCEA designation for the City's Downtown. The Downtown was defined as generally bounded by: Palm Beach Lakes Boulevard to the north; Lake Worth to the east including the Waterview and City Marina properties; Okeechobee Boulevard to the south including the CityPlace DRI; and Australian Avenue to the west. The DCA encouraged the City to apply for this designation during its review of the proposed Downtown Master Plan (DMP). The TCEA eliminates the need to comply with the Palm Beach County [Motor Vehicle] Traffic Performance Standards used to determine compliance with motor vehicle traffic concurrency for new development within the City's Downtown. This permits the City to meet the Goals, Objectives, and Policies of the DMP by focusing development within the City's Downtown, and reducing the current trend of encouraging development outside city centers. The TCEA was found in compliance by the DCA on April 24, 1997.

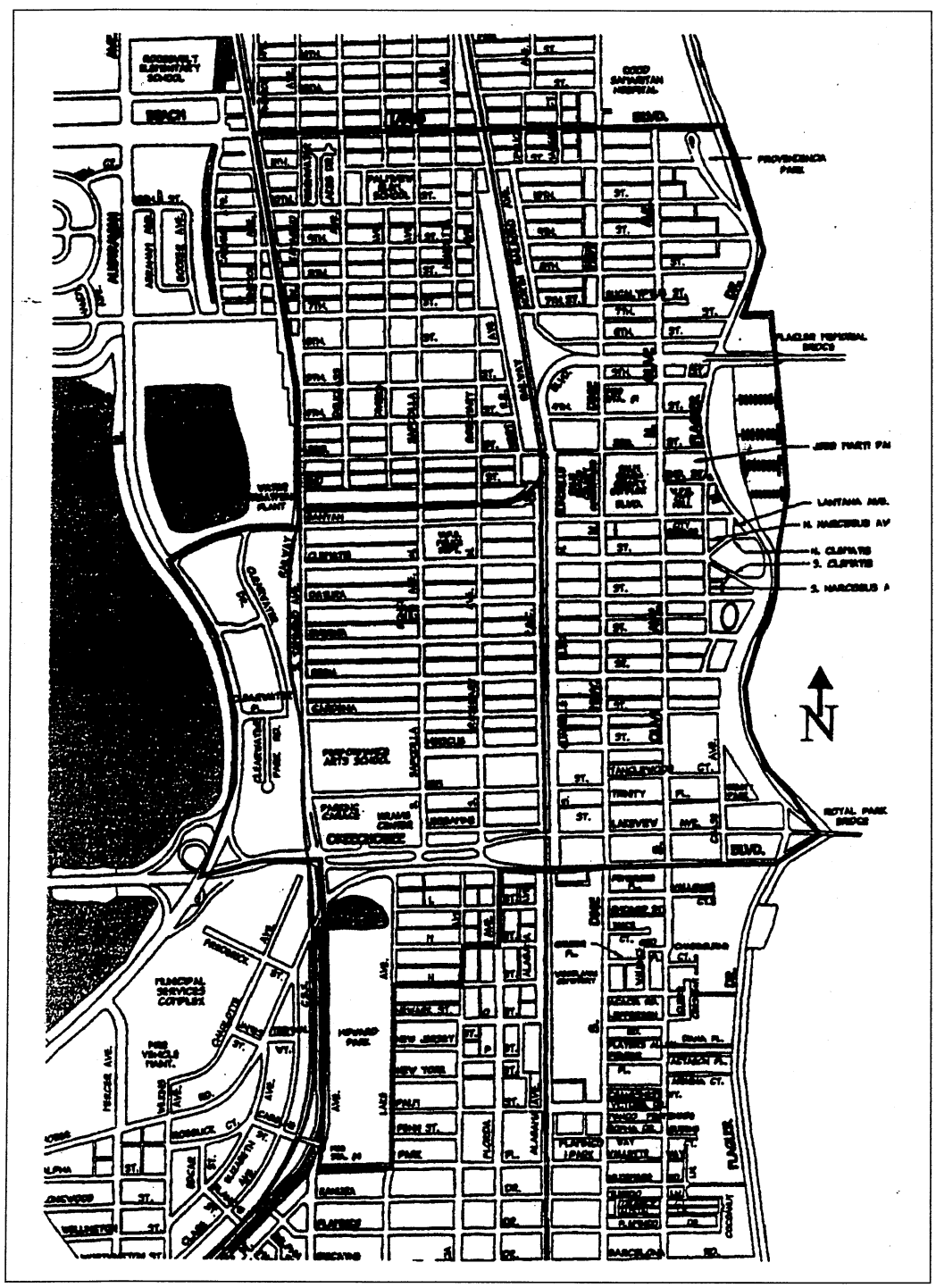
This approach has been pursued to mitigate the potential adverse effect the current level of service (LOS) standard for traffic concurrency would impose on the Downtown. More specifically, under existing regulations, the streets roadways within the Downtown area and adjacent areas must operate at LOS "D", which is the standard that has been adopted on a City-wide basis. Existing building setbacks and pedestrian streetscapes do not provide an opportunity for road widening nor would such road widening be consistent with the desired character and ambiance of the Downtown. Thus, adherence to a rigid level of service standard for traffic in the Downtown would create a major obstacle to the City's revitalization efforts, and could jeopardize the substantial public and private investment that has been made to date.

FIGURE 4-3
FUTURE MAJOR EMPLOYMENT CENTERS OF WEST PALM BEACH



Source: City of West Palm Beach Planning, Zoning and Building Department, July 1997.

FIGURE 4-3A
CITY OF WEST PALM BEACH TRANSPORTATION CONCURRENCY EXCEPTION AREA



Source: City of West Palm Beach Planning, Zoning and Building Department, July 1997.

The City is also using a similar rationale to apply for a designation of a Constrained Roadway at a Lower Level of Service (CRALLS) at the Uptown West Palm Beach at Palm Beach Lakes Boulevard, generally between Village Boulevard to the west and Tamarind Avenue to the east. The City is attempting to redevelop this area, particularly the properties known as the D.R. Lakes and MacArthur Foundation properties, in a manner which reflects the Eastward Ho! Initiative. The City is encouraging market rate residential development with a commercial component which will service the residential development. The City is attempting to limit the amount of "Big Box" type development at this area.

The current LOS of the identified corridor is already at LOS "D" which is the limit set by Palm Beach County. In order to realize its dream, the City needs to change the LOS standard to LOS "E." The CRALLS application should meet this demand.

F. ANNEXATION AREAS

The City of West Palm Beach is pursuing annexations in adjacent, unincorporated areas to increase its tax base. Since initial adoption of the Plan, several areas have been annexed into the City from unincorporated Palm Beach County. These areas are located in the northwest area of the City and include land west of the Villages of Palm Beach Lakes development, parcels north of 45th Street and other scattered parcels along Military Trail, among others (See Figure 4-4).

The City of West Palm Beach's original annexation policies, as stated in the City's 1978 Comprehensive Plan, were extremely conservative and, for the most part, restricted to an area east of Military Trail. The expansion of the City's corporate limits is blocked by the municipalities of Riviera Beach to the north and Lake Worth to the south, Lake Clarke Shores and Glenridge to the southwest, the Palm Beach International Airport to the west and the Westgate area south of Okeechobee Boulevard. The City did not actively pursue annexation, but instead responded to applications from property owners. Only a cursory economic analysis of annexation potential has been performed by City staff.

Efforts to explore annexation opportunities with the County were recommended in the 1985 City Commission Goals Workshop and the Citywide Forum of 1986. During this period, discussions of annexations were begun for the areas west of Military Trail. Also, the creation of the Countywide Planning Council and its successor, the Interlocal Plan Amendment Review Committee (IPARC), encouraged other municipalities to take a hard look at their future boundaries. As a result, the City of West Palm Beach along with the cities of Riviera Beach, Palm Beach Gardens and Royal Palm Beach have mapped and plotted their future annexation and ultimate city limit boundaries.

The Present Issues: Future Vision report of 1988, a long-term capital improvements plan that preceded this Comprehensive Plan, listed potential future annexation areas and recommended that the City prepare a feasibility analysis for each of the proposed annexation areas and assertively pursue annexing properties that increase the City's desired urban form, orderly provision of public services, protection of sensitive environmental resources, and have a positive tax dollar return.

The City Commission subsequently directed City Staff to analyze all "voluntary annexation" requests. Consequently, an annexation letter was drafted to inform landowners of

the City's interest in the annexation of property adjacent to the City's municipal border in order to increase voluntary annexations. This annexation letter was approved by the City Commission and 1,475 letters were distributed to several of the potential annexation areas defined within the boundaries depicted by Figure 4-5.

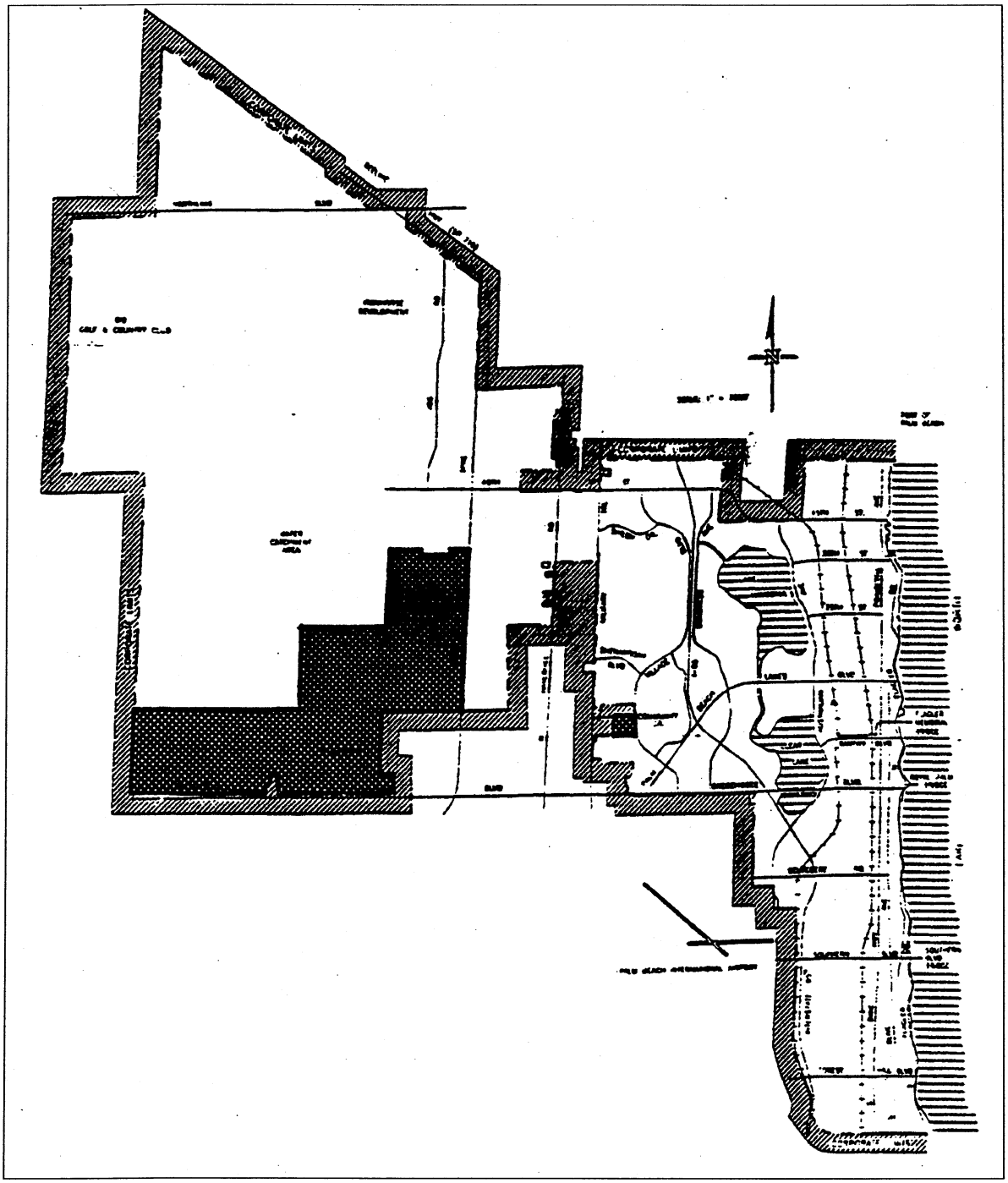
The City studies all requests for annexation, as they are proposed, to determine which areas would be most feasible and economically beneficial to the City. The provision of utility services, police and fire are analyzed on a case-by-case basis. All potential annexation applicants are required to provide for the facilities necessary to ensure that the City level of service standards adopted in this Comprehensive Plan are met. Any infrastructure capital improvement cost will be the responsibility of the land owner.

Currently, the area bounded by Okeechobee Boulevard on the south, Seminole Pratt and Whitney Road on the west, Beeline Highway on the north and the City's western edge of the Water Catchment Area on the east has been claimed as future potential annexation areas by the cities of West Palm Beach, Palm Beach Gardens and Royal Palm Beach. Another area of conflict includes the area outlined by 45th Street on the south, the eastern edge of the City's Water Catchment Area on the west, Beeline Highway on the north and the existing City of Riviera Beach city limits on the east, which has been claimed by both the City of West Palm Beach and Riviera Beach as future potential annexation areas. As stated previously, the City should work closely with Palm Beach County, the Interlocal Plan Amendment Review Committee (IPARC) and adjoining municipalities to identify potential annexation areas

As an example of intermunicipal cooperation, the City is currently involved with Palm Beach County and Palm Beach Gardens to plan for future annexations and to review the limits of their Urban Service Boundaries. At Northlake Boulevard, west of the Ibis Residential Planned Development, a ten mile stretch is now undeveloped. Within the last two years, this area has been under increased pressure to develop. Based on this pressure, the three local governments decided to use joint planning tools to initiate a study of the area and to recommend uses in the corridor which are either compatible to low density residential or compatible with the existing environmental characteristics.

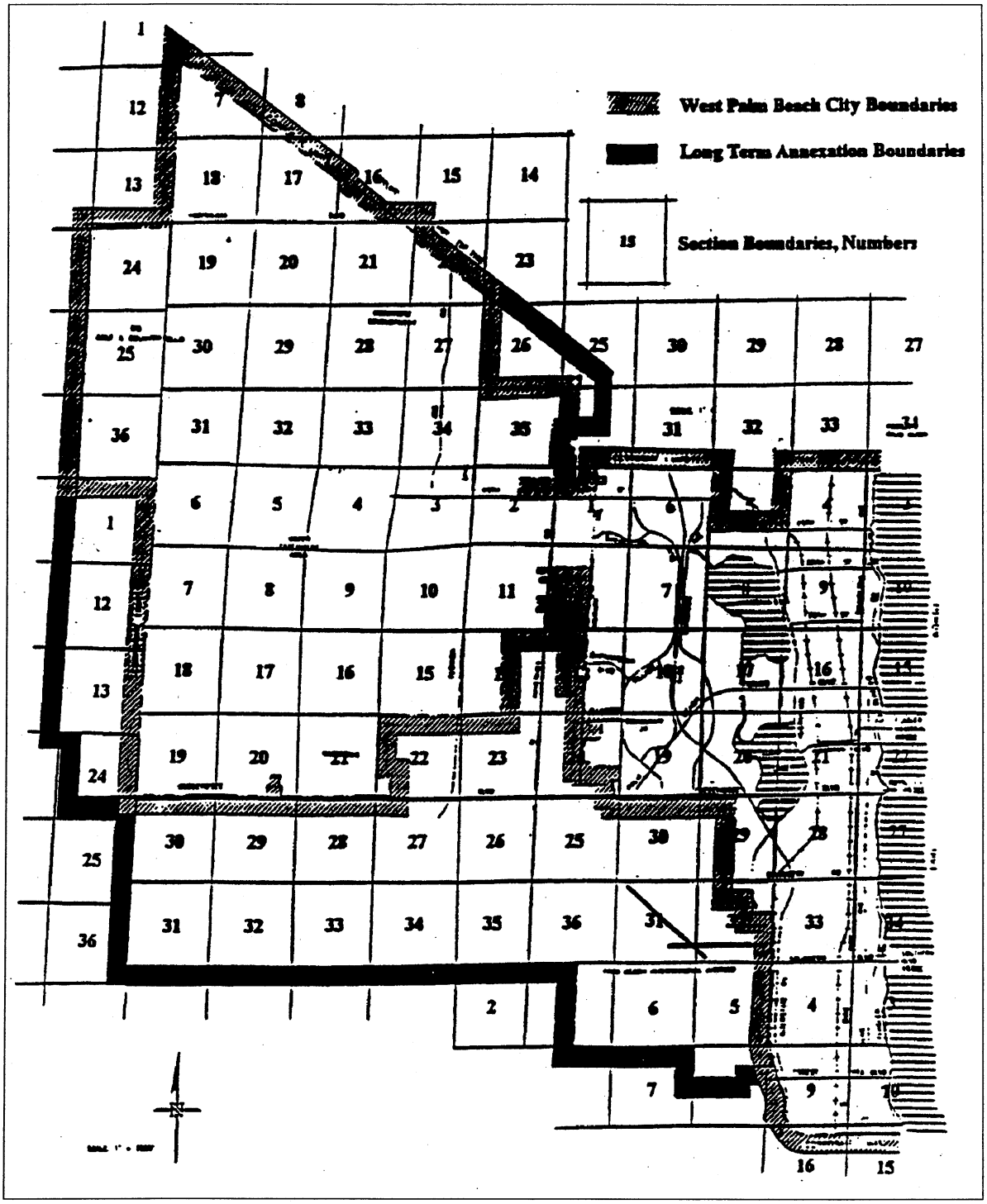
The low density residential uses would be serviced by commercial nodes along the corridor in an effort to reduce the urge to create strip commercial along the whole western corridor of Northlake Boulevard and to preserve the existing wetlands which now exist in the area. In this way, the three local governments could protect the environment and permit some development west of Ibis without developing the entire corridor into residential and commercial strips. The local governments are expected to conduct public hearings and adopt the study in the near future.

FIGURE 4-4
CITY OF WEST PALM BEACH RECENT ANNEXATIONS 1990 - PRESENT



Source: City of West Palm Beach Planning, Zoning and Building Department, July 1997.

FIGURE 4-5
CITY OF WEST PALM BEACH POTENTIAL ANNEXATION AREAS



Source: City of West Palm Beach Planning, Zoning and Building Department, July 1997.

G. ECONOMIC

Building Permit Activity

In 1986, the City experienced the greatest amount of annual growth with building permits totaling over 10,000 in number. Nearly two-thirds of this new growth occurred in the City's CBD. Building permit data, since 1978, is reflected in Table 4-3.

TABLE 4-3
AGGREGATE BUILDING PERMIT DATA 1978 - 1994

YEAR	PERMIT VALUE	TOTAL	PERMIT FEES
1996	$190,545,899	12,039	$1,774,092
1995	$177,438,221	11,244	$1,625,558
1994	$167,018,616	9,742	$1,534,364
1993	$127,595,161	8,490	$ 842,525
1992	$108,571,168	8,823	$ 597,501
1991	$ 91,683,462	8,594	$ 669,862
1990	$223,543,511	8,504	$ 850,305
1989	$139,758,822	9,026	$ 905,220
1988	$135,150,174	8,043	$ 815,407
1987	$258,163,736	9,823	$1,161,870
1986	$277,739,250	10,147	$1,313,360
1985	$160,270,073	8,220	$ 803,023
1984	$143,724,139	8,112	$ 718,751
1983	$210,809,588	8,785	$1,013,831
1982	$158,526,210	6,195	$ 646,494
1981	$ 68,019,813	5,958	$ 389,339
1980	$ 71,545,519	6,476	$ 328,509
1979	$ 98,760,800	7,179	$ 409,618
1978	$ 63,184,156	6,985	$ 250,438

Source: City of West Palm Beach Planning, Zoning, and Building Dept., July 1997.

Tax Base

The City's tax base increased every year since 1972 reaching a level in excess of 3.9 billion dollars in 1992, until a decrease in 1993 by 1.6%. Similarly, the tax base for the CBD has increased after remaining virtually stable throughout the 1970's. The growth in the Downtown and City tax base is reflected in Table 4-4.

TABLE 4-4
CITYWIDE TAX BASE 1977-78 - 1992-93*

YEAR	CITY OF WEST PALM BEACH	ANNUAL % GROWTH
1996-97	$3,642,829,503	4.1
1995-96	$3,499,919,033	2.3
1994-95	$3,419,859,142	1.0
1993-94	$3,384,362,007	-2.7
1992-93	$3,476,593,313	-3.7
1991-92	$3,611,200,774	2.1
1990-91	$3,538,206,952	6.7
1989-90	$3,317,421,817	1.1
1988-89	$2,957,019,129	1.3
1987-88	$2,995,888,603	7.8
1986-87	$2,778,788,902	11.3
1985-86	$2,497,434,850	10.5
1984-85	$2,260,353,012	20.0
1983-84	$1,882,862,562	19.6
1982-83	$1,574,622,558	28.2
1981-82	$1,228,380,457	53.1
1980-81	$ 802,282,809	2.6
1979-80	$ 782,002,230	4.9
1978-79	$ 745,538,049	1.7
1977-78	$ 733,374,846	

* Refers to total net assessed value

Source: City of West Palm Beach Finance Department, and Planning, Zoning, and Building Department, July 1997.

H. DISTRIBUTION OF LAND USES

The City's Future Land Use Map is intended to designate the proposed future general distribution, location, and extent of all land uses within West Palm Beach. The following land use categories are employed on the referenced map to guide the development of the City:

SFLD - Single Family Low Density
SFMD - Single Family Medium Density
SF - Single Family Residential
MFMD - Multifamily Medium Density
MF - Multifamily Residential
C - Commercial
CS - Community Service
I - Industrial
CID - Commercial Incentive District
SIZ - Special Impact Zone
PC - Planned Community
UCBD - Urban Central Business District
MUD - Mixed Use District

Table 4-5 summarizes the existing amount of land designated in the various land use categories in 1995 and the projected amounts for the two planning periods: 1997 to 2005, and 2005 to 2010. An Existing Land Use Map is also included, in the Appendix, to reflect the distribution of land uses within the City as of July 1997. The land use categories are those stated in Section 9J-5.006 (1)(a) of the FAC, as shown in Table 4-5. Note that Interstate 95, educational uses, public buildings and grounds and other public facilities are included in the City's Community Service (CS) land use category. The Future Land Use Map, which is for the year 2000, depicts the distribution of land use categories, described in the following section, by the number of acres tabulated in the Year 2000. The distribution of land uses for the years 1995, 2000 and 2010 is also reflected in Figure 4-6.

TABLE 4-5
ACREAGE OF LAND USES IN WEST PALM BEACH
BY LAND USE CATEGORY

LAND USE CATEGORY	1997 (actual)	2005 (projected)	2010 (projected)
Residential:	9,309	9,592	9,592
SF Low Density	(1,160)	(1,160)	(1,160)
SF Medium Density	(135)	(135)	(135)
Single Family	(6,559)	(6,842)	(6,842)
Multifamily	(1,455)	(1,455)	(1,455)
Commercial *	1,868	1,868	1,868
UCBD	(228)	(228)	(228)
Industrial	1,185	1,185	1,185
Agricultural	0	0	0
Recreational	1,091	1,091	1,091
Conservation	13,803	13,803	13,803
Community Service **	4,305	4,305	4,305
Commercial Incentive D.	318	318	318
Vacant/Undeveloped Land	283	0	0
Historic Resources ***			
Total	32,162	32,162	32,162

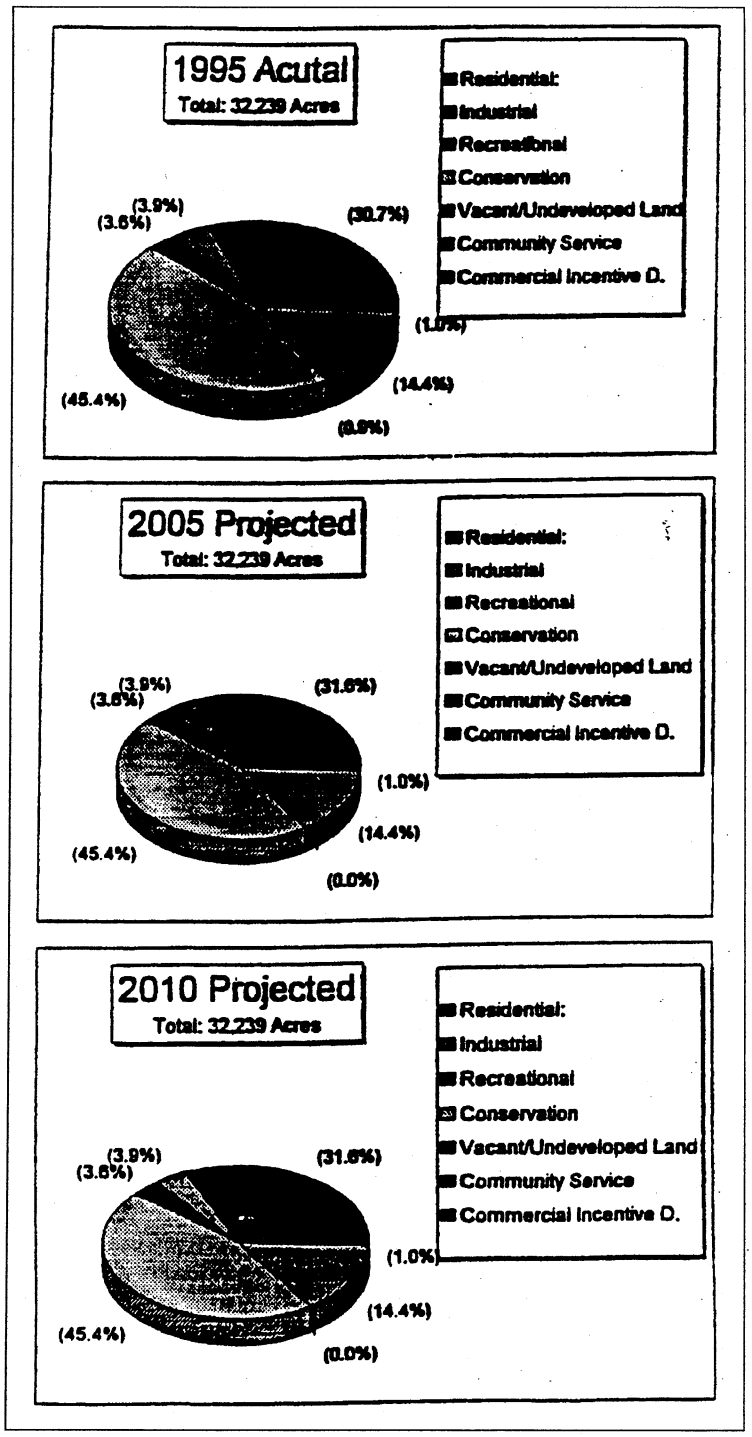
* Commercial includes UCBD

** Community Service includes Interstate 95, educational uses, medical facilities, churches, public buildings and grounds and other public facilities.

*** Historic Resources total 4.4 acres and are included within Commercial and Multifamily categories.

Source: City of West Palm Beach Department of Planning, Zoning, and Building, July 1997.

FIGURE 4-6
ACREAGE OF LAND USES IN WEST PALM BEACH BY LAND USE CATEGORY
1995, 2000 & 2010



Source: City of West Palm Beach Planning, Zoning and Building Department, July 1997.

The Existing Land Use Map also shows lakes, the generalized land uses of land adjacent to the City and existing and planned waterwells and cones of influence. Beaches and shores are reflected by Figure 8-2 of the Coastal Management Element. There are no rivers, bays or harbors located within West Palm Beach. Likewise, there are no designated Areas of Critical State Concern, pursuant to Section 380.05, Florida Statutes.

The City has nine residential districts within its Zoning Code. These include the Single Family 3, Single Family 5, Single Family 7, Single Family 11, Single Family 14, Multifamily 14, Multifamily 20, Multifamily 32 and Professional Office/Residential categories. The number following the residential category applies to the number of dwelling units permitted per acre. The Multifamily 32 designation, allowing the greatest residential density, is most apropos for the condominium and apartment buildings located along the Intracoastal Waterway, Clear Lake, the Lands of the Presidents development, as well as the Villages of Palm Beach Lakes.

The rapid growth experienced by the City in the past decade has required an intense examination of the appropriate distribution of land uses. The majority of this commercial growth has been in and around the CBD while, conversely, the development boom to the west has been primarily dedicated to single family and multifamily construction. The following sections include a discussion of the land use categories utilized by the City.

Residential Land Uses

The City has nine residential districts within its Zoning Code. These include the Single Family 3, Single Family 5, Single Family 7, Single Family 11, Single Family 14, Multifamily 14, Multifamily 20, Multifamily 32 and Professional Office/Residential categories. The number following the residential category applies to the number of dwelling units permitted per acre. The Multifamily 32 designation, allowing the greatest residential density, is most apropos for the condominium and apartment buildings located along the Intracoastal Waterway, Clear Lake, the Lands of the Presidents development, as well as the Villages of Palm Beach Lakes.

It is currently estimated that the number of housing units has increased from 29,593 permanent housing units in 1980 to 36,649 housing units in 1995. The majority of this new housing development occurred in those areas located west of Interstate 95. The Planned Community of the Villages of Palm Beach Lakes constitutes the majority of this construction. Of the 7,317 total residential units proposed to date, a total of 5,987 have been developed or approved as of July 1995. Of this total, 13% is comprised of single-family units, 46% are townhomes and 41% are multifamily units {Source: Perini Land and Development Company}. The great majority of owners and renters within this development are typically younger professionals. The first building permit for this development was issued in 1985.

New housing construction starts in the older part of the City, east of I-95, will be limited in the future. These areas of West Palm Beach are built out and redevelopment will be in the form of housing rehabilitation and infill housing construction. The most significant example of redevelopment is the addition of 800 dwelling units in the CityPlace project. The City has taken significant strides to assist homeowners with housing rehabilitation and improve neighborhood housing conditions through strong code enforcement, housing rehabilitation and infill housing programs.

In 1987, the City conducted a land use survey which identified 1,658 housing units that were deteriorated and 271 units that were dilapidated, or a total of 1,929 units were considered to be physically unsound. The survey found that 94.6% of the City's housing stock was sound and in adequate condition. A subsequent survey, conducted during the summer of 1988, identified a total of 492 abandoned residential structures in the City. The majority of these structures were concentrated in the central neighborhoods of West Palm Beach. At this time, the Planning, Zoning and Building Department began a program of demolishing those identified abandoned properties.

The City's total number of low and moderate-income subsidized housing units reached 2,623, or about 7.1% of all units, in 1988-89. In 1986, the number of persons served with Public Housing or Section 8 housing subsidies in West Palm Beach totaled 5,163, compared to 3,336 for Delray Beach, Boca Raton and Riviera Beach combined.

The formation of a Community Development Corporation (CDC) has been recommended to function as a nonprofit corporation which focuses primarily on residential and commercial development within the Community Development Block Grant Target Area. Two Development Corporations, Northwest Community Development Corporation (NwCDC) and Pleasant City Community Development Corporation (PCCRC), have been formed. NwCDC has worked in the Enterprise Zone developing and rehabilitating residential and commercial units since 1989. The Freshwater Lakes Development is a 32 unit single-family home project being constructed by NwCDC with the use of $198,000 received as a member of the HOME Community Housing Development Organization. PCCRC has also received funds from the HOME Community Housing Development Organization in the fiscal year 1995-96 to facilitate single-family home construction which will take place in the Enterprise Zone area.

Commercial Land Uses

This category includes land used for retail and wholesale trade, finance, insurance, real estate and other offices, hotels, motels, shopping, restaurants, service outlets, automobile service stations, repair facilities, and residential dwelling units when authorized by a Development of Regional Impact (DRI). Commercial land use in West Palm Beach is described by the following commercial districts: neighborhood commercial, office commercial, airport commercial, general commercial, commercial, marine and building types within the Downtown.

Neighborhood commercial, as the name implies, are those uses which cater to and serve nearby residents. These uses, located along major roadways, are typically convenience stores, service stations, personal services (e.g., beauty salons), laundromats and small retail businesses. The largest neighborhood commercial district in West Palm Beach is located along Broadway, from 39th to 59th Streets.

Office commercial uses preclude many of the food, personal services and retail uses associated with the neighborhood commercial district. These uses tend to include financial institutions, large office developments and medical offices. Airport commercial uses are similar to office commercial uses but permit greater intensity and additional airport-related uses. The primary airport commercial area within the City is located along Belvedere Road, north of the Palm Beach International Airport.

General commercial uses are the most permissive of the aforementioned commercial use categories. This category is employed for the larger shopping centers, automobile dealerships and major strip commercial corridors located along the City's largest thoroughfares, such as Okeechobee Boulevard, Palm Beach Lakes Boulevard and Dixie Highway.

Commercial marine uses are restricted to two locations in West Palm Beach: The Rybovich and Spencer Boatyards generally located on 40th Street and North Dixie Highway and the Flagler Yacht Club located along Flagler Drive at 8th Street. This category permits marine industrial establishments, marine retail sales and services and restaurants.

The Downtown districts include the area defined as the West Palm Beach Central Business District (CBD). This area constitutes the urban core area where major development should be focused. The diverse mix of uses permitted includes offices, general commercial, government, residential, parks and open space, planned and mixed-use developments and light industrial. The range of intensity varies with the four areas outlined in the City's Zoning Code. The Downtown Master Plan (DMP) permits commercial, retail and residential uses throughout the major commercial arterials of the Downtown. Exceptions to that are: drive-through type restaurant and business establishments, except banking facilities, as well as chemical manufacturing, storage; prisons; hazardous waste material; adult entertainment uses, and like types of uses which are inappropriate for a central business district.

Commercial development accounts for approximately 1,868 acres, or 6%, of the City's total land area. Commercial expansion has focused primarily on the undeveloped areas of the City. This includes construction in the area around the airport as well as in the northern areas along 45th Street. Much of this commercial expansion has resulted in the decreasing importance of the CBD as the office headquarters for the City and County. Many shopping centers, such as Palm Coast Plaza, Belmart and Westward, have undergone restoration in order to remain competitive with the newer, more suburban shopping centers located to the west. Figure 4-7 and Table 4-6 describe the major shopping centers located within the City.

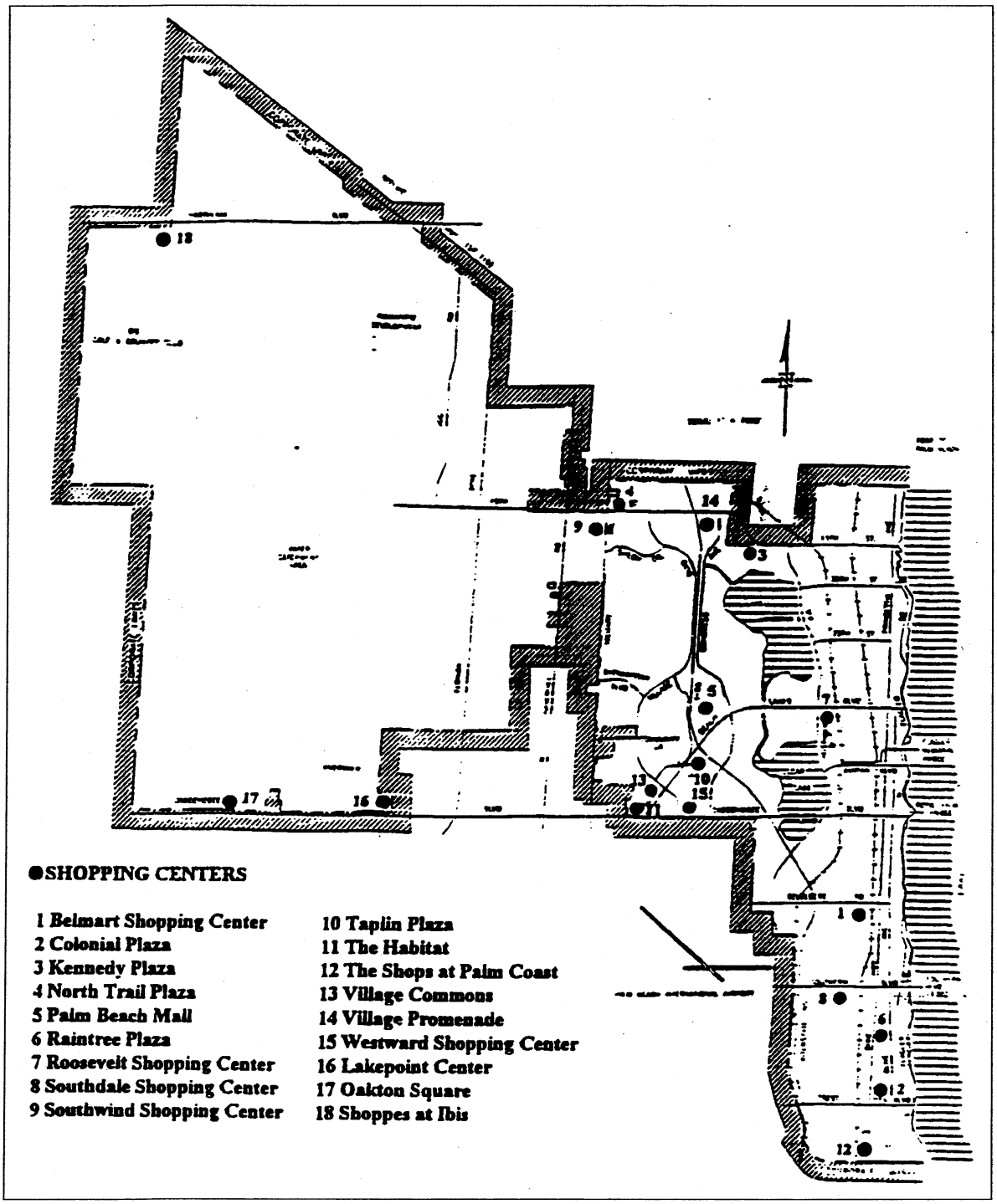
Industrial Land Uses

Industrial land in West Palm Beach accounts for 1,185 total acres. Industry has not located within the City in recent years because of both the high cost and lack of available land. Palm Beach County, on the other hand, has a plentiful supply of inexpensive, undeveloped property prime for industrial development. The industrial uses within the City tend to be the older, established businesses which have been here for many years. The primary industrial area, accounting for more than one-third of all industrial development, is located in the Southwest Central region between Okeechobee Boulevard and Belvedere Road, on either side of Interstate 95.

Agricultural Uses

The City of West Palm Beach does not have any land designated for agricultural use.

FIGURE 4-7
MAJOR SHOPPING CENTERS IN
WEST PALM BEACH



Source: City of West Palm Beach Planning, Zoning and Building Department, July 1997.

TABLE 4-6
MAJOR SHOPPING CENTERS IN WEST PALM BEACH

NAME		ADDRESS	SQUARE FOOTAGE	MAJOR TENANTS
1.	Belmart S.C.	500-700 Belvedere	70,160	Winn Dixie, Rite Aid
2.	Colonial Plaza	6108 S.Dixie Hwy.	6,350	
3.	Kennedy Plaza	1700 W. 45th St.	40,000	Flea Market
4.	North Trail Plaza	45th & Military	133,513	Sam's Club
5.	Palm Beach Mall	1801 P.B. Lakes	1,400,000	Lord & Taylor, Dillards, Burdines, Sears, JCPenney
6.	Raintree Plaza	4901 S.Dixie Hwy	12,000	Domino's Pizza
7.	Roosevelt S.C.	1256 P.B. Lakes	16,000	Super Duper Supermarket
8.	Southdale S.C.	818 Southern Blvd.	111,914	Publix, Rite Aid, Aaron's Rents
9.	Southwind S.C.	5335 N. Military	57,000	Eckerd Drugs, Winn Dixie
10.	Taplin Plaza	1896 P.B. Lakes	17,600	
11.	The Habitat	4047 Okeechobee	200,000	Splash Beach Club
12.	Shops/Palm Coast	7633A S.Dixie Hwy.	270,000	J.Byrons, Woolworth, Walgreens
13.	Vlg. Commons	831 Village Blvd.	170,000	Publix, Eckerd Drugs
14.	Vlg. Promenade	2100 N.W. 45th St.	77,000	
15.	Westward S.C.	2531 Okeechobee	238,400	Pharmor, Spec's, The Sports Authority
16.	LakePoint Centre	6901 Okeechobee	134,200	Winn Dixie, Burger King
17.	Oakton Square	Okeechobee Blvd.	106,000	Publix, Barnett Bank
18.	Ibis Commercial	Northlake Blvd.	106,000	Publix

* Over 5,000 square feet of floor area.
S.C. Shopping Center

Source: City of West Palm Beach, Planning, Zoning and Building Department, July 1997.

Recreational Uses

This category includes land used for neighborhood, community and metropolitan parks, golf courses, boat ramps, zoos, planetariums and open spaces. The City has a total of 370.9 acres of parkland. The recreational facilities identified in the Recreation and Open Space Element include both private as well as facilities provided by educational institutions. From a land use perspective, these latter uses are not identified as recreational uses in the City's Future Land Use Map. In such cases, schools have been identified as Community Service uses.

The City of West Palm Beach has been blessed with an abundance of both natural and man-made recreational amenities. The Intracoastal Waterway, located along the eastern coast of the City, provides one of the most scenic waterfront views in all of Florida. An abundance of open spaces, bicycle paths and parks line Flagler Drive from the southern corporate limits to 37th Street. Clear Lake and Lake Mangonia, located in the heart of West Palm Beach, also offer scenic opportunities to West Palm Beach residents. Dreher Park, the City's only metropolitan park, also is home to the Science Museum and Planetarium as well as the Dreher Park Zoo.

The West Palm Beach Municipal Golf Course is considered the only true public course within the City. The Bear Lakes Country Club, two courses within the Villages of Palm Beach Lakes development, and two courses at the Land of the Presidents development offer additional golfing opportunities for residents and visitors to West Palm Beach.

Conservation Uses

Areas designated as conservation land uses include lakes, major canals, and the City's Water Catchment Area. The Conservation land use category constitutes the largest land-use category, in terms of acreage, with over 15,103 acres. Approximately 82% of this total is considered the Water Catchment Area while the rest consist of canals and natural lakes (Lake Mangonia and Clear Lake).

The uses permitted within the Conservation category are limited to those which minimize the potential adverse impacts of development upon the City. Those uses in the city that fall within the Conservation land use category include wetlands, canals, lakes (Lake Mangonia and Clear Lake), vegetative communities and wildlife habitats.

It is imperative that the City's Water Catchment Area (WCA) be protected from development which would damage the City's source of drinking water. In this respect, the City of West Palm Beach is participating on the Loxahatchee Slough Restoration Committee. The Loxahatchee Slough and River corridor is one of the last natural riverine swamp systems on the east coast of Florida. It is a natural wetland system which includes the City's Water Catchment Area to the south. This committee's intent is to examine comprehensive plan policies to preserve the slough corridor and to identify options for dealing with multi-jurisdictional management of corridor lands.

The City has obtained several Preservation 2000 Grants to purchase lands adjacent to the WCA for the purpose of preserving these wetlands. By preservation of the wetlands, the City creates a buffer to development for the WCA. The Conservation Element of this Comprehensive Plan provides more detail on these Grants.

Community Service Uses

The Community Service land use category includes Interstate 95, educational uses, public buildings and grounds and other public facilities. Educational uses include both public and private elementary, middle and high schools as well as colleges and universities. Public buildings and grounds include government buildings, hospitals and cemeteries. Other public facilities include the City water plant and the Florida Power & Light headquarters on Executive Center Drive. The acreage for these uses were calculated and reflected on the Existing Land Use Map. These same uses, as well as the recreational uses discussed earlier, constitute the Community Service land use designation.

The public and private schools located in West Palm Beach, along with their respective 1997 enrollment figures, are shown in Tables 4-7 and 4-8, and Figure 4-8.

Commercial Incentive District

The "Commercial Incentive District," formerly referred to as "Dotted Line," is a flexible land use technique that permits changes to existing zoning in order to encourage redevelopment of undesirable strip commercial areas. Such changes include increasing commercial zone depths to 200 feet in certain blocks, support desirable existing or proposed commercial areas, and increasing multifamily residential zone depths to 250 feet where property owners desire to develop multifamily uses. Such changes in zoning would be granted pursuant to City approval of specific redevelopment plans.

The Commercial Incentive District is used to alleviate many of the problems evident along Broadway and certain portions of Dixie Highway (Poinsettia Avenue) and Tamarind Avenue. These problems include insufficient lot depths, difficult access and inadequate off-street parking. The Commercial Incentive District technique would encourage increased lot depths and permit the consolidation of strip commercial areas into more compact, better-planned business centers with additional off-street parking, landscaping and screening from abutting residences.

Under the Commercial Incentive District classification, a property owner would have three options for development. These options are:

1. Develop the site under the provisions of existing zoning and existing lot depths.

2. Request a rezoning of the property to permit multifamily residential development and the expansion of residential zoning lot depth to approximately 250 feet maximum.

3. Request a rezoning to permit commercial development and the expansion of commercial zoning lot depth to approximately 200 feet maximum.

In order for the property owner to secure a rezoning for the expanded zoning lot depth, the City must approve a detailed site development plan, as required in the City's Zoning Code. Approval of the rezoning is also dependent upon a determination by the City Commission that the rezoning is in the best interest of the City.

Special Impact Zone

Special Impact Zone areas are located throughout West Palm Beach in areas possessing great potential for development because of their close proximity to major highways and to large residential concentrations. Because of their highly visible and sensitive locations, development of these areas will have a great impact upon neighboring properties and upon traffic circulation. In order to ensure that the development of these areas will not create traffic congestion or access problems, and in order to protect neighboring properties from blighting influences, development of these areas for multifamily, residential, commercial, or industrial purposes is conditional upon approval of specific site development plans. Site Plan Review by the City is intended to ensure that the development of these areas will complement and respect the unique characteristics of their locations.

TABLE 4-7
PUBLIC SCHOOLS IN WEST PALM BEACH

ELEMENTARY SCHOOLS:	ADDRESS	ENROLLMENT	GRADES
1. BELVEDERE ELEM	3001 LAKE AVENUE	790	PK-5
2. NORTHBORO ELEM	400 40TH STREET	790	K-5
3. NORTHMORE ELEM	4111 N. TERRACE DR.	735	PK-5
4. PALMETTO ELEM	835 PALMETTO STREET	675	PK-5
5. U.B. KINSEY/ PALMVIEW ELEM SCHOOL OF THE ARTS	800 11TH STREET	480	PK-5
6. ROOSEVELT ELEM	1220 15TH STREET	707	PK-5
7. SOUTH OLIVE ELEM	7101 S. OLIVE AVENUE	925	K-5
8. WESTWARD ELEM	1101 GOLF AVENUE	720	PK-5
9. EGRET COMMUNITY LAKE ELEM	5115 47TH PLACE	640	PK-5
JUNIOR HIGH SCHOOLS:			
10. BEAR LAKES MIDDLE	3505 SHENANDOAH BLD	1,664	6-8
11. CONNISTON MIDDLE	673 CONNISTON ROAD	1,100	6-7-8
12. ROOSEVELT MIDDLE	AUSTRALIAN AVE COMPLETED 08/95	1,419	6-7-8
13. P.B. SCHOOL FOR THE ARTS MIDDLE	3701 N. SHORE DR.	767	6-8
HIGH SCHOOLS:			
13. FOREST HILL HIGH	6901 PARKER AVE	1,337	9-12
14. PALM BEACH LAKES HIGH	3505 SHILOH DRIVE	2,300	9-12
15. SABAL PALM SCHOOL	4400 AUSTRALIAN	205	4-12
16. ALEXANDER J. DRYFOOS, JR. SCHOOL OF THE ARTS	501 S. SAPODILLA AVENUE	1,020	7-12

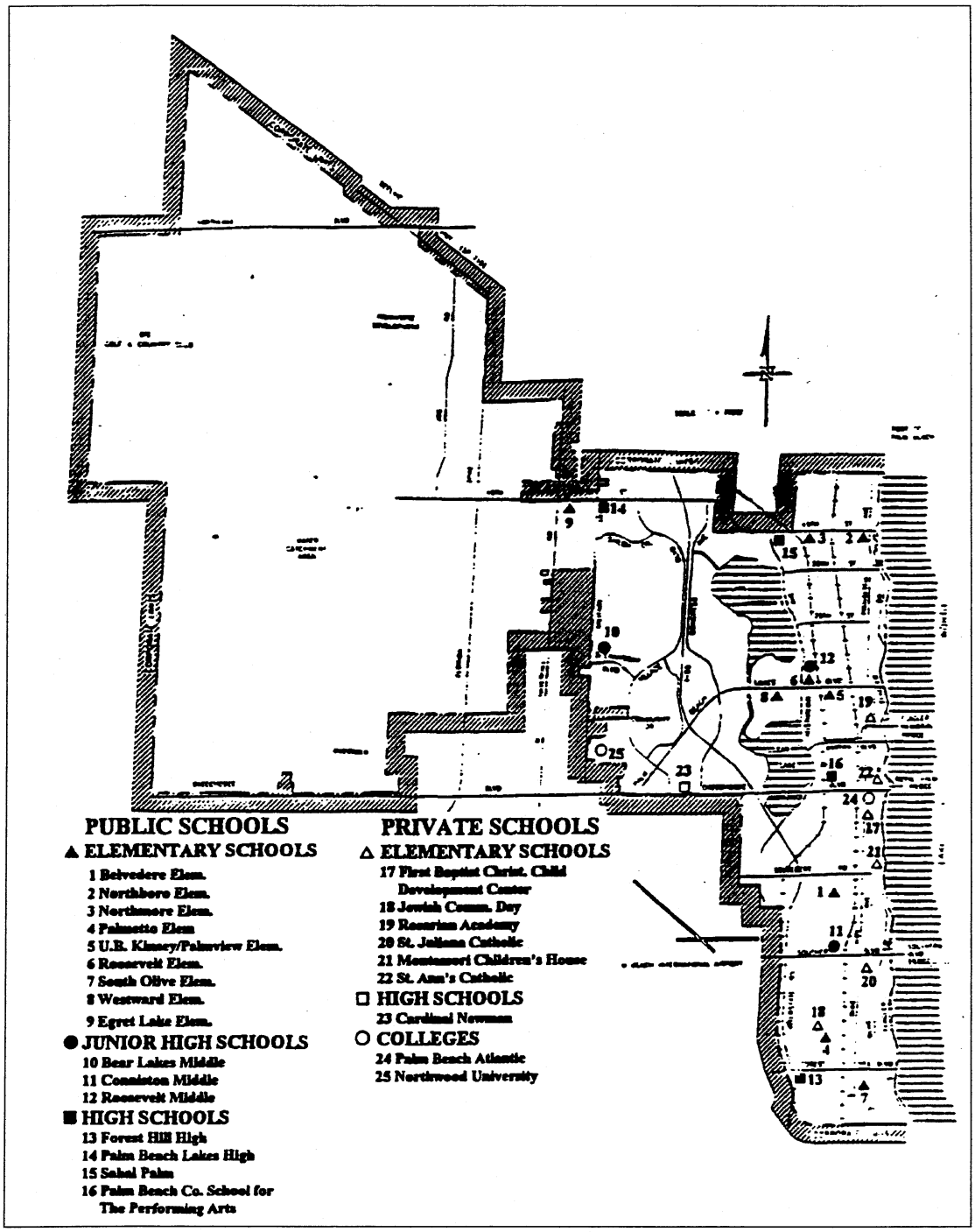
Source: Palm Beach Post, September 15, 1989 and West Palm Beach Planning, Zoning, and Building Department, July 1997.

TABLE 4-8
PRIVATE SCHOOLS IN WEST PALM BEACH

ELEMENTARY SCHOOLS:	ADDRESS	ENROLLMENT	GRADES
17. FIRST BAPTIST CHRIST CHILD DEVELOPMENT CENTER	1101 S. FLAGLER DR	200	5mo-4yrs
18. JEWISH COMM. DAY	5801 PARKER AVENUE	299	K-8
19. ROSARIAN ACADEMY MONTESSORI	807 N. FLAGLER DRIVE	378	K-8
20. ST. JULIANA CATHOLIC	326 PINE TERRACE	450	PK-8
21. MONTESSORI CHILDREN'S HOUSE	1957 S. FLAGLER DR.	89	PK-9
22. ST. ANN'S CATHOLIC	324 S. OLIVE AVENUE	275	PK-8
HIGH SCHOOLS:			
23. CARDINAL NEWMAN	512 SPENCER DRIVE	1,000	9-12
COLLEGES:			
24. PALM BEACH ATLANTIC	901 S. FLAGLER	1,800	4 YEAR
25. NORTHWOOD UNIVERSITY	2600 N. MILITARY TRAIL	500	4 YEAR

Source: Palm Beach County School Board, City of West Palm Beach Planning, Zoning, and Building Dept., July 1997.

FIGURE 4-8
LOCATION OF PUBLIC AND PRIVATE SCHOOLS IN WEST PALM BEACH



Source: City of West Palm Beach Planning, Zoning and Building Department, July 1997.
Planned Community

The Planned Community designation applies to large-scale developments with more than one land use. (The City's Zoning Code requires a minimum of 500 acres, with some exceptions, for Planned Community zoning districts.)

The Villages of Palm Beach Lakes and Briger are currently the only Planned Communities in West Palm Beach. The Villages of Palm Beach Lakes development, encompassing over 1,420 acres, includes a mixture of single-family residential, multifamily residential, commercial, educational and recreational uses. Approximately 7,317 residential units are proposed (658 single-family, detached and zero lot line units, 2,164 townhomes, 247 medium-density units and 4,248 multifamily condominium and rental units), as well as an additional 99 acres of commercial property, four parks, two schools, a fire station and two golf courses. As of July 1, 1997, approximately 82% of the residential and commercial properties have been developed or approved. Briger, on the other hand, has been approved for Phase I (Lakes of Laguna for 108 dwelling units).

Mixed Use Land Use

The Mixed Use Future Land Use category applies to limited areas in the City. This category permits the efficient use of the land, as well as a clustering of different land uses to employ the tenets of the New Urbanism in the planning and development of the City. In the City of West Palm Beach, the tenets of New Urbanism are defined by the following criteria:

A. Developments shall include a mixture of land uses which are complementary to each other, and together, promote the internal capture of vehicle trips. The land use mix shall include, but not be limited to: residential developments (both medium to high density); commercial; and retail land uses which will service the residential development;

B. Residential development shall attempt, as much as is practical, to locate individual dwelling units close to residential streets: shall have sidewalks and bicycle lanes; and shall have landscaped streetscapes;

C. Residential dwelling units shall contain useable porches or some other method for encouraging personal interaction between the public realm and the private dwelling units. Stoops are encouraged to form a separation between public and private land. Garage doors shall be set back from the main living area within the front of the dwelling units or shall be side load garages which are also set back from the front of the dwelling units;

D. The City Planning and Zoning staff will encourage residential dwelling unit and access road designs to include alleys which are used for parking and accessory garage access.

E. Commercial/Retail land uses shall be integrated into the street design and fabric of the residential neighborhoods in an effort to provide incentives for walking and bicycling to the commercial and retail land uses.

F. Parks and public buildings may be included in the development pattern so as to encourage interaction between the residents and the businesses and to foster a well landscaped and accessible development.

G. Gated communities will be discouraged, as these developments separate the residents from

the neighborhoods within which they are located.

The current City Zoning Code permits an applicant to construct commercial development within the Residential Planned Development (RPD) district. The maximum amount of commercial and professional office uses permitted is five percent of the total floor area of all the residential structures on the site. However, this regulation does not permit large square footage of commercial or retail development next to residential developments. It is at this location where the City wishes to support higher density retail or office uses, as employment centers and service areas should be located next to residential zones.

The City wishes to encourage development where the internal circulation system will be shared and will allow vehicular and pedestrian travel between residential and commercial land uses. This will allow for retail and office uses which service residential dwellers, as well as provide an employment base for the surrounding residential land uses. Examples are grocery stores and professional medical offices. This new land use will be encouraged within the corridor between the Intracoastal Waterway and Interstate 95. However, the City will permit this land use outside this boundary should a landowner provide adequate justification for this type of development. Two examples of adequate justification could be that the development will further the principles of New Urbanism, or that the development is capable of supporting residential development adjacent to potential employment centers and/or major transit centers.

Prior to the adoption of a Mixed Use future land use designation, a neighborhood master plan, including specific standards for the density or intensity of use, must be created and approved by the City Commission. The neighborhood master plan will specify building height, building placement and building use in the form of the building type model utilized in the Downtown Master Plan Area. The building types for each Mixed Use area on the Future Land Use Map will be incorporated into the appropriate subarea profile in the Future Land Use Element of the Comprehensive Plan. The Goals, Objectives and Policies section of the Future Land Use Element will contain policies stating the specific standards for the density and intensity of use for each Mixed Use area.

An area with a Mixed Use Future Land Use designation must be zoned Mixed Use. Mixed Use overlay districts may occur in any zoning district, provided the overlay follows the provisions laid out in a neighborhood master plan. The specific development regulations for a mixed use district will be outlined in the City's Zoning Code. Incentive programs may be established to further the goals and objectives of the neighborhood master plan. The Northwood Master Plan is an example of a neighborhood master plan.

I. NATURAL RESOURCES

The natural resources that are found in the South Florida region represent some of the world's most unique and unusual flora and fauna. The continuing growth in the City of West Palm Beach has resulted in the loss of some of these environmentally-sensitive lands and critical habitats for flora and fauna. With the present growth rate and continual development pressures, the few remaining environmentally-sensitive areas in the western areas of the City are threatened unless measures are taken to protect these valuable resources. The various aspects involved in the natural resources in the City are described in the following sections.

Topography

The present area of the City is divided into two physiographic regions: the Atlantic Coastal Ridge and the Sandy Flatlands. The Coastal Ridge is composed of fossilized sand dunes and parallels the coast rising only 25 to 40 feet above mean sea level. The Ridge is hardly noticeable, but it is important because it blocks surface drainage flowing from the west. The Sandy Flatlands is a formerly wet and flood prone area lying west of the Ridge, which rises 10 to 15 feet above mean sea level. The construction of numerous canals and water control structures to carry water through the Coastal Ridge has drained much of the Flatlands leaving a number of small lakes and marshes. Today, the range of water levels in such drained areas reflects a compromise between irrigation, drainage, control of seawater intrusion, and conservation needs.

Climate

The climate in this area varies only slightly with the seasons due primarily to its southerly location, as well as the fact that the Atlantic Ocean Gulf Stream is located near the coast. Temperatures below freezing in winter are rare and frosts are infrequent. Summer temperatures are moderated by the constant breeze produced by trade winds associated with the Gulf Stream. Table 4-9 depicts the average temperatures for West Palm Beach and Table 4-10 shows the average precipitation by month. As Table 4-10 depicts, approximately 70 percent of the annual 62 inches of precipitation occurs between May and October.

TABLE 4-9
AVERAGE TEMPERATURES FOR WEST PALM BEACH
(IN DEGREES FAHRENHEIT BY MONTH)

Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
66.9	67.9	69.9	73.9	77.6	81.0	82.6	83.0	82.1	78.2	72.5	68.2

Source: Florida Almanac 1988 - 1989, Edited by Del Marth & Martha J. Marth, Pelican Publishing Company, Gretna, LA, 1988.

The average annual temperature for West Palm Beach is 75.3 degrees Fahrenheit.

TABLE 4-10
AVERAGE PRECIPITATION FOR WEST PALM BEACH
(IN INCHES BY MONTH)

Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
2.48	2.35	3.44	4.34	5.11	7.53	6.66	6.74	9.66	7.96	2.86	2.57

Source: Florida Almanac 1988 - 1989, Edited by Del Marth & Martha J. Marth, Pelican Publishing Company, Gretna, LA, 1988.

The average annual precipitation is 61.70.

General Geology

The soils in the urban area of West Palm Beach are of the St. Lucie-Paola and Palm Beach-Canaveral Associations and are generally sandy throughout and well-drained. A small portion of the area west of the Coastal Ridge is nearly level to gently sloping, poorly-drained to

moderately well-drained soils of the Pomello-Immokalee, Myakka-Immokalee-Basinger, and Immokalee-Pompano-Basinger Associations. These soils are generally sandy throughout and have a weakly-cemented layer below a depth of 30 inches. Descriptions of the major geologic soil profiles, which may be found in West Palm Beach, are provided in the Appendix to this Element.

Hydrology and Hydrogeology

Hydrology and hydrogeology are presented in detail in the "Groundwater Resources" section of the Conservation Element of this Comprehensive Plan. The three aquifer systems that underlie Palm Beach County are the Surficial Aquifer System, the Intermediate Aquifer System (Hawthorn confining layer), and the Floridan Aquifer System.

Soils

Soils are one of the most important factors affecting the development potential of land. Soils are rated and limitations are noted for the construction of sanitary facilities, building site development, recreational development, construction material type, and water management.

The United States Soil Conservation Service classified the soils in Palm Beach County into fifteen major soil map units as identified on the following page:

1. St. Lucie Urban Land Paola Association
2. Palm Beach Urban Land-Canaveral Association
3. Auartzipsamments Urban Land Association
4. Pomello Immokalee Association
5. Myakka Immokalee Basinger Association
6. Immokalee Urban Land Pompano Basinger Association
7. Wabasso Riviera Oldsmar Association
8. Boca Hallandale Association
9. Riviera Association
10. Riviera Boca Association
11. Basinger Association
12. Winder Tequesta Association
13. Terra Ceia Association
14. Pahokee Association
15. Torry Association

These associations are described in the Palm Beach County Area, Florida Soil Survey, pages 3-8.

Due to the generality of the soils map found in the Appendix of the Infrastructure Element of this Comprehensive Plan, it is not recommended that it be used for specific site selection and planning, but rather that it should be used to provide a general idea of the type of soils found in the area. The Soil Survey of the Palm Beach County Area, Florida provides detailed maps, which can be used for site selection and planning.

Minerals

Valuable minerals that may be mined within the City limits are depicted in Figure 4-9.

There are basically two different types of minerals found within the City of West Palm Beach. They include: 1) medium fine sand and silt and 2) shelly sand and clay. Essentially, everything east of Haverhill Road is medium fine sand and silt, while to the west of Haverhill Road the mineral composition is predominately shelly sand and clay. At the present time, there are no known commercial mineral mining companies in operation within the City of West Palm Beach.

Wetlands

The State of Florida places great emphasis upon the preservation of its wetlands primarily because of their ecological values. These values are applicable to all wetlands, varying in quantitative and qualitative degree. In order of importance, these values are as follows:

1. Wetlands provide habitat for an enormous array of plant and animal species, which cannot survive without such a habitat. Many endangered and threatened species require wetland habitats. They have become endangered or threatened because their realm has been diminished.

2. Wetlands serve to remove and store excesses of certain elements from the environment. As a result of agricultural activities and as a result of large-scale usage of fossil fuels, nitrogen and sulphates have become generally excessive in the environment. Wetlands serve a filtering and storage function for these potential pollutants.

3. Wetlands serve an important water quality function. In periods of heavy rainfall, wetlands serve to store and slowly release water. Wetland vegetation serves to filter excess nutrients from rainfall and from runoff, especially phosphorus and nitrogen.

4. Wetlands are extremely productive in biological terms. Wetlands vegetation takes in nutrients and causes a net production of oxygen in the process of respiration. On a global, and even a local, scale, wetlands can be very important to air quality.

5. Wetlands have an important impact upon the climate. Stored water in wetlands areas maintains a warmer climate in areas surrounding the wetland. Wetlands also serve to fuel rainfall in an area.

These wetland attributes apply to all wetlands in varying degrees, and do not apply as profoundly to other ecosystems. In addition to these values, wetlands serve an important food producing function since they serve as breeding grounds for fish, have important aesthetic and recreational value, and have research and educational importance. Preservation of wetland area has become an important environmental concern because there has been a very large loss of wetland areas to development. It has been estimated that more than one-third of all wetlands in the United States, and more than half of the wetlands in Florida, have been drained.

As depicted in Figure 4-10, almost all of the wetlands that are located within the city limits of West Palm Beach are found in the City's Water Catchment Area. Most of the wetlands found in the Water Catchment Area are pine, wet prairies and cypress domes. Development that destroys or would endanger the potable water use of the City's Water Catchment Area is prohibited by Florida Statute. Other types of wetlands found within the city limits of West Palm Beach include mixed forest and Melaleuca.

Flooding

Figure 4-11 indicates the floodplain areas in the City of West Palm Beach. These floodplains are addressed in the "Floodplains" section of the Conservation Element of this Comprehensive Plan.

As Figure 4-11 depicts, the entire waterfront along Flagler Drive in West Palm Beach is within the 100-year flood zone. However, this Lake Worth waterfront flood zone is minimal, extending westward only a couple of hundred feet from the bulkhead. In addition, a few small scattered areas, as well as all land located west of the Florida Turnpike, within the corporate limits of West Palm Beach, including the City's Water Catchment Area, are within the 100-year flood zone. The 500-year flood plain is also shown to indicate areas of moderate flood hazards.

J. FUTURE ANALYSIS

The Future Analysis section will examine the availability of the facilities outlined in the Transportation and Infrastructure Elements of this Plan. An analysis of the character and magnitude of the City's vacant and undeveloped land shall be provided along with a determination of land required for each of the land uses utilized in this Plan. A discussion of the need for redevelopment shall be provided and, finally, a review of physical limitations to development shall be explored.

Availability of Urban Services

All land east of the City's Water Catchment Area shall be considered the Urban Service Area. Growth, including residential, commercial and industrial development, will be directed to the areas where urban services can be easily provided to avoid the excessive costs of providing facilities and services associated with urban sprawl. A summary of the facilities proposed in the Infrastructure and Transportation Element is presented below.

1. Sanitary Sewer - The City operates the East Central Regional Water Pollution Control Plant and uses 11 million gallons per day (MGD), or 21% of the total treatment allotment. With the expansion of 11 MGD, the City can use up to 17 MGD (30.9%) while the remaining 38 MGD is shared by Palm Beach, Riviera Beach, Palm Beach County and the Lake Worth Utility Authority. Total projected flows, based upon seasonal and resident population projections, are expected to reach 57.05 MGD by the year 2000. Therefore, with the improvements specified in this Plan, all West Palm Beach sewer needs are expected to be met.

2. Solid Waste - The Solid Waste Authority's new North County Regional Resource Recovery Facility, a Refuse Derived Fuel (RDF) plant accommodating 624,000 tons per year, will be able to handle the 105,000 tons of trash, garbage and sludge generated by West Palm Beach residents in the year 2000.

3. Potable Water - The City's Water Treatment Plant, serving the City, Palm Beach and South Palm Beach, underwent an expansion in 1989 allowing the facility to service a capacity of 47 MGD. This amount is sufficient to satisfy the respective population increases and development needs through the year 2010. Plant expansion and other improvements will not be required by the year 2010, as identified in this Plan.

4. Traffic Circulation - The City's traffic circulation system is well-established and serves the population of West Palm Beach through a variety of transportation modes. Access into the City from the west is provided by: 45th Street, Palm Beach Lakes Boulevard, Okeechobee Boulevard (State Road (SR) 704), Belvedere Road, Southern Boulevard (SR 80), and Forest Hill Boulevard (SR 882). Access to the east, from the Town of Palm Beach, is provided by three bridges across the Intracoastal Waterway (Lake Worth). Those bridges, from north to south, are the Flagler Memorial Bridge, Royal Palm Bridge and Southern Boulevard Bridge. Major roadways providing access from the north and south are Dixie Highway and Olive Avenue (U.S. Route 1 / SR 5 and 805), Australian Avenue, Interstate Highway 95 (I-95) and, to a lesser extent, Military Trail (SR 809).

   As discussed in the Transportation Element of this Plan, based on the new direction of the City, the City will encourage the construction of bike paths, sidewalks, public transportation (particularly the downtown light rail system), and traffic calming techniques to foster a higher quality of life, redevelopment, safer streets, slower vehicle speeds, etc.

   Solutions to traffic circulation problems are a regional concern. The City of West Palm Beach is an active member of the Palm Beach County Traffic Performance Standards Advisory Committee and the Metropolitan Planning Organization. These groups were formed, in part, to monitor motor vehicle traffic capacity and coordinate street modifications throughout Palm Beach County. The Traffic Performance Standard ordinance, passed by the Palm Beach County Commission, will effectively limit development on those roadway segments that have lower levels of service for motor vehicle users than the adopted level of service.

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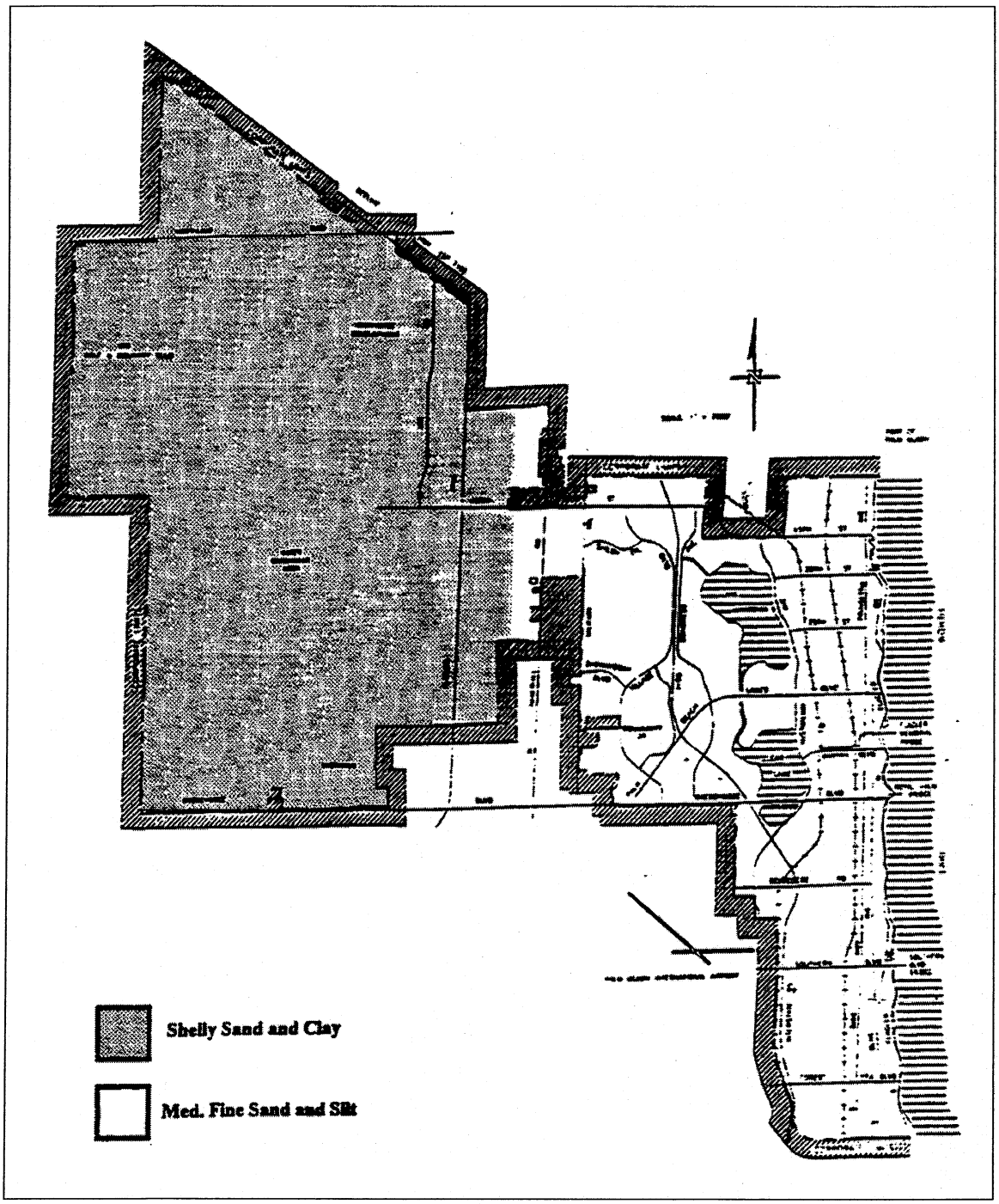
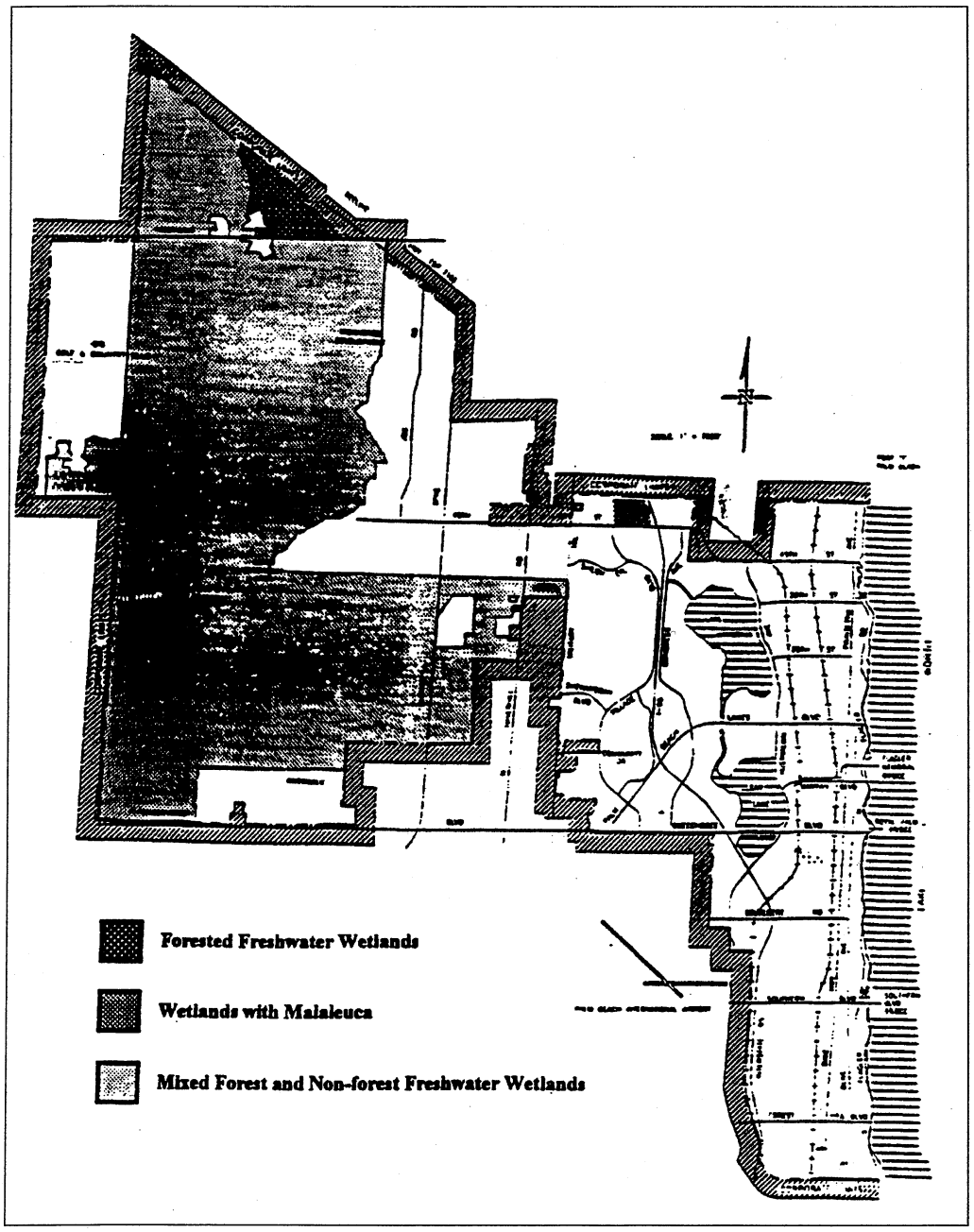
FIGURE 4-9
CITY OF WEST PALM BEACH
MINERALS MAP



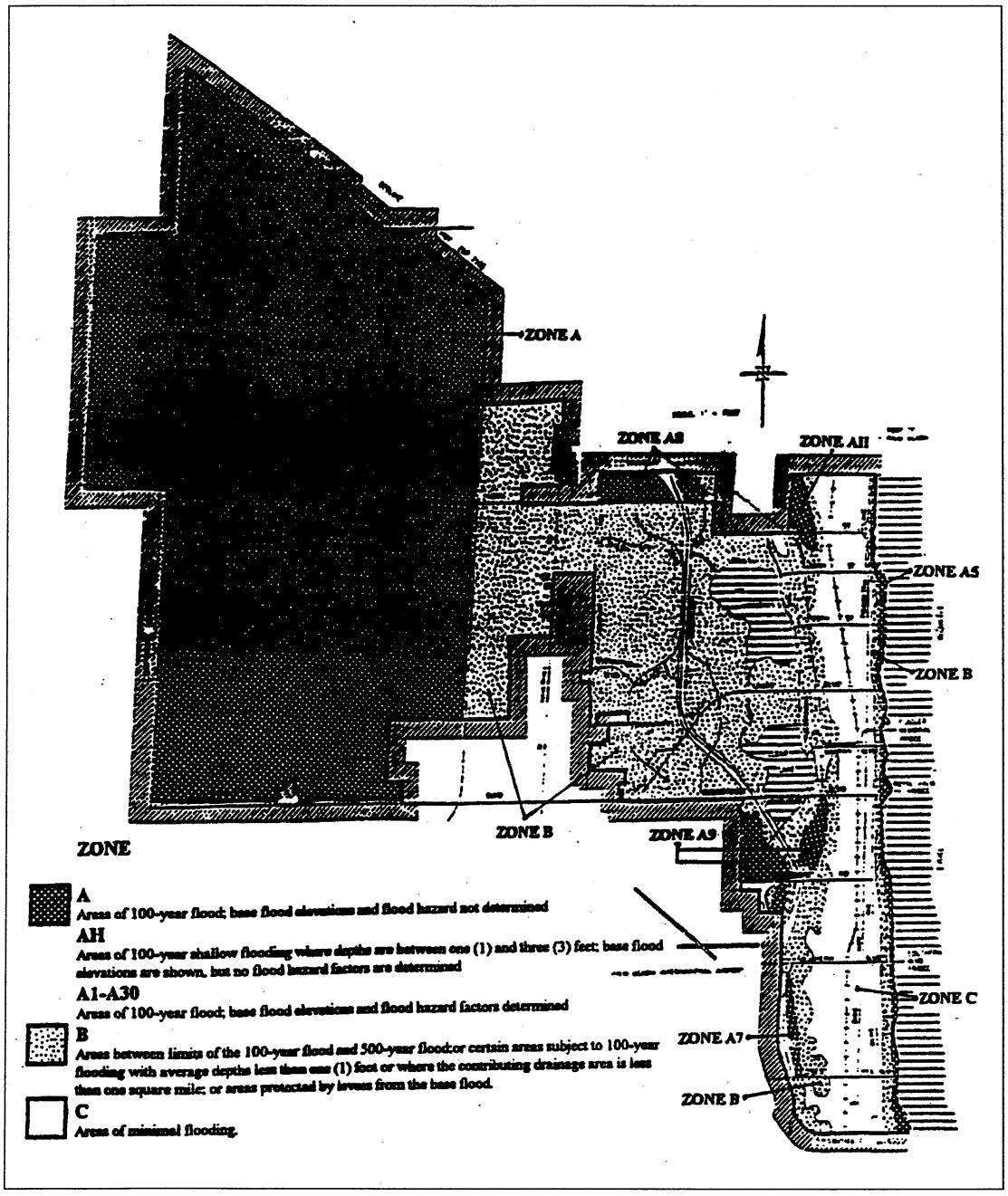
Source: Florida Department of Natural Resources, Bureau of Geology, Environmental Geology Series West Palm Beach Sheet, Map Series 100. July 1997.

FIGURE 4-10
CITY OF WEST PALM BEACH
WETLANDS MAP



Source: South Florida Water Management District, West Palm Beach, Florida. S.F.W.M.D. Land use and land cover classification code and 1988 Land Use Data, City of West Palm Beach and Surrounding Area.

FIGURE 4-11
CITY OF WEST PALM BEACH
FLOODPLAINS MAP



Source: U.S. Department of Housing and Urban Development, F.I.R.M. Flood Insurance Rate Map, City of West Palm Beach, Florida, West Palm Beach County (1979). Community-panel number 120229 0020 B and 1200229 0015 B.

However, the City and County have worked together to strengthen the revitalization of the Downtown by enhancing development therein by using a transportation tool available through the Florida Administrative Code. As recommended by the Florida Department of Community Affairs (DCA), both the County and City have adopted a Transportation Concurrency Exception Area (TCEA) for the City's Downtown. The TCEA permits the City to approve development which does not meet the County Traffic Performance Standard Ordinance. Within the general boundaries of Palm Beach Lakes Boulevard to the north, the Lake Worth lagoon to the east, Okeechobee Boulevard to the south including the CityPlace DRI, and Clear Lake to the west and known as the Downtown, development does not have to meet the required Level of Service (LOS) "D" standard, as regulated by the Palm Beach County Department of Engineering and Public Works. The exceptions to this are several intersections, such as Okeechobee Boulevard at Tamarind Avenue, and certain roadways such as Okeechobee Boulevard from Tamarind Avenue to Interstate 95. These intersections and streets must be looked at if they reach LOS "F" and then hierarchy of changes must be considered with street expansion being the least desirable. The City and County may create capacity increases at these links or intersections, provided non-motor vehicle alterations are considered first, and both the City and County agree to the modification for the same. The full list of these intersections and roadways may be found in the report submitted to the DCA, and entitled "Achieving Livability and Sustainability Through A TCEA For Downtown WPB."

The City also hereby designates a Constrained Roadway at a Lower Level of Service (CRALLS) at Palm Beach Lakes Boulevard, between Village Boulevard and Congress Avenue and between Australian Avenue to Tamarind Avenue. A CRALLS is also necessary at Congress Avenue, between Presidential Way and Palm Beach Lakes Boulevard and at Australian Avenue, between 25th Street and Palm Beach Lakes Boulevard. A CRALLS designation is necessary for several of the intersections within these links: Palm Beach Lakes Boulevard and Village Boulevard; Palm Beach Lakes Boulevard and Interstate 95; Palm Beach Lakes Boulevard and Congress Avenue; Palm Beach Lakes Boulevard and Australian Avenue; and Congress Avenue and Okeechobee Boulevard. A full list of these sections and intersections may be found in the report entitled "Traffic Analysis for CRALLS Application Uptown West Palm Beach Palm Beach Lakes Boulevard." Additionally, the City will propose a TCEA within the whole eastern corridor known as the Eastward Ho! Corridor.

The Palm Beach County Board of Commissioners has recently adopted a CRALLS at 45th Street between Village Boulevard and Australian Avenue to permit a LOS "E". The City recommends that this CRALLS be amended and broadened to include the link between Village Boulevard and Military Trail, and that another CRALLS be approved for a lower LOS than "D". For further information, the reader may refer to the Transportation Element.

The City is also designating the LOS "E" for all City Streets. This will permit more traffic volumes and more development within the City and create a self-regulating reduction in speed for safer streets and better pedestrian movements.

In addition to the TCEA approved for the Downtown, access into and around West Palm Beach will be enhanced in the future with the possible construction of Florida Turnpike interchanges at 45th Street and Southern Boulevard in 2015. Forest Hill Boulevard is also planned for in the Long Term Plan of the County.

The Tri-County Commuter Rail Service, which began operation in January 1989, is designed to relieve congestion expected on Interstate 95 because of construction on that roadway. Service is provided from two stations in West Palm Beach, Flagler Station. Two stations are located to the immediate north and south of the City. The first station is southwest of the airport on Southern Boulevard, and the northern station is north of the Town of Magonia Park. A feeder bus system links all the stations on this system to surrounding areas. In addition, the feeder buses will complement Palm Tran's existing public transit system in Palm Beach County.

The City has drafted a "Transportation Vision" for the street system of the City. The Transportation Vision is the following:

The Planning, Zoning and Building Department will use all available land use and transportation means to make the City sustainable, liveable and economically successful:

- Transportation changes to achieve land use goals and objectives;
- Land use changes help to achieve transportation goals and objectives; and
- The metrics are the citizen and the vulnerable pedestrian.

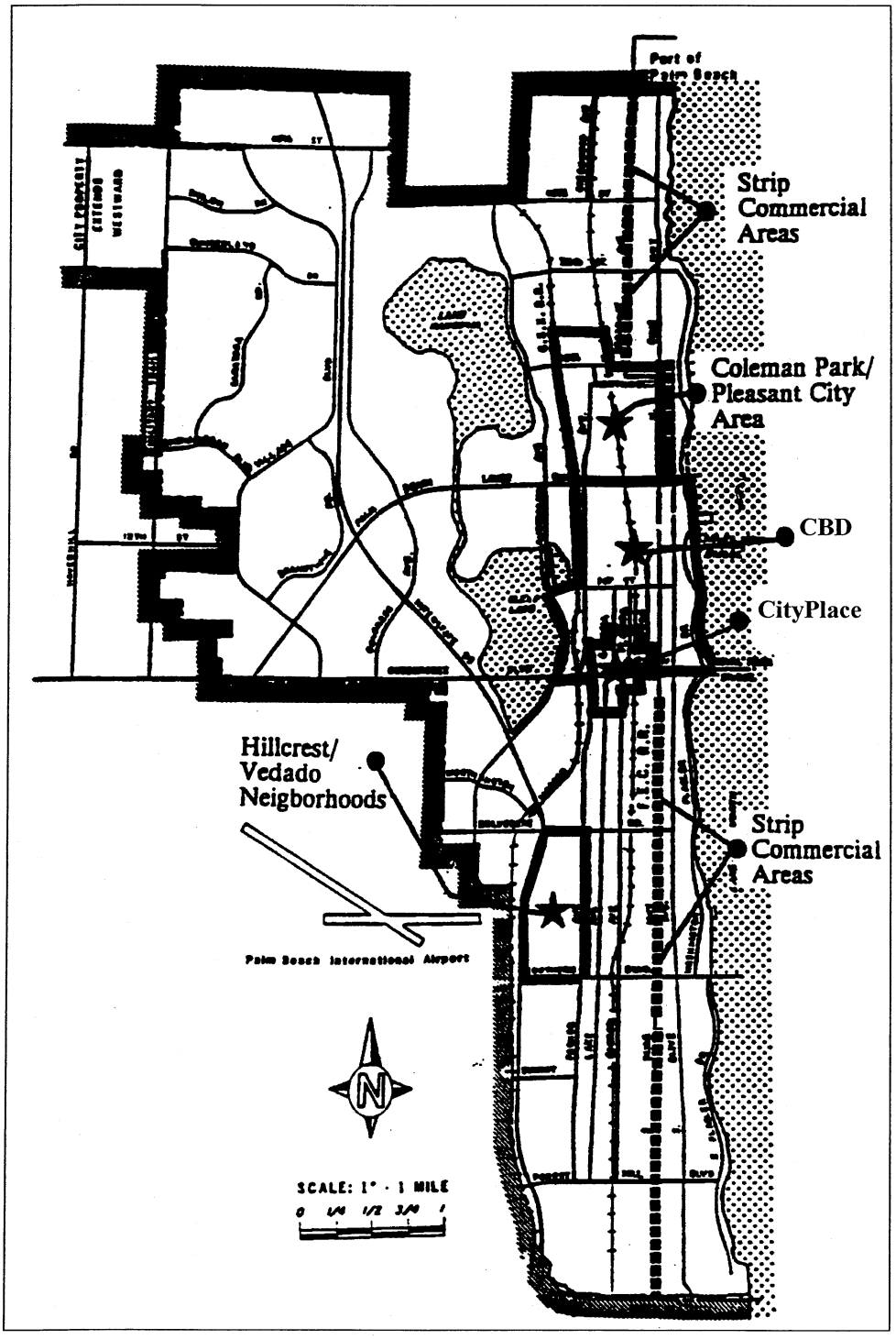
A more detailed vision is cited in the Transportation Element of this Comprehensive Plan.

5. Other Services - Drainage improvements will be required in the older portions of the City as identified in the City's Five-Year Capital Improvements Program. Additionally, an adequate drainage system will be necessary as the City continues to expand westward. The present management program of the City's surface water supply system is sufficient and should be continued in the future. Emergency service provisions for police, fire and rescue will need to be increased as the westward development trend and annexations continue. This will include additional personnel and capital facilities, particularly if areas are annexed into the City.

Blighted Areas

In 1993, the City of West Palm Beach determined the City Center to be a slum and blighted area for the purpose of establishing a Community Redevelopment Agency (CRA) to use tax increment financing funds for redevelopment. A City Center Community Redevelopment Plan ("Plan") was adopted on December 16, 1985, to guide these redevelopment efforts. Amendments have been made to this Plan in an effort to keep it up to date with regard to content, capital expenditures and financing. The latest amendment to the Plan was adopted in 1997. It is recommended that the Plan, as well as accompanying tax increment financing revenue projections, continue to be updated each year to direct the renewal of these blighted areas. Major redevelopment areas are shown in Figure 4-12.

FIGURE 4-12
CITY OF WEST PALM BEACH
MAJOR REDEVELOPMENT AREAS



Source: City of West Palm Beach Planning, Zoning and Building Department. July 1997.

The City should make every attempt to eliminate this blighted condition and improve the quality of life, health, safety and welfare of the residents of West Palm Beach. The elimination of slum and blight will curb the influx of crime that has plagued this area, provide for the rehabilitation and redevelopment of affordable housing, increase the City's tax base, enhance development opportunities, allow for the provision of facility improvements and create a more favorable environment conducive to residential and commercial activity.

The CityPlace project is located within the Downtown CRA area. This development will eliminate much of the deteriorated conditions which presently exist within the Downtown area. All dilapidated homes have been demolished or moved, and numerous improvements shall be made as part of this redevelopment effort.

Much of the residential area located at the north intersection of the Downtown area has experienced decay and is in need of redevelopment. The City has identified this area as a "Target Area" and shall concentrate certain resources, particularly federal Community Development Block Grant funds, to improve housing, recreation and infrastructure facilities. Likewise, the City has created an Enterprise Zone within this area to take advantage of state incentives (tax deductions, etc.) available to local businesses which locate in the zone. An annual report discussing business activity, revenues, capital expenditures, etc., for the Enterprise Zone Program is required by the State.

Finally, a study was conducted to determine if a portion of Northwood Road and Pleasant City should be considered blighted based on findings regarding deterioration of structures and site improvements, and unsafe or unsanitary conditions. The City Commission approved a resolution declaring this area as blighted on June 28, 1993. Approval of a Community Redevelopment Area (CRA) plan for this area was made on October 11, 1994.

In 1998, installation of the Northwood Road landscaping and design streetscape was implemented. The street now has several intermittent landscape bulbouts, with trellises over benches. Sidewalk improvements were made, as well as pavement and striping repairs.

Inconsistent Land Uses

In 1989, there was only one major area in West Palm Beach that needed to be redeveloped in order to eliminate or reduce an existing land use that can be considered inconsistent with proposed future land uses. That general area and land use consisted of residential development in the area immediately east of the Palm Beach International Airport (PBIA) that was subjected to aircraft noise levels which exceeded recommended national standards.

Specifically, the former single-family residences in the 80-acre area immediately east of PBIA had been determined to be incompatible with PBIA because of aircraft noise that will exceed 75 Ldn (average decibel level day and night) when the planned expansion of PBIA and the various noise abatement and mitigation procedures associated with the expansion are completed in the near future. This determination is based on the recommended national standards of the Federal Aviation Administration (FAA). The Palm Beach County Department of Airports purchased approximately 350 residential properties in the referenced acquisition area, all but five houses. The area now stands vacant and is ripe for redevelopment. The City and County have been holding discussions on the possibility of developing this area as a golf course

or some other recreation site. Should this occur, the City will need to submit a Large Scale Land Use Amendment to the Florida Department of Community Affairs to change the existing Land Use Map to accommodate this land use.

Strip Commercial Development

As is occurring throughout most of the older commercial areas in the coastal areas of South Florida, the strip commercial development along Broadway and South Dixie Highway is generally deteriorating, or being replaced by office development because of the inability of that older commercial area to compete with the commercial uses in the City's Central Business District and the newer commercial areas to the west. In addition, the several motels along Broadway are considered by many to be detrimental to the surrounding neighborhoods because of the inexpensive room prices offered, and are viewed as encouraging prostitution and other crimes. Through the redevelopment incentives outlined in this Element, these areas should be redeveloped primarily as viable commercial nodes at or near the intersections of the major roadways, identified on the Future Traffic Circulation Map in the Transportation Element of this Comprehensive Plan, with office, residential or public uses located between the commercial nodes. The City should also work with the residents and owners of properties in these areas to develop viable redevelopment plans. Figure 4-12 reveals the major potential redevelopment areas within the City and includes the Downtown, the CityPlace development, Coleman Park/Pleasant City, the Hillcrest/Vedado neighborhoods, the strip commercial properties located throughout the city and all vacant land.

The typical commercial lot within the Commercial Future Land Use category along the historic U.S. 1 north-south transportation corridor (Dixie Highway) averages 100 feet deep and either directly abuts adjacent residential properties, or has an alley or street separating the commercial and residential properties. The City values the residential fabric existing within close proximity to the U.S. 1 corridor, and has established policies to restrict the expansion of the commercial properties into the residential neighborhoods. The commercial expansion has primarily manifested itself in the past as the demolition of housing to facilitate parking lots, in many cases for parking in excess of the Zoning Code requirements, which is contrary to the City's goal of providing adequate housing and protecting its residential neighborhoods.

In an effort to revitalize the Northwood and Pleasant City Neighborhoods within the northeast section of the City, north of Palm Beach Lakes Boulevard to the City limits, the City commissioned the preparation of the Northwood Master Plan. This document was prepared in a manner similar to that of the Downtown Master Plan. The Northwood Master Plan was prepared by holding a design charrette on October 1-3, 1995. That charrette was then transformed into a plan which was adopted in concept by the City Commission on July 15, 1996.

The Plan addresses land uses which are appropriate in the northern, established section of the City: it looks at appropriate design characteristics for the neighborhoods; it suggests the institution of commercial nodes at major, key intersections; and it designates certain zoning criteria or possible regulations to implement the Plan. With the adoption of the Northwood Master Plan, the City may need to change the Commercial Incentive District land use and some zoning districts, as well as initiate urban regulations and the construction of traffic calming devices, in order to implement the Master Plan.

Limitations to Development

Development within West Palm Beach may be limited due to man-made or environmental constraints. These restrictions must be identified in order to determine where future development and redevelopment should be directed. For instance, development within the Water Catchment Area (WCA) could prove extremely detrimental to the City for health and ecological reasons. In 1997, the City identified approximately 283 acres of vacant or undeveloped land as reflected on the Existing Land Use Map in the appendix of this Element. The development of this land, along with potential redevelopment property, is discussed in the following section. Possible limitations to development include physical geographic constraints (i.e. soils, topography, etc.), the presence of natural or historic resources, flood hazard areas, slum and blight conditions and the need to protect public wellfields.

Soils and Topography

The topography of West Palm Beach, as explained in the prior section of this Element, is composed of the Atlantic Coastal Ridge and the Sandy Flatlands. The Ridge, rising anywhere from 25 to 40 feet above the mean level, and the Flatlands, lying west of the Ridge and extending only 10 to 15 feet above the mean sea level, are both capable of sustaining development. Soils, described in detail in the appendix of this Element, also pose no threat to redevelopment activities.

Natural Resources

With the exception of the WCA, the existence of natural resources does not appear to be a hindrance to development within the City. Likewise, the existing minerals reflected in Figure 4-9, the geology and the hydrological conditions do not serve to halt development, particularly in the western portion of the City where vacant and undeveloped land is available.

Wetlands are evident throughout virtually the entire WCA. Because of this area's environmental significance and its importance as a source of potable water, development should be strictly prohibited. Construction within this area should be relegated to water-related uses which do not negatively impact the water quality. Other wetland areas are located in the area surrounding the East Central Regional Water Pollution Control Plant and other small isolated pockets within the City. Development of any of these sites should conform to the regulations outlined by the South Florida Water Management District (SFWMD) and other appropriate state and federal agencies.

Historic Resources

Historic Resources are described in detail in both the Housing and Historic Preservation Elements of this Plan. Eight structures are listed on the National Register of Historic Places. These structures are reflected on Figure 6-3 and a list of historically significant structures is shown in Table 6-14.

Flood Prone Areas

The City has identified several developments located within the 100-year flood hazard area. As discussed earlier and shown on Figure 4-11, the entire waterfront along Flagler Drive, Dreher Park, the Water Catchment Area (WCA) and portions of the land south of Clear Lake and the intersection of 45th Street and Interstate 95 are considered within the 100-year flood zone.

Development along Flagler Drive is, for the most part, complete while major developments are approved or under construction for those areas near Interstate 95. The region between the Florida Turnpike and the eastern edge of the WCA is also within the 100-year flood zone. These and other developments classified as hazardous must conform to the regulations specified within the City's Building Code. Development should not be deterred, although precautions must be taken to ensure that development or redevelopment meets the specifications outlined in the National Flood Insurance Program.

Protection of Public Wellfields

The Palm Beach County Board of County Commissioners adopted the Countywide "Wellfield Protection Ordinance" in February 1988 to regulate "existing and new nonresidential use, handling, storage and production of hazardous and toxic materials within certain zones of influence" around major public wellfields (The ordinance defines a major wellfield as one which produces or is planned to produce 100,000 gallons or more per day of potable water). These zones of influence are based on the specific physical conditions surrounding each wellfield (e.g, soil permeability) and, therefore, vary for each wellfield. These various zones have been determined by a computer model and mapped. This modeling and mapping is to be done by the County on an annual basis. The Palm Beach County Department of Environmental Resources is responsible for enforcing this ordinance, and does so by coordinating with the permitting and approval processes for the various local governments in the County.

No City wells were initially mapped by the County for this program because West Palm Beach did not have any public wellfields in operation when the referenced ordinance was adopted. However, the City wellfield immediately south of the City's East Central Regional Wastewater Treatment Plant was recently added to this program. The zones of influence for that City wellfield are depicted in Figure 4-13.

The City shall continue to direct the applicants for relevant City approvals for properties in these zones to the Palm Beach County Department of Environmental Resource Management for the appropriate review and approval before issuing any related City approvals, permits or licenses. Land uses which are nonresidential within the one foot drawdown of wellfields as indicated on the Future Land Use Map are prohibited from storing, handling, producing or using any regulated substances as stated in the Palm Beach County Wellfield Protection Ordinance. However, the Ordinance allows nonresidential uses in Zone 4 only if they qualify as a General Exemption, obtain a Special Exemption or receive an Operating Permit which complies with certain conditions. The Ordinance also applies to any areas annexed into the City in the future that may contain zones of influence for public wellfields.

Acreage Needed for Future Land Uses

The City of West Palm Beach, with a 1995 resident and seasonal population of approximately 76,341, is expected to reach a population total of 101,794 by the year 2010. It is imperative that, as the City continues to grow, appropriate land uses are provided for residents, visitors and businesses alike. This section of the Plan discusses the necessary land uses needed to satisfy the demands of growth and development through the year 2010. These land uses are depicted on the City's Future Land Use Map.

Future Residential Use

With this large increase in population, it is essential that adequate housing be provided for the residents of West Palm Beach. The Housing Element of this Plan provides detailed information concerning the type, amount and location of residential development in the City. Tables 4-11 and 4-12 provide an overview of new housing units to be built in the City through the year 2000.

TABLE 4-11
NEW HOUSING UNITS TO BE CONSTRUCTED BY TYPE AND TENURE
CITY OF WEST PALM BEACH 1980-2000*

Owner Occupied	1980	1988	1990	1995	2000
Single Family & Condominiums	15,726	22,797	14,480	15,584	9,677
	(53.14%)	(61.41%)	(50.3%)	(48.9%)	(91.6%)
Renter Occupied Multifamily	13,769	14,226	14,069	16,051	891
	(46.53%)	(38.32%)	(48.9%)	(50.4%)	(8.4%)
Mobile Homes	98	98	238	238	0
	(0.33%)	(0.26%)	(0.83%)	(0.75%)	(0%)
Total:	29,593	37,121	28,787	31,873	10,568

* 1980, 1990, 1995 figures are actual, based upon the U.S. Bureau of the Census. The figures for 2000 are projections. The 1988 figures were extrapolated from the other years.

Source: 1980 U. S. Census and City of West Palm Beach Department of Planning, Zoning, and Building, March 1990.

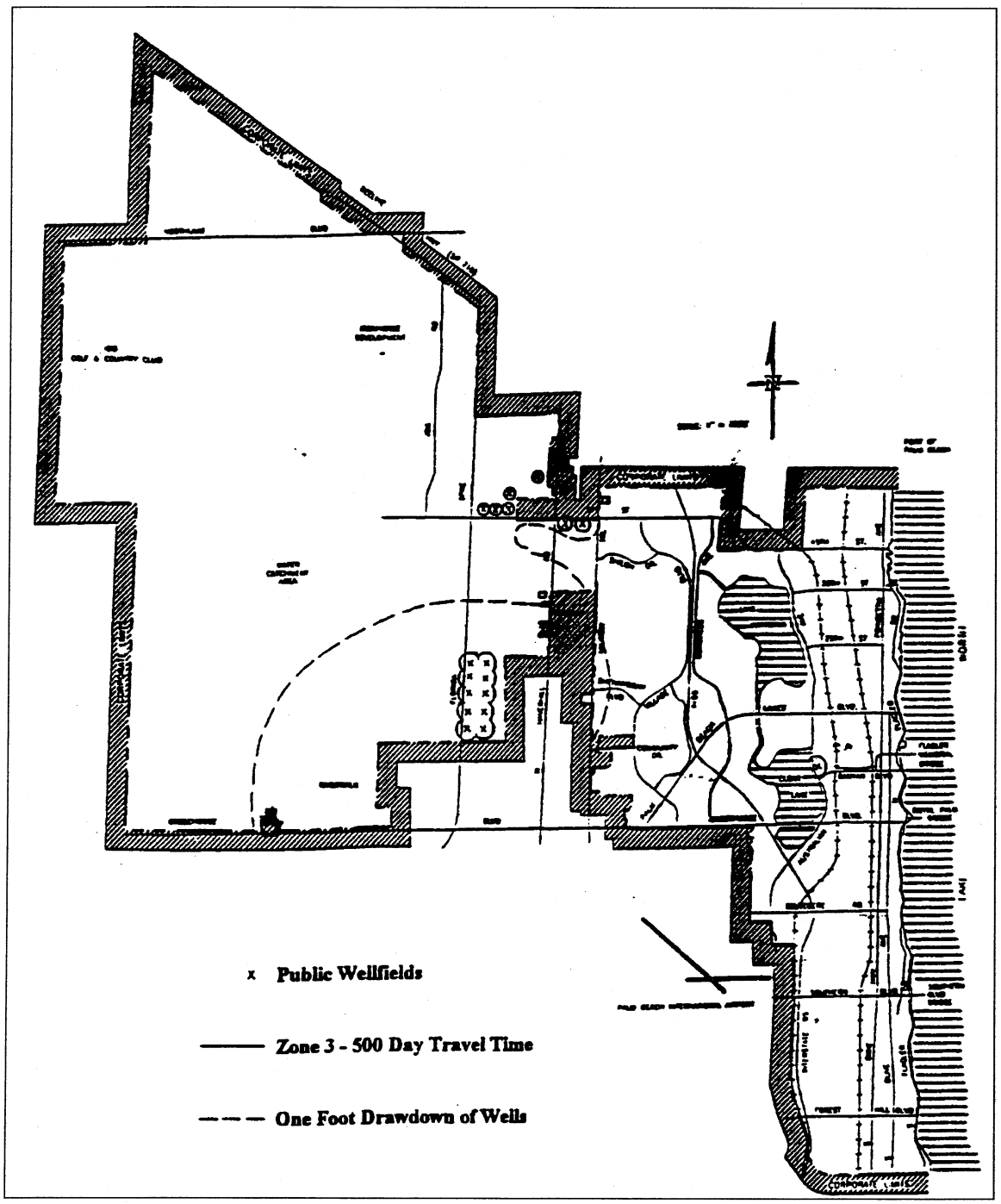
TABLE 4-12
ESTIMATED ADDITIONAL RESIDENTIAL, COMMERCIAL AND INDUSTRIAL ACREAGE IN WEST PALM BEACH BY THE YEAR 2010

TYPE OF LAND USES	NUMBER OF UNITS	ESTIMATED AVERAGE DENSITY (INTENSITY)	ADDITIONAL ACRES REQUIRED
RESIDENTIAL			
New Single Family	16,366	10.5/acre	1,559
New Multifamily	3,766	25.0/acre	151
Total:	20,132	35.5/acre	1,710
COMMERCIAL	NA	1.0 FAR*	467
INDUSTRIAL	NA	0.5 FAR*	117

Note: No new mobile homes are proposed
* indicates "Floor Area Ratio."

Source: 1980 U. S. Census and City of West Palm Beach, Planning, Zoning and Building Department July 1997.

FIGURE 4-13
ZONES OF INFLUENCE OF
PUBLIC WELLFIELDS



Source: Palm Beach County Environmental Resources Management Department, July 1997.

To determine the total acreage required for residential land uses, the projected number of needed single-family and multifamily units from 1988 to 2000, based upon the City's population projections, was calculated. This calculation is explained in detail in the Housing Element of this Plan. This figure, divided by an estimated average density, resulted in the total additional acres required for residential land uses.

A total of 1,550 acres will be required to develop the nearly 16,366 single-family units expected to be developed within the City by the year 2010. A total of 123 acres of land is required for future multifamily development. The total resident population for the year 2010 (101,578) divided by the total number of housing units that same year (46,172) yields an average household size of 2.2 persons per dwelling unit. The majority of this new residential development is expected to occur in the rapidly-growing western areas of the City. Continued development is expected in the Briger site and other undeveloped sites around the East Central Regional Water Pollution Control Plant, as well as Riverwalk, Andros Isles, Lennar Homes (a.k.a. - Baywinds Estates), Burgess, Montclair Lakes, etc. These areas are identified on the City's Future Land Use Map in the appendix to this Element.

Future Commercial Use

The increase in City population over the next 12 years will require an increase in commercial development as well. In 1988, there were 1,403 acres of commercial land uses within the City. By the year 2000, that figure is expected to climb to 1,870 acres, a 33% increase (See Table 4-12). The majority of this commercial growth is to occur at the intersection of 45th Street and Interstate 95 and in the newly developed western areas of the City. These developments will meet the neighborhood shopping needs of the residents of the Villages of Palm Beach Lakes, Briger and other residential developments within this area.

The Central Business District (CBD) should remain as the City's focal point for legal, judicial, commercial, financial, cultural/entertainment and governmental activity. The construction of additional residential structures should be encouraged within the CBD to support the concept of a 24-hour downtown. Although "satellite" office districts have and will be developed, the focus of all major commercial activity should be concentrated in the CBD. These issues are discussed more fully in the Downtown Master Plan of this Plan.

Future Industrial Use

Industrial areas within the City are limited to six specific locations, the largest, of which, is the area located immediately northeast of the Palm Beach International Airport, south of Clear Lake. Other industrial sites include the area along the F.E.C. Railroad (from Monroe Drive to the southern corporate limits and a Downtown area from 3rd Street to 10th Street), south of Evergreen Cemetery along Electronics Way and, finally, at the northern intersection of 45th Street and Interstate 95, and finally, the area south of 45th Street and west of Haverhill Road. These areas are reflected on the Future Land Use Map.

Industrial land use acreage will only increase by 117 acres within these designated areas. Because the older portion of the City (i.e., east of Interstate 95) is, for the most part, built out, industrial development will entail the expansion of existing facilities and construction upon undeveloped property.

Future Recreation and Open Space Land Use

The City has 370.9 acres of recreational land. This total does not include several private golf courses which were also not included as a part of the analysis within the Recreation and Open Space Element of this Plan. An additional 45.6 acres of recreation and open space is required to meet the future needs of West Palm Beach residents. This total includes 113.0 acres of metropolitan parks (i.e., golf course), 170.2 acres of community parks and 78.3 acres of neighborhood parks. Any proposed public golf course or community park(s) will, in all likelihood, be developed in an area designated as "Community Service" on the Future Land Use Map. The Recreation and Open Space Element identifies the generalized locations of these facilities.

Future Conservation Land Use

Conservation land uses increased by 2.5 square miles due to the expansion in the Water Catchment Area (WCA). A total of 13,803 acres of conservation land exist within the City, of which 89% is the WCA. Policies to govern the maintenance of protection for this resource are detailed in the Conservation Element of this Plan.

Future Community Service Land Use

Community Service (CS) uses, including public buildings, Interstate 95, educational facilities, medical facilities, churches and other public facilities, will witness a slight increase in total acreage. The development of an expanded downtown Judicial Center is included within the CBD land use total and is the major community service-type facility improvement. The expansion of the East Central Regional Water Pollution Control Plant is completed and has increased its capacity to 55 million gallons per day. As stated earlier, approximately 276 acres of the community service total will be utilized for recreation and open space purposes. Other community service needs and improvements have been identified in the Capital Improvements Element.

Future Commercial Incentive District Land Use

The Commercial Incentive District (CID) shall continue to be used along those strip commercial corridors where redevelopment activities should be encouraged. These corridors include Broadway, South Dixie Highway and certain portions of Tamarind Avenue and North Dixie Highway where commercial and/or residential expansion is desirable. The CID will require formal site plan review and approval by the City Commission.

Future Special Impact Zone Land Use

Special Impact Zones shall continue to be used in those areas located near major highways and large residential areas with great potential for redevelopment. These zones are evident along Belvedere Road, portions of Australian Avenue and around the intersection of 45th Street and Interstate 95. Again, formal site plan review shall be used to ensure the coherent and orderly development of these properties.

Future Planned Community Land Use

The Planned Community Land Use category shall apply to the Villages of Palm Beach Lakes and Briger property and, possibly, large geographic areas that may be annexed into the City. This designation shall permit a mixture of uses within the development and be consistent with the provisions outlined in the City Zoning Code.

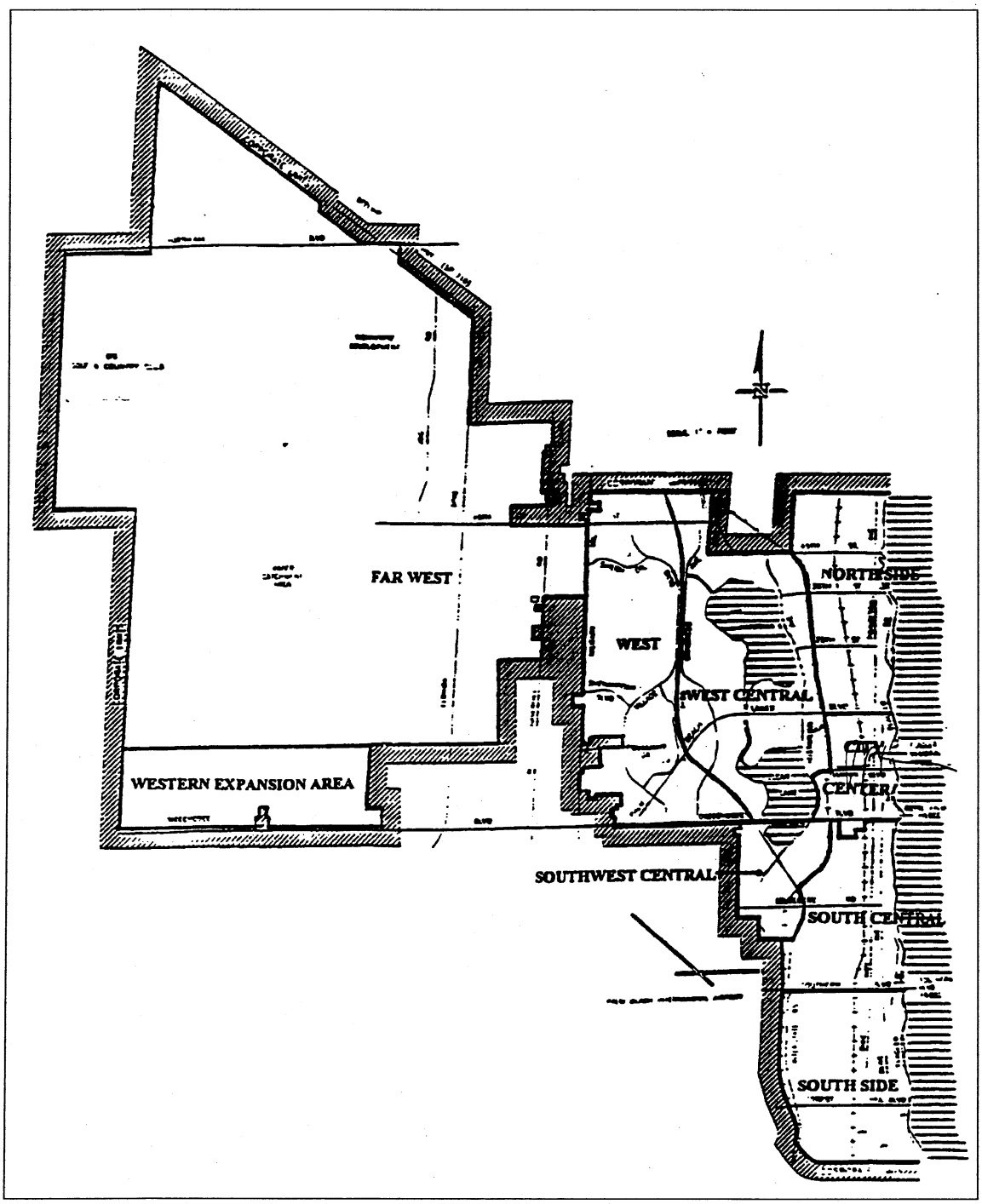
K. SUBAREA PROFILES

This document also profiles eight subareas within West Palm Beach. Each subarea profile includes a discussion of its location, a description of the area, assessed value, population, schools, shopping centers, parks, and major existing and approved developments. Figure 4-14 reveals the location of the subareas. A summary of these profiles is presented below and in the following pages. As seen in Table 4-13, the City's total population is projected to increase by 46.5% or 33,390 persons between the years 1995 and 2000. The percentage rate of growth is shown in Table 4-14.

Table 4-15 shows that there are two subareas which are almost equally integrated with blacks and whites, with each close to 50% of the subarea population. These subareas are CBD, and Far West. The North Side and West Central subareas are primarily Black and the remaining subarea populations are primarily white. Tables 4-16 and 4-17 reveal existing and future acreage by land use category and subarea.

The majority of future development within the City will be taking place in the Urban Central Business District, Southwest Central, West, and Far West subareas. Major developments in the Urban Central Business District subarea include the proposed CityPlace project, which is a mixed office/residential/retail project totaling a minimum of: 850,000 square feet of retail; 1,250,000 square feet of office; 800 dwelling units; 800 hotel rooms; and 400,000 square feet of cultural uses, the County Judicial Complex, and the proposed County Convention Center. The Southwest Central subarea will add 1.1 million square feet of industrial space in the Airport Industrial Park, 1.4 million square feet of office, 75,000 square feet of commercial and a 225,000 square foot hotel in Centrepark and a 134-room hotel by CPB I Associate, Ltd. The West subarea added 2,415 residential units in the Villages of Palm Beach Lakes between 1989 and 1995. Major commercial/industrial developments in the West subarea include: Northpoint (currently under construction) with 1,380,000 square feet; Metrocentre (approved) with 570,500 square feet; and the 45th street Business/Industrial Park (approved) with 1,437,480 square feet. The City is acquiring land for the purpose of potentially creating a Regional Sports Facility. However, the City's efforts are preliminary in nature and subject to change in the future. The City has designed and constructed a Water Catchment Area Nature Center.

FIGURE 4-14
CITY OF WEST PALM BEACH
SUBAREA MAP



Source: City of West Palm Beach and Planning, Zoning and Building Department, July 1997.

TABLE 4-13
CITY OF WEST PALM BEACH POPULATION BY SUBAREA
1995 - 2010

	1995	2000*	2005*	2010*
NORTH SIDE	16,026	16,284	16,284	16,284
UCBD	4,828	5,439	5,739	6,039
S.W. CENTRAL	721	21	721	721
SOUTH CENTRAL	13,098	13,498	13,498	13,498
SOUTH SIDE	11,750	11,750	11,750	11,750
WEST CENTRAL	13,862	14,640	15,982	16,582
WEST	14,391	15,664	17,694	19,344
FAR WEST	1,665	6,761	12,299	17,576
TOTAL	76,341	84,057	93,967	101,794

* Projected

Source: City of West Palm Beach, Department of Planning, Zoning, and Building Community Development and Planning Department, July 1997.

TABLE 4-14
WEST PALM BEACH POPULATION
PERCENTAGE GROWTH RATES 1980 - 2010

	1980	1981 to 1995	1996 to 2000	2001 to 2005	2006 to 2010
NORTH SIDE	7,473	-35.4%	12.7%	5.5%	5.5%
UCBD	0	100.0%	306.0%	81.9%	42.9%
S.W. CENTRAL	17,392	-7.9%	1.6%	0.0%	0.0%
SOUTH CENTRAL	13,581	-3.6%	3.1%	0.0%	0.0%
SOUTH SIDE	636	13.4%	0.0%	0.0%	0.0%
WEST CENTRAL	11,062	6.2%	0.0%	0.0%	0.0%
WEST	10,381	33.3%	5.6%	9.2%	3.8%
FAR WEST	2,583	457.0%	8.8%	13.0%	9.3%
TOTAL	63,108	21.0%	11.0%	10.9%	8.3%

Source: City of West Palm Beach, Department of Planning, Zoning and Building, July 1997.

TABLE 4-15
1995 POPULATION BY RACE

	PERSONS	%WHITE	%BLACK	%OTHER	%SPANISH
NORTH SIDE	16,026	32.8	60.4	6.8	10.0
UCBD	4,828	49.8	47.3	2.9	12.4
S.W. CENTRAL	721	54.5	24.1	21.4	36.2
SOUTH CENTRAL	13,098	80.5	9.9	9.6	32.7
SOUTH SIDE	11,750	90.7	2.1	7.2	35.1
WEST CENTRAL	13,862	39.3	56.9	3.8	4.5
WEST	14,391	81.2	14.8	4.0	5.8
FAR WEST	1,665	49.3	45.1	5.6	9.9
TOTAL	76,341	-	-	-	-

Source: City of West Palm Beach Department of Planning, Zoning, and Building, July 1997.

TABLE 4-16
CITY OF WEST PALM BEACH
EXISTING LAND USE ACREAGE

	FW	WC	NS	UCBD	SWC	SC	SS	W
COM	17.1	327.1	93.5	391.9	91.9	124.3	66.1	271.3
CS	1,600.0	517.5	285.3	93.5	82.2	113.2	255.2	361.3
CON	13,241.4	1,088.2	0.0	0.0	69.1	0.0	0.0	44.5
CID	0.0	0.0	142.9	2.6	0.0	68.9	103.9	0.0
IND	0.0	83.3	76.8	22.6	363.7	92.6	122.1	167.6
REC	0.0	306.9	21.8	6.8	0.0	42.3	343.9	369.0
RES	59.4	895.6	1,076.8	261.5	45.1	1,032.2	1,257.1	1,043.8
VAC	3,034.2	121.5	8.3	7.3	103.9	0.0	0.0	659.8
TOTALS:	17,952.1	3,340.1	1,705.4	786.2	755.9	1,473.5	2,148.3	2,917.3

GRAND TOTAL: 31,078.1 ACRES

COM	Commercial	UCBD	Urban Central Business District
CS	Community Service	CON	Conservation
CID	Commercial Incentive District	IND	Industrial
PC	Planned Community	REC	Recreation
RES	Residential	VAC	Vacant

Source: Community Development and Planning Department, July 1997.

TABLE 4-17
CITY OF WEST PALM BEACH
FUTURE LAND USE ACREAGE

	FW	WC	NS	CBD	SWC	SC	SS	W
COM	161.1	3512	96.8	171.6	160.9	124.3	66.1	490.3
UCBD	0.0	0.0	0.0	227.5	0.0	0.0	0.0	0.0
CS	1,993.6	542.5	290.3	93.5	113.1	113.2	255.2	361.4
CON	13,241.4	1,088.2	0.0	0.0	69.1	0.0	0.0	44.5
CID	0.0	0.0	142.8	2.6	0.0	68.9	103.9	0.0
IND	207.1	117.3	76.8	22.6	367.9	92.6	122.1	177.6
REC	0.0	306.8	21.8	6.8	0.0	42.3	343.9	369.0
RES	2348.9	934.1	1,076.8	261.5	45.1	1,032.1	1,257.1	1,474.6
TOTALS:	17,952.1	3,340.1	1,705.3	786.1	756.1	1,473.4	2,148.3	2,917.4

GRAND TOTAL: 31,078.8 ACRES

COM	Commercial	UCBD	Urban Central Business District
CS	Community Service	CON	Conservation
CID	Commercial Incentive District	IND	Industrial
PC	Planned Community	REC	Recreation
RES	Residential		

Source: Department of Planning, Zoning and Building, July 1997.

NORTH SIDE SUBAREA

OVERVIEW

The North Side Subarea includes the neighborhoods of Northwood, Northwood Hills, Coleman Park, Pleasant City and Lakeside. All of these neighborhoods are engaged in various levels of revitalization with infill housing and/or rehabilitation of the housing stock. The population in this subarea is projected to remain stable at about 16,300 through the year 2010.

The Northwood Neighborhood Association (NNA) and Community Redevelopment Agency Advisory Board (CRAAB) are experiencing a resurgence of planning activity centered on the reconstruction of Broadway (U.S. 1). Broadway is central to the entire renewal effort in the North Side subarea. Problems of burglaries and other illegal activities have increased within the neighborhoods, particularly along Broadway.

The reconstruction of Broadway holds the prospect of achieving a major improvement in the North Side Subarea by eliminating the deterioration of the Broadway commercial strip and associated illegal activities. Residents of this subarea have asked the City to assist in improving conditions within the neighborhood. The Northwood neighborhood held a design session on October 1-3, 1995 to incorporate the desires of its community and focus future development in the area. The plan that resulted was approved July 15, 1996. The City has made several changes to the street network which has helped the area. However, the street closures created problems

outside the closed off area which has caused the City to highly discourage street closures anywhere else.

The Florida Department of Transportation is designing the reconstruction of Broadway with the design phase completed in 1998. The reconstruction will take three years to complete. The NNA is developing a number of projects for the revitalization of the commercial districts in conjunction with the restructuring of Broadway. Feasibility studies will be undertaken to provide an analysis of potential economic advantages derived from the proposed urban renewal projects weighed against the cost of the proposed physical improvements. The Northside Subarea lacks a centralized shopping center with the full variety of necessary commercial services for "one-stop shopping." The NNA is working toward the creation of such a center.

A study was conducted to determine if a portion of Northwood and Pleasant City should be considered blighted based on findings regarding deterioration of structures and site improvements, and unsafe or unsanitary conditions. The City Commission approved a resolution declaring this area as blighted on June 28, 1993. Approval of a Community Redevelopment Area (CRA) plan for this area was made on October 11, 1994.

In 1998, installation of the Northwood Road landscaping and design streetscape was implemented. The street now has several intermittent landscape bulbouts, with trellises over benches. Sidewalk improvements were made, as well as pavement and striping repairs.

This Subarea is now the discussion among developers for market rate multifamily residential development because of increase land values and its proximity to the Downtown.

On July 1, 1995, the Palm Beach County Enterprise Zone was established making it the nineteenth in the State of Florida. This Enterprise Zone incorporates the municipalities of West Palm Beach, Riviera Beach, Belle Glade, South Bay and an area of unincorporated Belle Glade. The designated WPB Enterprise Zone will encourage business in the area of Northwood, spurring the local economy with new businesses and new jobs. Financial incentives are also available to participants of the Enterprise Zone to attract them to these blight stricken areas.

The Lakeside Neighborhood has a mixture of expensive commercial properties and homes intermingled with low and moderate-income households. It is probable that private market mechanisms will address this imbalance over time by purchasing and upgrading undervalued properties. The upgrading of Currie Park with a new Fishing Pier and other improvements will benefit all of the neighborhoods in the North Side Subarea.

Currie Park will also be the site of the Martin Luther King Memorial. This is planned for construction in 1998/99 and is currently under the final phase of design. The City is also planning a Northwood Community Center at Pinewood Avenue, approximate to 39th and 40th Streets. This Community Center will provide recreation and services to children and adults and will tie into the Northmore Elementary School area to the west.

SUBAREA STATISTICS

POPULATION

1960	20,571
1970	17,961
1980	17,392
1985	17,436
1990	18,424
1995	16,026
2000	16,284
2005	16,284
2010	16,284

1995 POPULATION BY RACE

PERSONS	% WHITE	% BLACK	% OTHER	% SPANISH
16,026	33%	60%	7%	10%

EXISTING AND FUTURE LAND USE

SCHOOLS:
Northmore Elementary
Northboro Elementary
Roosevelt Middle School for Math, Science and Technology

SHOPPING CENTERS: None

PUBLIC PARKS:
Poinsettia/54th Street Park
Fogelman Park
Gettler Park
Northwood Community Center
Sullivan Park
Coleman Park
Pleasant City Park/Community Center
Currie Park
Nathaniel Adams Park (15th Street)
Al Tatum Ballfield

RELATED STUDIES AND PROJECTS:

The Northwood Neighborhood Association (NNA) received a grant of $3,000 for an Historic Preservation Survey in "Old Northwood." The survey was conducted by the NNA in the area bounded by 26th Street to the south, 36th Street to the north, Broadway to the west and Dixie Highway to the east. Old Northwood was listed in the West Palm Beach Registry of Historic Places in 1991 and in the National Registry of Historic Places in 1994. The City also created the Northwood Master Plan in 1995 to guide the development of this section of the City. See the preceding description of this Plan.

In 1996, the City Commission adopted the Northwood Master Plan (Plan) in order to reinforce the unique character of the neighborhood and retail corridors. The Plan includes a series of policies, recommendations and an outline of urban design guidelines for future development. The Plan has been used as a guide for development and redevelopment within the Northwood Study Area (Figure 4-15). However, the recommendations of the Plan were never

formally incorporated into the City's Zoning Code. Therefore, in 2000 the Mayor appointed the Northwood Citizens Planning Committee (NCPC) to work with the City Planning Department to prepare the NMUD development guidelines for the Northwood Business District. After 18 meetings, the NCPC's work was completed and reviewed at a Planning Board workshop held in the Pleasant City Multicultural Community Center on January 18, 2001.

The intent of the NMUD development guidelines is to reinforce the existing architectural character; to create a place of common vision and physical predictability for all new construction and renovations; and to provide areas for the concentration of compatible land uses that are complementary to the surrounding neighborhoods. The NMUD development guidelines were recommended for approval by the City's Planning Board on February 21, 2001.

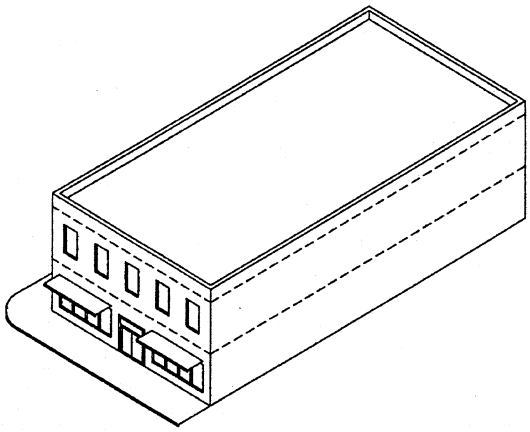
Subsequent to the NMUD's adoption, the NCPC and the City Planning staff shifted their focus to the Currie Corridor Area (Figure 4-16). Working together, staff and the NCPC created the new zoning text and regulating plan for the Currie Corridor Area using input from the general public.

The intent of the development standards for the CMUD is to create a predictable, urban neighborhood that adds vitality and additional local users to the adjacent Currie Park and Northwood Business District.

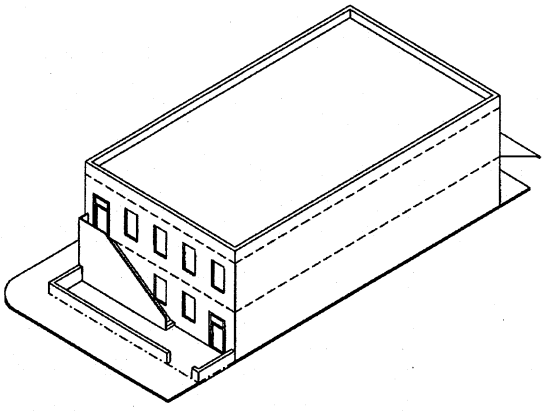
The Broadway Mixed Use District (BMUD) is the third and final phase of the NCPC's work program. After a public workshop, staff and the NCPC created the zoning text and regulating plan for the Broadway Corridor (Figure 4-17).

The intent of the development standards for the BMUD is to create a predictable, urban corridor that adds vitality to the adjacent Northwood Business District and preserves the character of the adjacent residential properties.

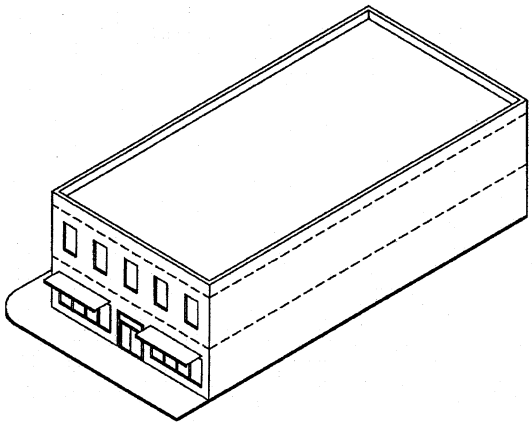
Building Types Found in the Northwood Mixed Use District (NMUD)



NMUD Type I
NMUD Type I is a two-story building built to the sidewalk with storefronts on the ground floor with offices or residences on the second floor. Parking is located in the rear of the building or lot. To provide a transition from the business district to the adjacent detached single-family residential area, Type I is limited to a maximum overall height of thirty-eight (38) feet.

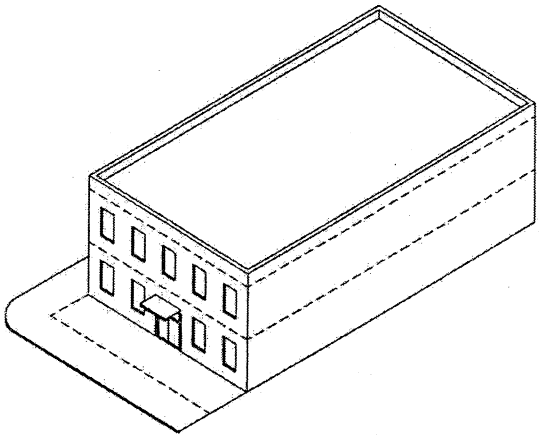


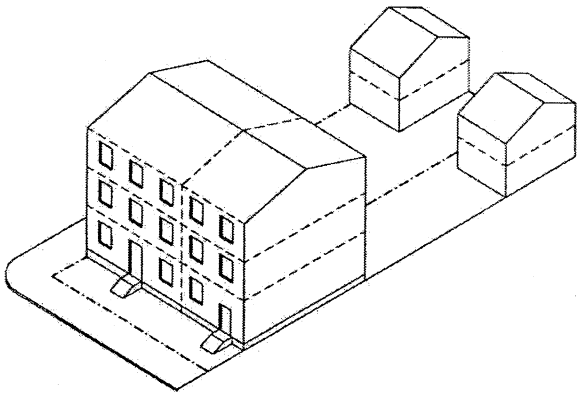
NMUD Type II
NMUD Type II is a two-story building with dual frontage. On one street, the building is built to the sidewalk, which is lined with storefronts on the ground floor with offices or residences on the second floor; the other street has a low streetwall along the sidewalk, a small setback area with an access route to the second floor. Parking, dumpsters, and storage areas must be enclosed in a structure.

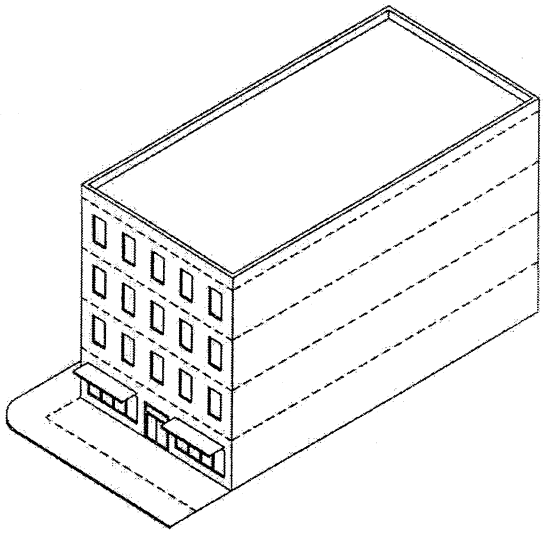


NMUD Type III
NMUD Type III is a two-story building built to the sidewalk with storefronts on the ground floor with offices or residences on the second floor. Parking is located in the rear of the building or lot.

Building Types Found in the Currie Corridor Mixed Use District (CMUD)







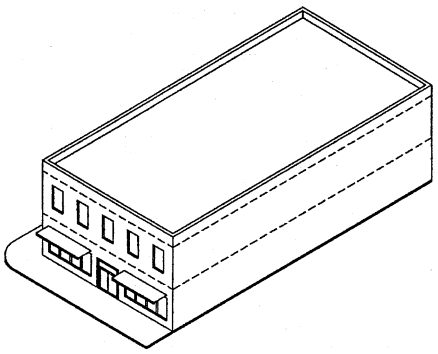
CMUD Type I

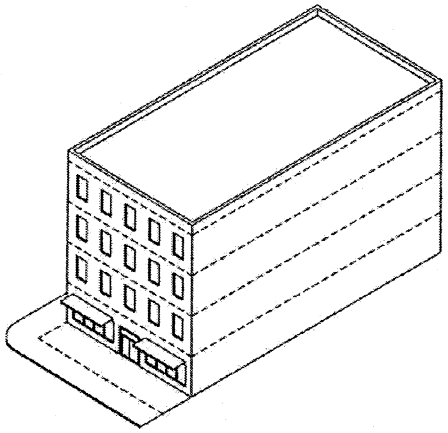
CMUD Type I can be configured in three different ways: as a two-story office building, as a residential townhouse, or as a small apartment building up to four stories in height.

Parking is located in the rear of the lot behind the building facade.

Around public open spaces such as parks, retail use may be permitted at the sidewalk level.

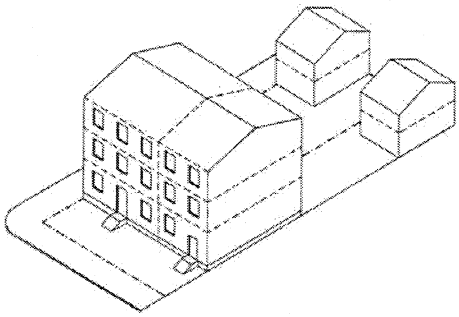
Limited duration residential incentives are available for CMUD Type I.

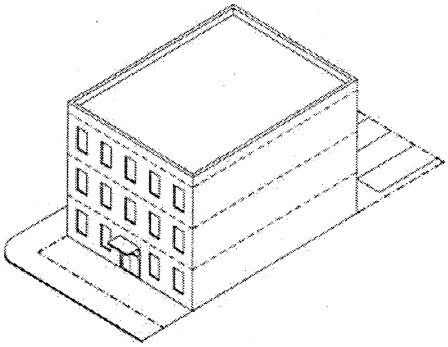




CMUD Type II
CMUD Type II can be configured in two different ways: as a mixed use building up to four stories in height, allowing general commercial uses on the first two stories and residential uses on the upper two stories, or as an apartment building up to four stories in height.

Parking is located in the rear of the lot behind the building facade.

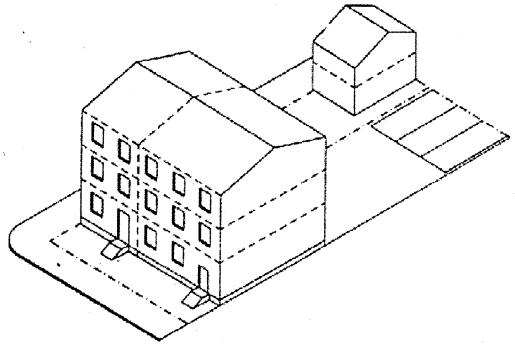




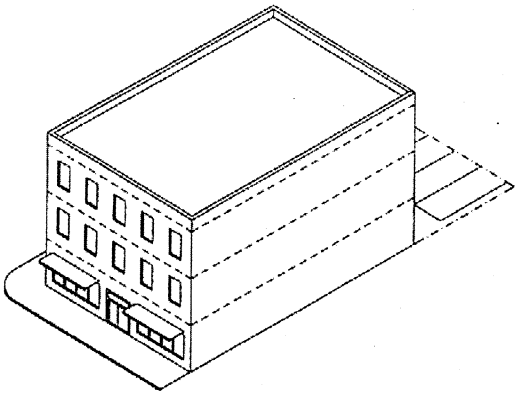
CMUD Type III
CMUD Type III can be configured in two different ways: as a residential townhouse or as a small mixed use building up to three stories in height.

Parking is located in the rear of the lot behind the building facade or within a garage apartment.

Building Types Found in the Broadway Mixed Use District (BMUD)

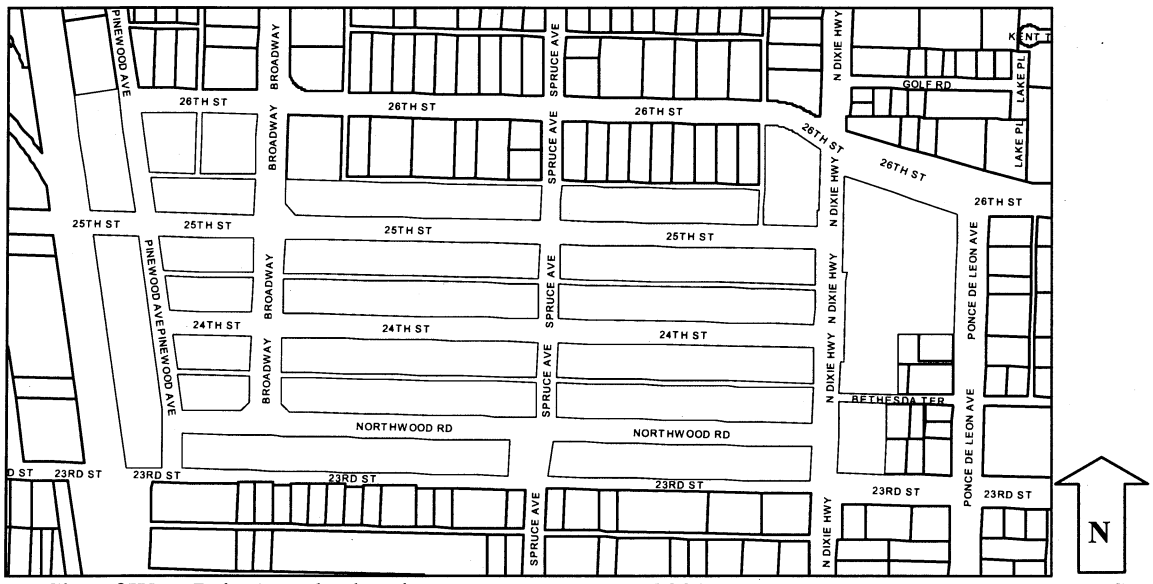


BMUD Type I
BMUD Type I is a maximum three story apartment or office building. At Primary Intersections, the building must be a minimum of two stories tall. Parking is located in the rear of the lot behind the building façade.



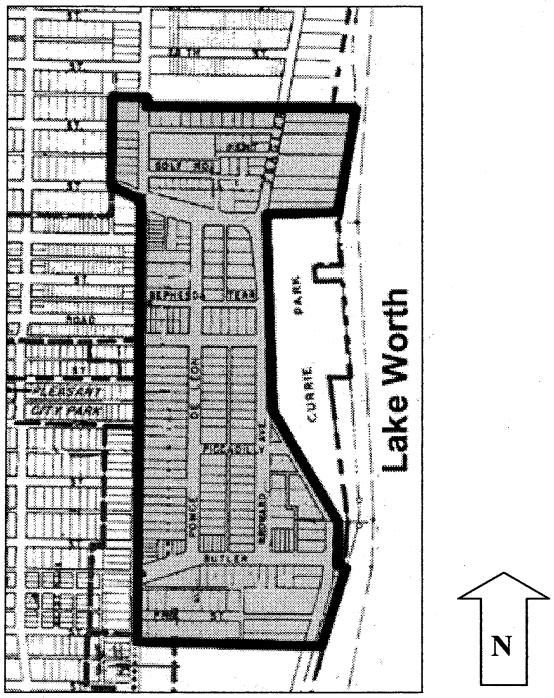
BMUD Type II
BMUD Type II is a maximum three story apartment, office or commercial building. At Primary Intersections, the building must be a minimum of two stories tall. Parking is located in the rear of the lot behind the building façade.

FIGURE 4-15
NORTHWOOD STUDY AREA



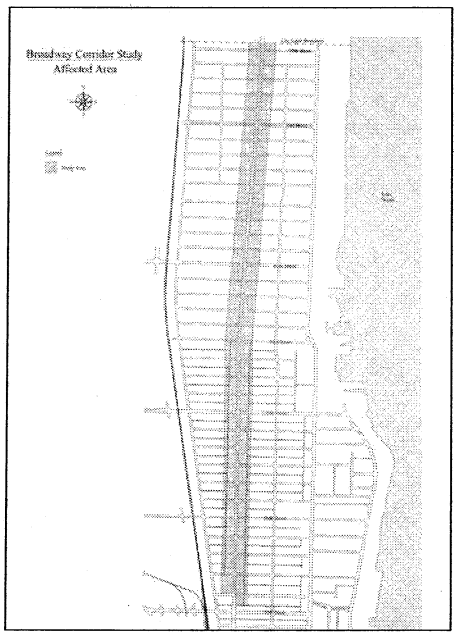
Source: City of West Palm Beach Planning Department, June 2001. N.T.S

FIGURE 4-16
CURRIE CORRIDOR STUDY AREA



Source: City of West Palm Beach Planning Department, July 2002. N.T.S

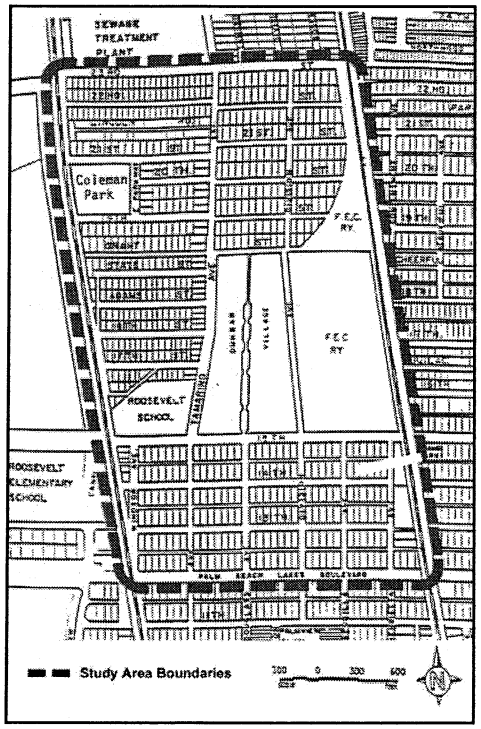
FIGURE 4-17
BROADWAY CORRIDOR STUDY AREA



Source: City of West Palm Beach Planning Department, February 2003.

The State Legislature has declared that fiscally strong urban centers are a method for reducing future urban sprawl, and should be promoted by state, regional, and local governments. To implement this declaration, the Florida Department of Community Affairs has allocated $2.5 Million in the FY 2000-2001 in order to fund the Urban Infill and Redevelopment Assistance Grant Program (Program). The City of West Palm Beach intends to apply for the FY 2000-2001 Matching Implementation Grant to the Florida Department of Community Affairs. The Coleman Park Neighborhood complies with the definition of an Urban Infill and Redevelopment Area (UIRA) as defined in Sections 163.251(3)(a) through (e), Florida Statutes. The Coleman Park Neighborhood (Figure 4-18) has been designated by the City as an URIA for the purpose of targeting economic development and the construction of affordable single-family housing.

FIGURE 4-18
COLEMAN PARK URBAN INFILL AND REDEVELOPMENT STUDY AREA



Source: City of West Palm Beach Planning Department, September 2000.

URBAN CENTRAL BUSINESS DISTRICT SUBAREA

OVERVIEW

Unlike other subareas in the City, the Urban Central Business District (CBD) is a major regional activity center. Services and development policies must be implemented to accommodate the needs of the neighborhoods, the needs of the development community, protection of access to the Intracoastal Waterway and protection of views of the Intracoastal Waterway.

The roads used by office employees for their daily migration into and out of the business district, as well as for circulation within the district are becoming increasingly congested with

traffic. (For example, the completion of the Esperante office building will eventually translate to an additional 1,181 persons coming to the City Center for employment.) The widening of Okeechobee Boulevard and Quadrille Boulevard relieves much of this traffic congestion. The development of the downtown bus loop system provides transportation between the major office and commercial developments and the Palm Beach County Judicial Complex, the proposed County Convention Center, proposed County Arena, the City Library and the Tri-Rail and the proposed High Speed rail system.

Of all the projects currently proposed for development, the CityPlace project has the most potential for Downtown area wide impact. The CityPlace property is located north and south of Okeechobee Boulevard between Tamarind Avenue on the west and Dixie Highway on the east, "N" Street on the south and Fern Street on the north. This mixed-use office commercial/residential development is proposed to be phased over a projected five-year period, and will occupy approximately 77 acres of land in the Downtown area. It will include a minimum of 1,250,000 million square feet of office space, 850,000 square feet of retail, approximately 800 hotel rooms and 800 residential units.

Currently, the owner of the D&D Center, located at Clematis Street between Dixie Highway and Quadrille Boulevard, is attempting to redevelop the property, which, in the past, had housed a Burdines department store. The redevelopment of this block will continue the current trend to revitalize Clematis Street as an entertainment and shopping corridor. Several rehabilitation projects have commenced, and have been completed to build restaurants, bars and retail in existing buildings along the corridor. The City has placed strong emphasis on the concepts of "New Urbanism" to develop pedestrian-friendly uses as well as street cafes and retail. The City's current trend has energized the CBD with investment capital, and confidence that the CBD will attract shoppers, dwellers, tourists and entertainment seekers throughout the County. The City is now finding the development along Clematis Street and, east of Quadrille is stimulating redevelopment of the CBD at adjoining blocks both north and south of Clematis Street.

It is apparent that the CityPlace development to the west of Quadrille and the Clematis Street revitalization to the east of Quadrille will enhance the City's CBD through economic investment, as well as the attraction of people from all over the County and the region. The City plans to connect CityPlace to Clematis Street through varied pedestrian networks, public art and performance space and the use of the existing Downtown Shuttle. It is planned by the City that the adherence to the New Urbanism concepts will provide a synthesis between the City's economic development and the preservation of the UCBD's past history, when Clematis Street was the CBD's economic engine.

A survey of historic sites within the UCBD was conducted in 1988. Since that time, seven sites have been listed in the West Palm Beach Registry of Historic Places. Six have been listed in the National Registry of Historic Places. The survey needs to be updated since a number of buildings have been altered or demolished since that time.

Finally, the City is herein designating the CBD as an "Urban Central Business District" (UCBD) pursuant to 93-206 of the Laws of Florida. The boundaries of the UCBD are Palm Beach Lakes Boulevard to the north; Lake Worth (Intracoastal Waterway) to the east; Okeechobee Boulevard between Lake Worth and Interstate 95 to the south, including the CityPlace DRI; the shore of Clear Lake shall be the western boundary of the UCBD. These

boundaries are the similar to those found in the City's "Regulating Plan" of the Downtown Master Plan. These boundaries shall be used to create Development of Regional Impact (DRI) guidelines and standards, consistent with the criteria found in the Florida Administrative Code (F.A.C.), Section 28-24.014(10)(a).

SUBAREA STATISTICS

POPULATION

1960	10,229
1970	8,549
1980	7,473
1985	8,241
1990	8,283
1995	4,828
2000	5,439
2005	5,739
2010	6,039

1995 POPULATION BY RACE

PERSONS	% WHITE	% BLACK	% OTHER	% SPANISH
4,828	49.8%	47.3%	2.9%	12.4%

EXISTING AND FUTURE LAND USE
(In acres)

	EXISTING LAND USE	% OF CITY TOTAL	FUTURE LAND USE	% OF CITY TOTAL
COMMERCIAL	391.9	27.9%	399.2	21.3%
COMMUNITY SERVICE	93.5	2.8%	93.5	2.4%
CONSERVATION	0.0	0.0%	0.0	0.0%
CID	2.6	0.8%	2.6	0.8%
INDUSTRIAL	22.6	2.4%	22.6	2.2%
RECREATION	6.8	0.6%	6.8	0.6%
RESIDENTIAL	261.5	4.6%	261.5	4.0%
VACANT	7.3	0.4%	0.0	0.0%
TOTAL:	786.2	NA	786.2	NA

SCHOOLS: U.B. Kinsey/Palmview Elementary
Rosarian Academy
St. Ann's Elementary

SHOPPING CENTERS: None

PUBLIC PARKS: Flagler Drive Park
Flagler Waterfront Parks
Jose Marti Park
Trinity Park

Art Park
Providencia Park
3rd Street Park
Melanie Jenkins Park

RELATED STUDIES AND PROJECTS:

Northwest Redevelopment Study
Downtown Urban Design Master Plan
City Center ADRI Study
Downtown Uptown DRI Study
Tri-County Commuter Rail Project
Downtown Master Plan
City Place Proposal
Transportation Concurrency Exception Area for Downtown West Palm Beach

SOUTHWEST CENTRAL SUBAREA

OVERVIEW

The Southwest Central Subarea is approximately 756 acres in size and is located south of Okeechobee Boulevard and west of the CSX Railroad tracks and Interstate 95. The area is characterized by mostly commercial and industrial uses that take advantage of the area's proximity to Interstate Highway 95 (I-95), the Palm Beach International Airport (PBIA), and the CSX railroad tracks. There are no schools, shopping centers or parks and only a small number of residences located in this subarea, which corresponds to relatively small population estimates and projections (listed below).

Major developments located within this subarea include "Centrepark" and the "Airport Industrial Park," both of which are Commercial Planned Unit Developments and consist of office, commercial and industrial land uses. Centrepark is located on 40.6 acres of land on the east side of Australian Avenue, between I-95 and Belvedere Road, and has been approved to have approximately 1.6 million square feet of enclosed floor space when completed. The Airport Industrial Park is located on 31.9 acres of land on the west side of Australian Avenue, abutting the north side of Belvedere Road, and has been approved to have approximately 1.4 million square feet of enclosed floor space when completed. The City Municipal Complex is also located within this subarea, on the east side of Australian Avenue between I-95 and Okeechobee Boulevard.

The respective elements of this Comprehensive Plan recommend various improvements in this subarea. These improvements include the widening of Okeechobee Boulevard and I-95 to overcome existing and projected roadway deficiencies, and storm drainage improvements for portions of this subarea to alleviate existing drainage problems.

The City has recently designed a stormwater drainage system, which will channel stormwater from the CityPlace DRI to the southern end of Clear Lake, south of Okeechobee Boulevard. This system will create the opportunities for improving this end of Clear Lake and provide a waterspout and other amenities to show that a visitor to the City is entering a vibrant Downtown. The system will provide french drains, which will assist in filtering pollutants out of the stormwater prior to its entrance into Clear Lake. The City identifies this project as the

Renaissance Project, as it facilitates the City's "rebirth" with CityPlace, as well as rejuvenates and uses the water resource at Clear Lake.

SUBAREA STATISTIC

POPULATION

1960	846
1970	69
1980	636
1985	662
1990	671
1995	721
2000	721
2005	721
2010	721

1995 POPULATION BY RACE

PERSONS	% WHITE	% BLACK	% OTHER	% SPANISH
721	54.5%	24.1%	21.4%	36.2%

EXISTING AND FUTURE LAND USE
(In acres)

	EXISTING LAND USE	% OF CITY TOTAL	FUTURE LAND USE	% OF CITY TOTAL
COMMERCIAL	91.9	6.5%	160.9	8.6%
COMMUNITY SERVICE	82.2	2.5%	113.1	3.0%
CONSERVATION	69.1	0.5%	69.1	0.5%
CID	0.0	0.0%	0.0	0.0%
INDUSTRIAL	363.7	39.2%	367.9	31.0%
RECREATION	0.0	0.0%	0.0	0.0%
RESIDENTIAL	45.1	0.8%	45.1	0.7%
VACANT	103.9	5.0%	0.0	0.0%
TOTAL:	755.9	NA	756.1	NA

SCHOOLS: None

SHOPPING CENTERS: None

PUBLIC PARKS: None

SOUTH CENTRAL SUBAREA

OVERVIEW

The South Central Subarea is approximately 1,500 acres in size and is bounded by Okeechobee Boulevard to the north, Lake Worth (Intracoastal Waterway) to the east, Southern Boulevard to the south, and the CSX railroad track and I-95 to the west. The area is

characterized by predominately single-family residences, which are well-served by the several schools and parks (listed in following section). Strip commercial development exists along the few major roadways (e.g., South Dixie Highway) that transverse this subarea.

Major sites within this subarea include Lake Worth (Intracoastal Waterway), Howard Park, Palm Beach Atlantic College, Norton Art Gallery, and the Woodlawn Cemetery, all of which provide focal points for the respective portions of the subarea.

The improvements for Howard Park consist of resurfacing tennis courts, replacing lighting fixtures and fencing, resurfacing the parking lot, and enhancing the playing area of the soccer field. In addition, the park will receive new trash cans, benches and 40 lights. New features such as concrete promenade and an exercise walk path will also be added as part of Phase IA. Phase IB will add a children's playground. Phase II includes landscaping and irrigation improvements. Phases III and IV will provide the balance of the proposed master plan, which includes a fountain-type feature in the middle of the park, picnic shelters, a 2,000 square foot addition to the recreation center, a covered pier on the lake, a floating fountain in the lake, and volleyball courts. Phases III and IV are to be built in FY98/99 and FY99/00, respectively.

Construction began to replace the oldest community center in the City, located in Vedado Park, in late 1997. Additional improvements to the park include entry signage, landscaping and conversion of a tennis court to a basketball court.

Improvements to Gaines Park are scheduled for September 1997. With funds from a Community Development Block Grant the City will be upgrading the air-conditioning system, adding to the current landscaping and irrigation system and lining the perimeter of the park with wooden fencing.

Pleasant City Park located on 23rd and Spruce will be receiving additional picnic tables, children's play areas and tennis courts. Across the street from Pleasant City Park is Pleasant City Multicultural Center, which is now completed. The Multicultural Center will provide after school day care and continuing adult education.

SUBAREA STATISTICS

POPULATION

1960	13,027
1970	13,577
1980	13,581
1985	13,913
1990	13,269
1995	13,098
2000	13,498
2005	13,498
2010	13,498

1995 POPULATION BY RACE

PERSONS	% WHITE	% BLACK	% OTHER	% SPANISH

13,098	80.5%	9.9%	9.6%	32.4%

EXISTING AND FUTURE LAND USE
(In acres)

	EXISTING LAND USE	% OF CITY TOTAL	FUTURE LAND USE	% OF CITY TOTAL
COMMERCIAL	124.3	8.9%	124.3	6.6%
COMMUNITY SERVICE	113.2	3.4%	113.2	2.9%
CONSERVATION	0.0	0.0%	0.0	0.0%
CID	68.9	21.6%	68.9	21.6%
INDUSTRIAL	92.6	10.0%	92.6	8.8%
RECREATION	42.3	3.9%	42.3	3.9%
RESIDENTIAL	1,032.2	18.2%	1,032.2	15.7%
VACANT	0.0	0.0%	0.0	0.0%
TOTAL:	1,473.5	NA	1,473.5	NA

SCHOOLS:
Belvedere Elementary
Conniston Community Middle School
First Baptist Christian
Children House Montessori
Palm Beach Atlantic College

SHOPPING CENTERS: Belmart Plaza

PUBLIC PARKS:
Howard Park
Prospect Park
Vedado Park
Westminister Park
Monceaux Park
Norton Art Gallery
Royal Palm Park
Flamingo Park
George Petty Park

RELATED STUDIES AND PROJECTS:

1. The FDOT and Palm Beach County have hired a consultant to study the need for an interconnect from I-95 to PBIA. Such a facility would require the acquisition of some private property along the east side of I-95 in the vicinity of PBIA.

2. The City is selling the Flamingo Park site at the northwest corner of the intersection of South Dixie Highway (U.S. 1) and Park Place.

3. In 1998, the City, in cooperation with the Treasure Coast Regional Planning Council, and the Palm Beach County Planning Division held a design charrette at the Conniston Middle School. The study area of the charrette was the block bounded by Parker Avenue to the west, Southern Boulevard to the south, South Lake Avenue, and Conniston Road. The main purpose of the charrette was to design a commercial and residential area within the block and

include a public plaza within the block. This development would reduce, and hopefully, eliminate the blight and unsightliness of the block. The Plaza will be pedestrian-friendly, with trees, walkways and benches for gathering. It is the City's intent to design this block in conformance with the concepts of Eastward Ho!, and as a demonstration project for the Eastward Ho! Initiative.

This block was chosen because despite its blighted condition, it contains vibrant and successful ethnic businesses; it holds the characteristics that can make this area the town center for the Sub Area (a school; a Publix Grocery Store, a US Post Office and a strong and populous neighborhood); and there is neighborhood support for the redevelopment of the block. Such a redevelopment would permit the current business owners to thrive. Additionally, the project represents a fantastic opportunity to create an Eastward Ho! development.

It is the City's goal to extend the redevelopment successes of the Central Business District into the southern, western and northern neighborhoods, which border the CBD. This project represents one way to do this.

SOUTH SIDE SUBAREA

OVERVIEW

The South Side Subarea is predominantly a middle to upper-income residential community located south of Southern Boulevard. The population has, and will continue to remain, fairly stable through the year 2010. Generally, the value of homes in this subarea tends to increase as one moves from Interstate 95 to the Intracoastal Waterway.

Major sites located within the Subarea include Dreher Park, the City's only metropolitan park and home of the Zoo, Planetarium and Science Museum, the West Palm Beach Country Club, Forest Hill High School and the recently-renovated Shops of Palm Coast. Neighborhood commercial uses are also prevalent along South Dixie Highway and along Southern Boulevard. The area is considered a good location to raise a family, with an abundance of parks, shopping facilities, and public and private schools.

The development of Palmetto Park, located across from the Hillcrest Memorial Park Cemetery, fills the void of one neighborhood park needed in that particular area. Improvements to Mary Brandon Park included the construction of a seven (7) car surface parking facility.

SUBAREA STATISTICS

POPULATION

1960	11,535
1970	11,334
1980	11,062
1985	11,280
1990	11,420
1995	11,750
2000	11,750

2005	11,750
2010	11,750

1995 POPULATION BY RACE

PERSONS	% WHITE	% BLACK	% OTHER	% SPANISH
11,750	90.7%	2.1%	7.2%	35.1%

EXISTING AND FUTURE LAND USE
(In acres)

	EXISTING LAND USE	% OF CITY TOTAL	FUTURE LAND USE	% OF CITY TOTAL
COMMERCIAL	66.1	4.7%	66.1	3.5%
COMMUNITY SERVICE	255.2	7.8%	255.2	6.6%
CONSERVATION	0.0	0.0%	0.0	0.0%
CID	103.8	32.6%	103.9	32.6%
INDUSTRIAL	122.1	13.1%	122.1	11.7%
RECREATION	343.9	31.5%	343.9	31.5%
RESIDENTIAL	1257.1	22.2%	1257.1	19.1%
VACANT	0.0	0.0%	0.0	0.0%
TOTAL:	2,148.2	NA	2,148.3	NA

SCHOOLS:
Palmetto Elementary
South Olive Elementary
Forest Hill High School
Jewish Community Day School
St. Juliana Catholic School

SHOPPING CENTERS:
Southdale Shopping Center
The Shops at Palm Coast

PUBLIC PARKS:
Dreher Park
Municipal Golf Course
Phipps Park
South Olive Park
Mary Brandon Park
Palmetto Park
Summa Park

RELATED STUDIES AND PROJECTS: NONE

WEST CENTRAL SUBAREA

OVERVIEW

The West Central Subarea includes Lake Mangonia and Clear Lake among a mixed array of residential land uses. Located to the west of the subarea is the Lands of the President country club/retirement community. Single-family residences are located in the Echo Lake, Westfield

and Northshore areas to the north, while the predominantly African American residential community of Roosevelt Estates is centered between the two lakes. The Palm Beach Mall, the Palm Beach Lakes Golf Course and multifamily residential uses are concentrated in the southwest portion of the subarea. It is interesting to note that this subarea was marshland until the 1960's. However, due to the western urbanization that occurred during the 1970's, the population is expected to increase steadily through the year 2000. Houses located along the lakefront and within the Lands of the President development tend to have the highest home values.

There are a number of parks located in this subarea. Of the six public parks located in the subarea, Gaines Park is the largest, while Lake Mangonia Park is available for boating. Commercial activities take the form of concentrated shopping malls, as opposed to the strip commercial uses prevalent in other parts of the city. Palm Beach Mall serves as a regional mall, attracting patrons from the entire City and beyond.

Park improvements for Gaines Park include renovating the stage, upgrading the roofing and air conditioning system at the recreation center, replacing the fencing and improving the landscaping and irrigation system. Additional facilities for Gaines Park include two baseball/softball fields, one open multipurpose field and an amphitheater. Projects for 36th Street Park include boat ramps/docks, parking surface, restrooms and storage facility, playground, picnic and site furnishings. A picnic shelter shall be constructed in Echo Lake Park. The Auditorium and Stadium Complex has been sold to the Jehovah's Witnesses Watchtower Bible and Tract Society.

As a precursor to a possible Transportation Concurrency Exception Area (TCEA) and in response to the sale of the City's Auditorium site to the Watchtower Bible and Tract Society, the City commissioned the preparation of an area study called the Palm Beach Lakes/I-95/Congress Avenue Area Study ("Study"), which was used during its review of the a proposed Major Planned Development Amendment at the Palm Beach Inn and Golf Course. The Study was prepared to analyze existing and future development for a 295-acre area, in the heart of this subarea. The boundaries of the study were Forum Place and the Palm Beach Mall to the north; Interstate 95 to the west; Congress Avenue to the south; and Clear Lake and Lake Mangonia to the east.

The Study found that there is a very high need for neighborhood retail shops, including grocery store within this area to service the neighborhoods in the subarea. The Study showed that approximately 12,500 people live in 5800 households, with median incomes ranging from a high of $370, 054 to a low of $19,358, within the one-mile market area radius. Additionally, the Study suggested that the Level of Service for Palm Beach Lakes Boulevard, east of I-95 and Congress Avenue, will exceed a level of "D" capacity by the year 2001. It is the Study's recommendation that land uses which complement each other, such as residential and neighborhood commercial, be located within the Study boundaries, so as to reduce the traffic impact of Palm Beach Lakes Boulevard.

This Study's recommendation was aimed specifically at the Palm Beach Lakes Inn and Golf Courses property, and somewhat at the Auditorium and Stadium site. The Study recommended that the area have market-rate apartments. The Study further suggested the neighborhood commercial to be located at the Palm Beach Lakes Inn and Golf Course site should be located adjacent to I-95 as a way to buffer the area's residential mix from the highway

noise.

Finally, the City has sold the Auditorium/Stadium site to the Jehovah's Witnesses Watchtower Bible and Tract Society for this Society's regional and national meetings. The City is looking to redevelop the site, in partnership with the Watchtower Society. The Study recommends that neighborhood commercial land uses be developed at this property. The Study suggests that the remainder of the property be reserved for multifamily development. The actual development of the Watchtower property is expected to reach approximately, but no more than, 250,000 square feet of retail and commercial and 750 residential dwelling units. However, the actual development intensity will be determined at a later date.

The City has applied to the Florida Department of Community Affairs (DCA) for, and obtained approval of, a Future Land Use Plan change to develop over 200,000 square feet of commercial and several hundred dwelling units at this property. The exact land uses or tenants have not been chosen at this time.

The City has also begun negotiations with the MacArthur Foundation to seek the Foundation's approval of a Large-Scale Future Land Use Plan Change for its property located at the southwest intersection of Congress Avenue and Palm Beach Lakes Boulevard. This approximately 60-acre property is planned for multifamily development by the City, with some neighborhood-serving commercial permitted. The new land use designation is proposed as Multifamily (MF) and the new Zoning designation is planned as High Density Multifamily (MF-32), permitting at least 32 dwelling units per acre.

In furtherance of the City's goal for this Subarea, the City has applied to Palm Beach County for a designation of a Constrained Roadway at a Lower Level of Service (CRALLS). As described previously, this application will allow Palm Beach Lakes Boulevard, between Village Boulevard to the west and Tamarind Avenue to the east to generate vehicle trips at a LOS "E." This will foster the development now encouraged by the City and described in the preceding paragraphs.

SUBAREA STATISTICS

POPULATION

1960	0
1970	3,929
1980	10,381
1985	13,080
1990	15,934
1995	11,769
2000	21,308

1995 POPULATION BY RACE

PERSONS	% WHITE	% BLACK	% OTHER	% SPANISH
13,862	39.3%	56.9%	3.8%	4.5%

EXISTING AND FUTURE LAND USE
(In acres)

	EXISTING LAND USE	% OF CITY TOTAL	FUTURE LAND USE	% OF CITY TOTAL
COMMERCIAL	327.2	23.3%	351.2	18.8%
COMMUNITY SERVICE	517.5	15.7%	542.5	14.0%
CONSERVATION	1,088.2	7.5%	1,088.2	7.5%
CID	0.0	0.0%	0.0	0.0%
INDUSTRIAL	83.3	9.0%	177.3	11.2%
RECREATION	306.9	28.1%	306.9	28.1%
RESIDENTIAL	895.6	15.8%	934.1	14.2%
VACANT	121.5	5.0%	0.0	0.0%
TOTAL:	3,340.2	NA	3,400.2	NA

SCHOOLS:
Roosevelt Elementary
Westward Elementary
Sabal Palm

SHOPPING CENTERS:
Kennedy Plaza
Palm Beach Mall
Roosevelt Shopping Center
Village Promenade

PUBLIC PARKS:
Echo Lake Park
Gaines Park
Golf Avenue Park
Lake Mangonia Park
Lost Creek Park
Big Lake/36th Street Park

RELATED STUDIES AND PROJECTS:

Palm Beach Lakes Boulevard Corridor Study, September 1988.
Palm Beach Lakes Boulevard I-95/Congress Avenue Area CRALLS Study- 1997
Traffic Analysis for CRALLS Application and CRALLS Application: Uptown West Palm Beach, Palm Beach Lakes Boulevard

WEST SUBAREA

OVERVIEW

The West Subarea is generally bounded by I-95 on the east, Okeechobee Boulevard to the south, Military Trail to the west and the City corporate limits to the north. A major part of the West Subarea, particularly the land north of Palm Beach Lakes Boulevard, was originally a swamp area which was sold by the City to the Perini Land and Development Company in 1957. This area was filled above the flood plain level and, in 1985, the Perini Land and Development Company began developing this area into a planned community called the Villages of Palm Beach Lakes. This development, upon completion, will contain 3,020 single-family residential units, 3,862 multifamily residential units and approximately 1,199,500 square feet of commercial and office development. The area between Palm Beach Lakes Boulevard and Okeechobee Boulevard is an older, predominantly single-family residential area.

Development of the West Subarea encouraged suburban growth and began a shift of the City's population and economic base away from the downtown. The majority of the City's new housing development has occurred in the West Subarea. The 1,400-acre planned community of the Villages of Palm Beach Lakes has constituted the majority of this construction. Of the 7,317 total residential units proposed to date, a total of 5,987 have been built or approved as of July 1995. The 749-unit Palm Club, built in 1985, is a major residential development in the West Subarea, located west of the Villages of Palm Beach Lakes. The Briger property, located south of 45th Street, east of Military and west of the Villages of Palm Beach Lakes development, received approval in 1984 to develop 2,204 residential units. The development has recently been approved for the initial construction of the 108 units in Phase I.

Commercial uses in the West Subarea are located along the major thoroughfares of Okeechobee Boulevard, Palm Beach Lakes Boulevard, Military Trail, 45th Street, and the southern portion of Village Boulevard. Commercial properties within the Villages of Palm Beach Lakes are located on Village Boulevard in the southern portion of that planned community, directly north of the commercial properties along Palm Beach Lakes Boulevard. Commercial properties include both retail and office uses. Currently there are 332,028 square feet of commercial development in the Villages and, by December 1989, the total is expected to rise to 462,791 square feet. There are, in addition, two private golf courses in the Villages of Palm Beach Lakes development. A major commercial and industrial area is being established just north of the Villages of Palm Beach Lakes, on both sides of 45th Street just west of I-95. Developments in this area include: Northpoint (currently under construction) with 1,380,000 square feet; 45th Street Business/Industrial Park (approved) with 1,437,480 square feet; and Metrocentre (approved) with 570,500 square feet.

A new public high school, Palm Beach Lakes High School, located south of 45th Street and east of Military Trail, was completed and opened in January 1989.

SUBAREA STATISTICS

POPULATION

1960	0
1970	1,327
1980	2,583
1985	7,255
1990	16,260
1995	14,391
2000	15,664
2005	17,694
2010	19,344

1995 POPULATION BY RACE

PERSONS	% WHITE	% BLACK	% OTHER	% SPANISH
14,391	81.2%	14.5%	4.0%	5.8%

EXISTING AND FUTURE LAND USE
(In acres)

	EXISTING LAND USE	% OF CITY TOTAL	FUTURE LAND USE	% OF CITY TOTAL
COMMERCIAL	271.3	19.6%	510.3	27.3%
COMMUNITY SERVICE	361.3	11.0%	341.4	8.8%
CONSERVATION	44.5	0.3%	44.5	0.3%
CID	0.0	0.0%	0.0	0.0%
INDUSTRIAL	167.6	18.0%	177.6	17.9%
RECREATION	369.0	33.8%	369.0	33.8%
RESIDENTIAL	1,043.8	18.4%	1,474.6	20.9%
VACANT	659.8	31.9%	0.0	0.0%
TOTAL:	2,917	NA	2,917.4	NA

SCHOOLS:
Bear Lakes Middle School
Cardinal Newman High School
Palm Beach Lakes High School
Northwood University

SHOPPING CENTERS:
Taplin Plaza
Westward Shopping Center
Village Commons
The Habitat
North Trail Plaza

PUBLIC PARKS:
Chillingworth Park
Cumberland Recreation Area (private)
Sandalwood Park (private)
Saratoga Park (private)

RELATED STUDIES AND PROJECTS:

Palm Beach Lakes Boulevard Corridor Study, September, 1988

FAR WEST SUBAREA

OVERVIEW

The planning region known as the Far West Subarea is the only major area within the city limits of West Palm Beach that is not almost fully developed. This planning subarea contains approximately 24,248 acres and is located north of Okeechobee Boulevard, south of the Bee Line Highway, and west of Military Trail. Of this total, 12,352 acres (51%) consists of the City's Water Catchment Area. The vast majority of this subarea is vacant, natural in appearance and constitutes a major, regional open-space feature. Some areas within this subarea may have the potential for limited nature-oriented recreational activity. Most of the land in this subarea is in public ownership. As a natural environment forming part of the Loxahatchee Slough, the Catchment Area can be considered a unique asset to this part of the urbanizing County, and to the region.

Urbanization has unavoidably destroyed nearly all of the natural habitats in West Palm Beach. At one time, these habitats were home to a wide variety of mammals, birds, and reptiles. The City's Far West Planning Subarea is the only relatively undisturbed and large enough area to sustain a comparatively large wildlife population. The vegetation of the area is composed primarily of marsh and swamp cover types with open slough waters throughout, with some small drier pine islands present. Several exotic species that have been introduced into South Florida have become present in the Catchment Area and represent a serious threat to the potable water system if these noxious pests are not eradicated.

As a result of the rapid growth in Palm Beach County, the natural wetlands, which at one time surrounded the Water Catchment Area, are now coming under pressure to be developed for urban purposes. This type of urban land use may seriously impair the water holding characteristics of the Catchment Area and could result in changes to the existing biological systems in the area which may affect its utility and its desirable ecology. At the present time, the City of West Palm Beach has no control over land use surrounding most of the City's Water Catchment Area. Another serious issue is the question of whether or not neighboring municipalities should be permitted to draw water out of the area surrounding the City's Catchment area because of the possibility of the lowering of the water table.

The Far West Subarea is the most rapidly expanding of all the City's Subareas and trends predict that this expansion will continue in the future as western land parcels are annexed into the City. Most of the City's recent annexations have been in Far West Subarea. As indicated above, the City of West Palm Beach has annexed land surrounding the City's Water Catchment Area, in order to have some control over land uses adjacent to this source of potable water. The City also projects that this subarea will increase in size in the future, due to the inability of the City to expand to the east, south and north because of adjacent municipalities.

The City has implemented the first portions of a plan to protect and enhance the WCA. The ongoing development of the Loxahatchee Preserve Nature Center will focus public attention

on this unique ecosystem, while providing an educational tool to increase the knowledge of wetland environments and the City's drinking water resources. Phase Two of the Nature Center will add permanent research facilities and additional public access including canoeing and hiking trail connections to the extensive Florida Trails System.

Making use of state matching grants through the Florida Communities Trust (FCT) Preservation 2000 program, the City has recently purchased 1,300 acres along the southern border of the WCA. These lands, which were in danger of development, will be used to buffer the WCA from adjacent development and eventually to accept excess surface water runoff or reclaimed water to assist in the recharge of the WCA. The application of water to these lands will, in addition, restore the natural hydroperiod which existed prior to the lands being drained, thus restoring wetland and wildlife habitat areas.

The City will continue to implement the master plan for the Nature Center and purchase buffer lands around the WCA. Some 1,000 or so additional acres are potentially available for purchase and addition to the West Palm Beach Preserve. The preserve areas, including the WCA, will be subject to environmental mitigation measures to restore wetland hydroperiods and remove exotic and invasive vegetation. The water to restore these lands can be obtained through better management of excess surface water discharges that are normally lost to tides.

This subarea is also the City's growth engine, as several new developments are planned within this area. The Lennar Homes (Baywinds Estates) development is expected to contain 1,700 dwelling units with recreational areas and a potential new school. The Lennar Homes (a.k.a. - Baywinds Estates) development will be surrounded by wetland preservation lands. The Andros Isle development is expected to contain approximately 1200 dwelling units as zero lot line units with some multifamily included. A recreational center, commercial shopping parcels and, as with Lennar Homes, extensive wetland preservation lands are also included. The Burgess/Montclair development will contain 1680 dwelling units mixed as duplexes, zero lot line and multifamily units. Finally, the Riverwalk development consists of 704 dwelling units at this time with approval to build 1,119, with a mixture of single family detached, duplex and townhouse units, assorted recreational lands and a towncenter.

SUBAREA STATISTICS

NOTE: Due to the remote character of this subarea, separate population characteristics have never been developed for this area. The 1990 census combined the Far West subarea with the North West subarea within the City of West Palm Beach. Therefore, all statistical information up until this time has combined the two subareas into one. However, prior to 1988, all of the Far West subarea was in public ownership with a majority of this land being comprised of the City's Water Catchment Area. Recently, the City has annexed several hundred acres of private land into this subarea, thereby changing the public ownership and growth characteristics of the area. The figures depicted below are, at best, approximations of the future conditions of the subarea, due to the rapid growth and development pressures currently being exerted on the area.

POPULATION

1960	0
1970	0
1980	0

1985	0
1990	1,692
1995	1,665
2000	6,761
2005	12,299
2010	17,576

1995 POPULATION BY RACE

PERSONS	% WHITE	% BLACK	% OTHER	% SPANISH
1,665	49.3%	45.1%	5.6%	9.9%

EXISTING AND FUTURE LAND USE
(In acres)

	EXISTING LAND USE	% OF CITY TOTAL	FUTURE LAND USE	% OF CITY TOTAL
COMMERCIAL	17.1	1.2%	161.1	8.6%
COMMUNITY SERVICE	1,600.0	48.7%	1,993.6	51.8%
CONSERVATION	13,241.4	91.7%	13,241.4	91.7%
CID	0.0	0.0%	0.0	0.0%
INDUSTRIAL	0.0	0.0%	207.1	17.0%
RECREATION	0.0	0.0%	0.0	0.0%
RESIDENTIAL	59.4	1.0	2,348.9	27.0%
VACANT	3,034.2	56.5%	0.0	0.0%
TOTAL:	17,952.1	NA	17,952.1	NA

SCHOOLS: Egret Lakes Elementary

SHOPPING CENTERS: Southwind Plaza
Lakeside Center
Oakton Square
The Shops at Ibis

PUBLIC PARKS: Water Catchment Area Nature Center (on-going)
Regional Sports Facility (Proposed)

RELATED STUDIES AND PROJECTS:

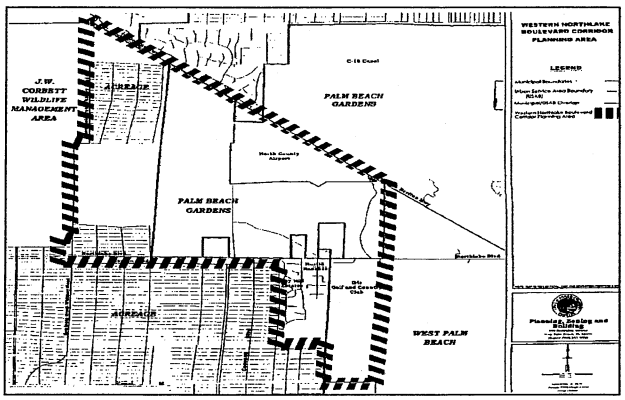
Representatives from the Planning, Zoning and Building Department participated in a joint planning effort with Palm Beach County and Palm Beach Gardens for the Western Northlake Boulevard Corridor Land Use Study Area (Figure 4-19). The Study examines the existing land use pattern and future land uses along Northlake Boulevard, generally west of the West Palm Beach Water Catchment Area, and south of the Bee Line Highway.

At this time, the Ibis Golf and Country Club is the only portion of the City of West Palm Beach that is located in the Study Area. It is also the only portion of the Study Area that can be categorized as being urban in nature. The Study Area is primarily rural in character; however, in recent years there has been increasing pressure for growth and urban development. Additionally,

there is a substantial amount of public-owned environmentally sensitive land within the Study Area. The overall purpose of the Study is to determine appropriate land uses within the Northlake Boulevard area that will preserve and enhance the rural character, while planning for limited urban development.

The second phase of the joint planning effort was the adoption of an Interlocal Agreement for "heightened review" in the Study Area. The Interlocal Agreement was approved by the Commission on April 20, 1999. Section Seven (7) of the Interlocal Agreement requires that the three (3) participating governments must recognize the Study Area in their respective comprehensive plans by describing the Study Area and incorporating a Study Area Map. Section Eight (8) of the Interlocal Agreement establishes a procedure for the "heightened review" of local land use change petitions.

FIGURE 4-19
WESTERN NORTHLAKE CORRIDOR LAND USE STUDY AREA



Source: Palm Beach County Planning, Zoning and Building, April 2000.

FUTURE LAND USE

GOALS, OBJECTIVES AND POLICIES

GOAL 1: CITY OF WEST PALM BEACH SHALL ENCOURAGE MOST APPROPRIATE LAND USES WHICH MAXIMIZE BENEFIT AND APPRECIATION OF NATURAL, SOCIOECONOMIC AND GOVERNMENTAL RESOURCES WHILE PRESERVING, PROMOTING AND IMPROVING HEALTH, SAFETY AND WELFARE OF ITS RESIDENTS.

Objective 1.1: Future growth within the City shall continue to be regulated through the administration of the land development regulations specified within the City's Zoning Code, Downtown Master Plan (DMP), Building Code and subdivision regulations.

Policy 1.1.1: The City shall continue to administer land development regulations that address and regulate the following:

a) All land uses identified on the Future Land Use Map.
b) The subdivision of land.
c) Signage.
d) Areas subject to seasonal or periodic flooding and provisions for drainage and storm water management.
e) The protection of environmentally-sensitive lands including the Water Catchment Area, water wellfields and aquifer recharge areas.
f) Compatibility of adjacent land uses.
g) The provision of open space.
h) The safe use of vehicles and vehicle parking needs.
i) A concurrency management system to ensure that development orders and permits are issued concurrent with the provision of the facilities and services required by the adopted level of service standards established in this Plan.
j) The City shall continue Development of Regional Impact reviews and evaluations of the effects of significant developments within the City's jurisdiction including the Area Wide DRI process and the utilization of Development Agreements for major developments.
k) The City hereby designates the Central Business District ("CBD") as an "Urban Central Business District" (UCBD) pursuant to 93-206 of the Laws of Florida. The boundaries of the UCBD shall be Palm Beach Lakes Boulevard to the north; Lake Worth (Intracoastal Waterway) to the east; Okeechobee Boulevard between Lake Worth and Interstate 95 to the south, including the CityPlace Development of Regional Impact (DRI); the shore of Clear Lake shall be the western boundary of the UCBD. These boundaries are similar to those found in the City's "Regulating Plan" of the Downtown Master Plan. These boundaries shall be used to create DRI guidelines and standards, consistent with the criteria found in the Florida Administrative Code (F.A.C.), Section 28-24.014(10)(a).

Policy 1.1.2: The City shall require an environmental assessment, where appropriate, for any land use development as a part of the Development Application process, which will include

identification of vegetation associations, soils, elevations and flooding levels, and an aerial photography map. The Site Plan Review process will regulate land uses and development to protect natural drainage features and groundwater aquifer recharge areas.

Policy 1.1.3: The City shall continue to administer land development regulations that establish standards for the following residential densities:

1. SF3 Three (3) single-family dwelling units per acre
2. SF5 Five (5) single-family dwelling units per acre
3. SF7 Seven (7) single-family dwelling units per acre
4. SF11 11 single-family dwelling units per acre
5. SF14 14 single-family dwelling units per acre
6. MF14 14 multifamily dwelling units per acre
7. MF20 20 multifamily dwelling units per acre
8. MF32 32 multifamily dwelling units per acre
9. POR 32 multifamily dwelling units per acre with commercial
10. CC2 low allowable lot coverage to maintain open lakefront

Policy 1.1.4: The uses permitted in the Conservation, Commercial, Industrial, Single Family, Multifamily, Planned Community, Commercial Incentive District, Urban Central Business District, Mixed Use District and Community Service land use categories shall be identified in the Permitted Use Table of the City's Zoning Code. The following are residential land use density ranges and commercial land use intensity ranges which are allowed in each future land use category:

FUTURE LAND USE CATEGORY	DWELLING UNIT DENSITIES PER ACRE	FLOOR AREA RATIO
Single Family Low Density (SFLD)	1 TO 3	-
Single Family Medium Density (SFMD)	3 TO 5	-
Single Family (SF)	7.26 TO 13.40	-
Multifamily Medium Density (MFMD)	1 TO 20	-
Multifamily (MF)	14.52 TO 32.27	-
Commercial (C)	-	0.75
Commercial (C) within Eastward Ho! boundaries	1 TO 32.27	1.50
Commercial (C) within an approved Development of Regional Impact (DRI)	As regulated by the DRI Master Plan	As regulated by the DRI Master Plan
Industrial (I)		0.75
Conservation (CON)	1 DU per 5 acres	-
Community Service (CS)	-	1.00
Commercial Incentive District/Residential (CID)	14.52 TO 32.27	-
Commercial Incentive District/Commercial (CID)	-	0.75
Planned Community (PC)	10.00	0.50 (2% TO 8% of PC)
Mixed Use District	See Policy 1.9.2	See Policy 1.9.2
Urban Central Business District	See Downtown Master Plan Element Policy 3.1.1	

The Mixed Use District shall permit both residential development and commercial land uses. The commercial land uses may include those typically associated with neighborhood retail

and/or professional offices, including art merchandising; art and drafting supplies; beauty salons; book and stationary stores; personal and convenience sales; day care facilities, florists; food stores; mail services; newspaper and magazine shops; medical offices; professional service offices; restaurants; etc. which could service those living in the proposed residential neighborhoods.

Policy 1.1.4a: The City shall require any property owner who wishes to use the Mixed Use District to apply for a Future Land Use Plan Amendment and a Rezoning to a Planned Development District, if such a zoning district does not already exist for that property.

Policy 1.1.4b: Should a property owner wish to change the Land Use designation on its property to a Mixed Use District, the City shall evaluate a proposed development by determining if it meets the standards and goals of New Urbanism, as described in the "Eastward Ho!" Section of this Element; whether it permits the internalization of vehicle trips; and if the site plan, mix of land uses and urban design of the development fosters an urban community or village. Urban community shall be defined as one which: encourages dramatically increased pedestrian and bicycling activity; reduces vehicle trips generated by development; allows complementary land uses to locate in close proximity to each other; provides recreational activities and useable open space, such as pocket parks, etc.

Policy 1.1.4c: The following standards shall be used to change the above described Future Land Use Designations:

A. Changed Projections - Changed projections (e.g., regarding public service needs) in the Comprehensive Plan, including by not limited to amendments that would ensure provision of public facilities;
B. Changed Assumptions - Changed assumptions (e.g., regarding demographic trends or land availability) in the Comprehensive Plan, including but not limited to the fact that growth in the area, in terms of the development of vacant land, new development, and the availability of public services has altered the character such that the proposed amendment is now reasonable and consistent with the land use characteristics;
C. Data Errors and or Updates - Data errors, including errors in mapping and natural features in the Comprehensive Plan;
D. New Issues - New issues that have arisen since the adoption of the Comprehensive Plan; and
E. Additional Detail or Comprehensiveness - Recognition of a need for additional detail or comprehensiveness in the Comprehensive Plan.

Policy 1.1.5: The Downtown Transportation Concurrency Exception Area (TCEA), upon approval by the City, and upon processing its application through the County Comprehensive Plan amendment process, shall become effective upon the finding of compliance by the Florida Department of Community Affairs.

Objective 1.2: The City shall continue facilitation of renewal programs within blighted and declining areas within West Palm Beach. In addition, the City shall continue incorporating redevelopment projects in the West Palm Beach Capital Improvement Program and in the Community Redevelopment Agency Capital Improvement Budget for the Tax Increment

Agency Capital Improvement Budget and for the Tax Increment Financing District.

Policy 1.2.1: The City shall update, on an annual basis, the City Center Community Redevelopment Plan, which is designed to eliminate slum and blight conditions within the Central Business District and adjacent neighborhood areas.

Policy 1.2.2: All proposed residential and commercial developments within the Northwest Neighborhood shall be consistent with the Northwest Neighborhood Redevelopment Plan and the Downtown Master Plan.

Policy 1.2.3: The City shall continue to utilize Community Development Block Grant funds, the Enterprise Zone and non-profit agencies as a means of ameliorating any blighted conditions which may exist within the City.

Policy 1.2.4: To encourage residential and commercial redevelopment within the City's designated "Target Area", the City shall work cooperatively with the Community Development Corporations to:

- Assist with obtaining bank financing;
- Assist with land acquisition for the development of affordable housing;
- Utilize Tax Increment Financing from the Community Redevelopment Agency for affordable housing projects;
- Promulgate the Areas of Chronic Economic Distress (ACED) designations to support affordable housing; and
- Continue to support the proposed affordable housing developments. The Target Area is defined as an area which has a majority of the households with incomes less than 80% of the median as well as a concentration of substandard housing units.

Policy 1.2.5: The City shall continue to work closely with West Palm Beach's neighborhood associations in their revitalization efforts.

Policy 1.2.6: The City shall initiate the renovation and rehabilitation of existing older commercial and industrial developments by initiating site specific redevelopment plans for public and private sector implementation. The City's Land Development Regulations, as adopted, included the following items:

a) The City shall utilize flexible parking requirements for the adaptive reuse and/or rehabilitation of older structures.
b) The City shall work with the Downtown Development Authority to ensure a successful marketing strategy to promote and encourage the rehabilitation of existing, older commercial and industrial developments.
c) The City shall continue to administer the Historic Preservation Ordinance which was adopted in November 1990, and amended on February 13, 1995 and July 22, 2002. The Ordinance enables the City to designate local historic sites and districts, and provide procedures for protecting designated historic sites and districts.
d) The City shall continue to administer the Ad Valorem Tax Exemption Ordinance which was adopted on January 24, 1994. The Ordinance enables the City to defer ad valorem property tax for the increases in property assessments due to the restoration,

renovation and/or improvements of historic structures.

e) The City shall work to ensure the successful strategy to promote and encourage the rehabilitation and redevelopment of existing neighborhoods adjacent to the Downtown using the principles of "New Urbanism." The development shall further the goals of Eastward Ho! and the preservation of the City's natural resources.

Policy 1.2.7: The City shall work closely with the Palm Beach County Department of Airports, the East Airport Area Homeowners Association and the Vedado Neighborhood Association, as well as other residents, to consider implementation of the recommendations of the Laventhol & Horwath report completed in 1989.

Objective 1.3: The City's Zoning Code shall on a continual basis be reviewed and amended to prohibit any uses deemed or considered inconsistent with the provisions outlined in this Element.

Policy 1.3.1: The City shall continue to enforce its Zoning Code which prohibits uses which are deemed inconsistent with the provisions outlined in this element.

Policy 1.3.2: Within six months of the TCEA's effective date, the City shall amend its Zoning Code to exempt land uses within the Downtown from traffic concurrency requirements.

Objective 1.4: The City shall ensure the protection of natural resources and historic resources through identification and documentation, of historic districts, rehabilitation and adaptive reuse.

Policy 1.4.1: Areas designated as "Conservation" on the City's Future Land Use Map shall be restricted to the uses identified in the Zoning Code to ensure that the natural and historic resources of West Palm Beach are preserved.

Policy 1.4.2: The City shall adhere to the policies outlined in the Conservation and Recreation and Open Space Elements to preserve the Loxahatchee Slough/River Corridor.

Policy 1.4.3: The City shall prohibit any development within the Water Catchment Area that is not deemed a water-related use or may harm the City's source of potable water.

Policy 1.4.4: Development of any wetland areas should conform to the regulations outlined by the South Florida Water Management District and other state and federal agencies.

Policy 1.4.5: Any plans for proposed development located contiguous to the Water Catchment Area shall include an environmental assessment prior to City Commission approval, to demonstrate the project will not be a detriment to the City's source of potable water.

Policy 1.4.6: The City shall support the following initiatives: the Florida Department of Environmental Protection's Ecosystem Management Initiative for protecting and sustaining Florida's natural resources; the Loxahatchee River Ecosystem Management Area; and the Lake Worth Lagoon Ecosystem Management Area.

Policy 1.4.7: The City shall support the program of the Governor's Commission for a Sustainable South Florida to protect the Everglades ecosystem by doing the following in a manner which is practicable to the City: transforming urban sprawl into quality development patterns; reducing reliance from the Everglades; accommodating future development in the existing urban corridor; etc.

Policy 1.4.8: The City shall update, on a continuous basis, the inventory of historically-significant structures within West Palm Beach by identifying and documenting pre-1945 structures within corporate limits. The City shall encourage nomination of those structures eligible to the National Register of Historic Places.

Policy 1.4.9: The City shall continue to administer its Historic Preservation Ordinance which enables the City to designate local historic sites and districts, and provide procedures for protecting designated historic sites and districts.

Policy 1.4.10: The City shall continue its programmatic agreement with the Federal Advisory Council on Historic Preservation and the Florida State Historic Preservation Office which ensures that all City rehab and adaptive use projects assisted with federal and/or state funds shall comply with the Secretary of the Interior's Standards for Rehabilitation.

Policy 1.4.11: The City shall prohibit any development within designated protected potable water wellfields, and their respective cones of influence, if that development proves to adversely affect an identified source of potable water in accordance with the Palm Beach County Wellfield Protection Ordinance.

Policy 1.4.12: Development within the City's 100-year flood hazard area shall conform to the specifications of the National Flood Insurance Program and West Palm Beach Building Code.

Objective 1.5: The City shall coordinate with the Palm Beach County Emergency Management Division and the American Red Cross to identify additional hurricane shelters so as to accommodate increased population in the Central Palm Beach County hurricane evacuation zones.

Policy 1.5.1: The City shall review the West Palm Beach Comprehensive Emergency Management Plan and the Palm Beach County Comprehensive Emergency Management Plan, prepared every three years, on an annual basis to ensure that hurricane shelter capacities are at least 4,758* within West Palm Beach (*20% of 11,173 West Palm Beach population in evacuation zone in the year 2000 and 10% of 25,230 Palm Beach population in the year 2000).

Policy 1.5.2: The City shall coordinate with the Palm Beach County Emergency Management Division in the updating the Countywide Hurricane Evacuation Plan.

Policy 1.5.3: The City shall complete the Emergency Operation Center by the end of FY1999, and shall use it for conducting emergency services during hurricanes and other natural or human-caused disasters.

Objective 1.6: The City shall coordinate with any appropriate resource planning and

management agency which designates an Area of Critical State Concern within West Palm Beach, pursuant to Chapter 380, Florida Statutes, upon approval of that designation by the Governor and Cabinet.

Policy 1.6.1: The City shall require a minimum of one City Commissioner or City staff person serve on the Governor's appointed "resource planning and management committee" to study the potential designation of an Area of Critical State Concern.

Objective 1.7: The City shall work with Palm Beach County to check the proliferation of urban sprawl by approving higher densities within the City in the range of 3 to 9 net dwelling units per acre. Although the City is 93% built-out, the City will continue to build onto the existing infrastructure where possible. This may necessitate the need for Constrained Roadway at a Lower Lever of Service (CRALLS) and/or Transportation Concurrency Exception Area (TCEA) designations within the City Boundaries, or a TCEA for the entire Eastward Ho! Initiative Area, as defined in Goal Number 2 below.

Policy 1.7.1: The City shall coordinate activities pertaining to land use and development with the Interlocal Plan Amendment Review Committee as well as adjacent municipalities concerning potential annexation areas.

Policy 1.7.2: The City shall review and prepare an Evaluation and Appraisal Report of the Comprehensive Plan, in accordance with state law.

Policy 1.7.3: The City shall work to plan land use development within its boundaries by conforming to the Transportation Vision cited in the Transportation Element of the Comprehensive Plan and as stated below:

The Planning, Zoning and Building Department will use all available land use and transportation means to make the City sustainable, liveable and economically successful:

- Transportation changes to help achieve land use goals and objectives;
- Land use changes to help achieve transportation goals and objectives; and
- The metrics are the citizen and the vulnerable pedestrian.

Policy 1.7.4: The City hereby designates a Constrained Roadway at a Lower Level of Service (CRALLS) at:

Palm Beach Lakes Boulevard from Village Boulevard to Interstate 95-
Daily LOS: 54,990 vehicles per day (VPD); Peak Hour: 2,969 vehicles per hour (VPH); Test 2 Volume: 62,100VPD;
Palm Beach Lakes Boulevard from Interstate 95 to Executive Center Drive -
Daily LOS: 58,040VPD; Peak Hour: 2,816 VPH;
Australian Avenue from Palm Beach Lakes Boulevard to 25th Street -
Daily LOS: 34,839 VPD; Peak Hour: 1,768 VPH;
Palm Beach Lakes Boulevard from Interstate 95 to Congress Avenue -
Test 2 Volume: 61,040 VPD;
Intersection of Palm Beach Lakes Boulevard and Village Boulevard -
Critical Sum: 1,820 VPH;
Intersection of Palm Beach Lakes Boulevard and Interstate 95 Ramps -

Critical Sum: 1,593 VPH;
Intersection of Palm Beach Lakes Boulevard and Congress Avenue -
Critical Sum: 1,513 VPH;
Intersection of Palm Beach Lakes Boulevard and Australian Avenue -
Critical Sum: 1,431 VPH; and

Policy 1.7.5: Within three years of the adoption of the Comprehensive Plan Amendment, the City shall apply for a CRALLS at 45th Street between Australian Avenue and to Military Trail.

Policy 1.7.6: The City shall study and shall pursue all avenues to obtain a Transportation Concurrency Exception Area (TCEA) throughout the Eastward Ho! boundaries, as applicable to the City limits, as described in preceding Sections of this Future Land Use Element.

Policy 1.7.7: The Western Northlake Corridor Land Use Study Area shall be delineated in the Future Land Use Element. This area is generally located south of the Beeline Highway; west of the West Palm Beach Water Catchment Area; east of the J.W. Corbett Wildlife Management area and Seminole Pratt Whitney Road; and north of the southern boundary of Ibis, Rustic Ranches, Bay Hill Estates, and Hamlin Boulevard. Through an interlocal agreement, Palm Beach County and the cities of West Palm Beach and Palm Beach Gardens shall provide for a means of intergovernmental cooperation in implementing the recommendation of the Western Northlake Corridor Land Use Study dated June 8, 1998. The provisions of the Interlocal Agreement include a procedure for "heightened review" of local land use change petitions and development permit applications.

Objective 1.8: All development orders and permits shall be issued only if the necessary public facilities and services needed to maintain the level of service standards adopted in this Plan are available or will be in place when the impacts of development occur.

Policy 1.8.1: All future developments shall be permitted if the necessary facilities are; (a) available or will be in place when the impacts of development occur; or (b) the subject of a binding contract executed for the construction of the facilities or the provision of services at the time the development permit is issued or (c) included in the City's annual budget and identified in the City's five-year Capital Improvements Program.

Policy 1.8.2: As determined by the City, property owners wishing to annex into West Palm Beach shall be required to provide the necessary facilities or services to meet the established level of service standards.

Policy 1.8.3: The City shall be solely responsible for establishing and adopting its level of service standards for roads, utilities and park facilities while attempting to be consistent with policies established within the Treasure Coast Strategic Regional Policy Plan and State of Florida Comprehensive Plan.

Policy 1.8.4: The City shall continue to coordinate with the County to ensure that the countywide traffic performance standards, which were adopted December 1990, as amended, are realistic and serve to promote quality development within the City.

Policy 1.8.5: All development orders and permits shall be issued in conjunction with the

Concurrency Management System outlined in the Capital Improvement Element of this Plan.

Objective 1.9: Upon the adoption of this Plan, all future development and redevelopment in the City shall be directed in accordance with the Goals, Objectives and Policies outlined in this Element, consistent with the City's Future Land Use Map, and with the option of utilizing innovative planned development regulations and with incentives to encourage the use of such regulations.

Policy 1.9.1: The City shall continue to allow for innovative designs and the efficient use of land, such as the practice of permitting Planned Developments (PDs) and zero lot line developments. Incentives for PDs shall include:

a) Relaxing of height, setback or other dimensional requirements.
b) Allowing an increase in density and/or floor area ratio.
c) Permitting uses or a mixture of uses not normally permitted in the underlying zoning district.

Policy 1.9.2: Mixed-use developments shall be permitted in those areas identified for such in the City's Zoning Code and Future Land Use Map.

Policy 1.9.2.1: A neighborhood master plan, including specific standards for the density or intensity of use, must be created and approved by the City Commission prior to the adoption of a Mixed Use future land use designation. The neighborhood master plan will specify building height, building placement and building use in the form of the building type model utilized in the Downtown Master Plan Area.

Policy 1.9.2.1a: The City may accomplish the goals and objectives of a neighborhood master plan through the use of incentive programs such as additional stories, additional density, additional Floor Area Ratios, air rights easements over arcades on public rights-of-way, public-private partnerships, shared parking agreements for mixed uses, encouraging the Community Redevelopment Authority (CRA) to use its powers, and similar incentives. "Limited Duration" means up to four (4) years or such longer period which is determined by the City Commission to be necessary to further the goals of the neighborhood master plan. Such incentive programs shall be consistent with the spirit and intent of the specific neighborhood master plan. City shall adopt effective enabling land development regulations to effectuate such residential incentive programs.

Policy 1.9.2.2: The Northwood Mixed Use District (NMUD) Development Regulations shall be accommodated in the Zoning Code by the following regulatory framework:

The Regulating Plan: a graphic document that maps the location of the Building Types, as defined in the NMUD Development Regulations.
The NMUD Development Regulations: define the Building Types and regulate their uses, placement on the lot, parking requirements, and heights. The following building types are envisioned in the NMUD area:

NMUD Building Type I: a two-story mixed-use building type limited to thirty-eight (38) feet in overall height, incorporating sidewalk level storefronts. Pursuant to a limited duration residential incentive program adopted according to Policy 1.9.2.1a above, the

following building type may be allowed:

NMUD Building Type Ia: one (1) additional story may be added, for a total of three (3) stories above grade, provided the overall building height does not exceed thirty-eight (38) feet. The building shall be restricted residential uses above the first floor.

NMUD Building Type II: a two-story mixed-use building type with dual frontage. Pursuant to a limited duration residential incentive program adopted according to Policy 1.9.2.1a above, the following building type may be allowed:

NMUD Building Type IIa: one (1) additional story may be added, for a total of three (3) stories above grade. The building shall be restricted residential uses above the first floor.

NMUD Building Type III: a two-story mixed-use building type incorporating sidewalk level storefronts. Pursuant to a limited duration residential incentive program adopted according to Policy 1.9.2.1a above, the following building types may be allowed:

NMUD Building Type IIIa: one (1) additional story may be added, for a total of three (3) stories above grade, provided that the third floor is utilized for residential uses only.

NMUD Building Type IIIb: two (2) additional stories may be added, for a total of four (4) stories above grade. The building shall be restricted residential uses above the first floor.

NMUD Building Type IIIc: three (3) additional stories may be added, for a total of five (5) stories above grade. The building shall be restricted to residential uses above the first floor.

Per the regulatory framework above and the available land area in the district, the build-out of the NMUD will not exceed a maximum of 850,000 square feet of retail/commercial use and 650 residential units, under the base zoning. Under the Limited duration residential incentive zoning, the maximum number of residential units increases to 2,200 based upon an average unit size of 1,000 square feet.

Policy 1.9.2.3: The Currie Corridor Mixed Use District (CMUD) Development Regulations shall be accommodated in the Zoning Code by the following regulatory framework:

The Regulating Plan: a graphic document that maps the location of the Building Types and the public green, as defined in the CMUD Development Regulations.

The CMUD Development Regulations: define the Building Types and regulate their uses, placement on the lot, parking requirements, and heights. The following building types are envisioned in the CMUD area:

CMUD Building Type I: a two to four-story mixed use building. Pursuant to a limited duration residential incentive program adopted according to Policy 1.9.2.1a, a limited duration residential incentive affecting properties with a frontage line on Flagler Drive and on the public green allowing properties to build to a maximum of six stories

extending from the frontage line to 100 feet in depth or to the alley, whichever is less.

CMUD Building Type II: a two to four-story building mixed use building.

CMUD Building Type III: a two to three story mixed use building serving as a transitional type between the adjacent single family homes and the CMUD.

Public Green: an open space designation only allowing park related uses serving the general public.

Locations of Civic Importance: Prominent locations identified on the Regulating Plan, that shall provide buildings that respond appropriately to terminate vistas and provide architectural features of enhanced character and visibility. Such sites are eligible for additional height with approval by the City Commission and shall adhere to all Building Type regulations.

Per the regulatory framework above and the available land area in the district, the build-out of the CMUD will not exceed a maximum of 2.3 million square feet of retail/commercial use and 4,065 residential units, under the base zoning. Under the limited duration residential incentive zoning, the maximum number of residential units increases to 4,580 based upon an average unit size of 1,000 square feet.

Policy 1.9.2.4: The Broadway Mixed Use District (BMUD) Development Regulations shall be accommodated in the Zoning Code by the following regulatory framework:

The Regulating Plan: a graphic document that maps the location of the Building Types, as defined in the BMUD Development Regulations.

The BMUD Development Regulations: define the Building Types and regulate their uses, placement on the lot, parking requirements, and heights. The following building types are envisioned in the BMUD area:

BMUD Building Type I: a one (1) to three (3) story mixed use, apartment or office building. A minimum of two (2) stories is required at the Primary Intersections, which are denoted on the BMUD Regulating Plan.

BMUD Building Type II: a one (1) to three (3) story mixed use, apartment, commercial or office building. A minimum of two (2) stories is required at the Primary Intersections, which are denoted on the BMUD Regulating Plan.

Per the regulatory framework above and the available land area in the district, the build-out of the BMUD will not exceed a maximum of 830,000 square feet of retail/commercial use and/or 830 residential units based upon the average unit size of 1000 square feet.

Policy 1.9.3: The City shall utilize the Commercial Incentive District to reduce any negative impacts associated with expansion of commercial uses into residential areas.

Policy 1.9.4: The City shall utilize the Special Impact Zone to ensure site plan review to

reduce potential land-use incompatibilities.

Policy 1.9.5: Development proposed for land adjacent to the City's Water Catchment Area poses special circumstances due to the importance of maintaining an adequate supply of clean potable water, the close relationship of surface and groundwaters, the prevalence of wetland areas which provide water storage and cleansing functions, and the nearness of the drawdown zone of another municipality. Accordingly, the City shall utilize the Special Impact Zone to ensure site plan review and to prohibit land use and environmental incompatibilities for the area bounded by Haverhill Road on the east, the City's Water Catchment Area on the west, the "M" Canal on the south, and a line parallel to and approximately 611 feet south of 45th Street on the north. Any development within this zone must comply with the following standards and requirements.

a) The City shall require a professionally accepted and applied environmental assessment of any development proposed within the Special Impact Zone as a part of the development application process. The assessment will include an identification of the following: soils and vegetative types, groundwater and surface water elevations and flows, surface water management systems and levels of service, existing water quality standards and an aerial photography map. The environmental assessment will evaluate the impact and include design standards to prevent adverse impacts of the proposed development on surface and groundwater quality and quantity, wetlands and other sensitive environmental habitats, surface and groundwater flows and storage, drainage levels of service, and potable water supplies.
b) Land uses shall not be approved in the Special Impact Zone that require the use, sale or storage of hazardous materials, wastes or other polluting materials unless requirements as set forth in subsection 5.02 (a), (b), (c), (d), (e), and (h) of the Palm Beach County Wellfield Protection Ordinance No. 88-7 for Zone 2 are met. In addition, any spill of hazardous materials, wastes or other polluting materials shall be reported immediately and by telephone to the Engineering and Public Works Director for the City. Clean-up shall commence immediately upon discovery of the spill.
c) No development shall be approved in the Special Impact Zone unless the quality and quantity of the supply of groundwater and surface water inflow to the Water Catchment Area, the "M" Canal and existing potable water wellfields are maintained. The level of treatment for stormwater (especially herbicides, pesticides, heavy metals and petroleum hydrocarbons), and waste water, including sanitary sewer effluent as well as other onsite activities, must ensure that the water quality of the "M" Canal, the Water Catchment Area, and potable water wellfields are not degraded. Septic tanks shall not be permitted within the Special Impact Zone.
d) The Water Catchment Area will be protected by a buffer of natural vegetation of at least 200 feet, and the "M" Canal will be protected by a buffer zone of natural vegetation within the south 450 feet of the Parcels One, Two, and Three described in Chapter 89-479 (Laws of Florida) as amended by Chapter 90-461 (Laws of Florida).
e) Surface water management systems for developments in the Special Impact Zone must be designed so that hydroperiods and groundwater levels of established wetlands are maintained or enhanced.
f) Existing wetland areas shall not be altered to decrease the fish, wildlife, and water quality and quantity values in the Special Impact Zone. Wetlands alteration is limited to degraded wetlands which are defined as having been impacted through human activities such as dredging and filling that have caused changes to the wetland

hydroperiod, topography, or allowed the intrusion of non-wetland or non-native (e.g. melaleuca) plant species. As a result, the degraded wetlands do not provide fish, wildlife and water quality and quantity values equal to or greater than would be provided if these wetlands were restored on an acre for acre basis as determined by professionally accepted and applied methodologies. There shall be no discharge of surface water off-site which exceeds the historic flow of surface waters from the Special Impact Zone. No development in the Special Impact Zone shall decrease the pre-development flow and quality of water to wetlands within the Special Impact Zone. Any loss of wetland values and functions shall be mitigated on a two-for-one basis so that twice as much of the same wetlands community will be created or restored as is lost through development. Mitigation shall be accomplished on site or within the Water Catchment Area or Special Impact Zone through restoration of degraded wetlands or through the creation of new wetlands.

g) Review of development proposals and land use changes shall be coordinated with Palm Beach County, the South Florida Water Management District and adjacent municipalities to insure maintenance of the Florida Department of Environmental Regulation Class 1 potable water designations for the Water Catchment Area and to ensure the protection of other municipal wellfields.

Policy 1.9.6: The City's "Buildable Areas Monitoring Table" (Table 4-18) is a projection of how the Downtown Master Plan will be developed. At least every five years, the City shall evaluate the Table to determine whether an amendment to the Downtown Master Plan and/or the "Buildable Areas Monitoring Table" is required to reflect actual development trends. This amendment shall be consistent with the goals, objectives, and policies of the Downtown Master Plan and Comprehensive Plan.

TABLE 4-18
BUILDABLE AREAS MONITORING TABLE
Revised January 2003

Nonresidential (Square Feet)	1995 Existing	**8,126,945**
	Development Gap	**6,947,025**
	Total 2010 Projection	**15,073,970**

Residential (Units)	1995 Existing	**2,689**
	Development Gap	**4,566**
	Total 2010 Projection	**7,255**

Hotel (Rooms)	1995 Existing	**349**
	Development Gap	**2,100**
	Total 2010 Projection	**2,449**

Notes:

1. The table has been revised to reflect the final approved CityPlace Development of Regional Impact (DRI).
2. For planning purposes, the Subarea development caps are available in the Downtown Master Plan Element.
3. Residential information is provided for planning purposes only. Residential development is currently exempt from the Palm Beach county Traffic Performance Standards through the Coastal Exception provisions.
4. The revisions to the "Buildable Areas Monitoring Table" do not alter the requirements of the residential to non-residential ratio requirement of the Transportation Concurrency Exception Area. The Table provides the total projected build-out of non-residential square footage in the downtown.

Policy 1.9.7: The City shall encourage neighborhood commercial land uses within the geographic area analyzed within the "Palm Beach Lakes Boulevard/I-95/Congress Avenue Area Study" and "Palm Beach Lakes Boulevard CRALLS."

Policy 1.9.8: Within one year of the adoption date of this amended Comprehensive Plan, the City shall review the possibilities of establishing a Community Redevelopment Agency redevelopment district generally at the intersection of Palm Beach Lakes Boulevard and Interstate 95 to the west, to Palm Beach Lakes and Australian Avenue to the east.

Policy 1.9.9: Within one year of the adoption date of this amended Comprehensive Plan, the City shall review all zoning changes required by the implementation of the Northwood Master Plan. Within two years of this amended Comprehensive Plan, the City shall adopt the required land use plan and zoning changes, as well as initiate the appropriate traffic calming and urban regulations, to implement the Northwood Master Plan.

Objective 1.10: The City shall continue to expand its tax base by promoting the expansion of existing and new businesses, redevelopment activities and annexations.

Policy 1.10.1: The City shall continue to work with the county in the establishment of a

county convention center and promote the development of a performing arts district, while encouraging the creation of new, complementary businesses in the Central Business District area.

Policy 1.10.2: By 2005, the City shall analyze the feasibility of expanding the Enterprise Zone.

Policy 1.10.3: The City shall work closely with the Palm Beach County Economic Council, Palm Beach Development Board, Downtown Development Authority, Downtown Association, Chamber of Commerce of the Palm Beaches, Suncoast Chamber of Commerce, Hispanic Human Resources, Neighborhood Associations and other public-interest agencies to promote West Palm Beach as an attractive site for business and industry.

Objective 1.11: The City shall continue to identify potential sources of funding for capital improvement projects.

Policy 1.11.1: The City shall continue to coordinate with Palm Beach County to ensure that a commensurate amount of funds collected through the Countywide Parks Impact Fees are returned to the City for the development of parks.

Policy 1.11.2: The City shall revise its Capital Improvement Program in conjunction with the annual preparation of the West Palm Beach budget.

Policy 1.11.3: The City shall issue development orders and permits based upon the Concurrency Management System established in the Capital Improvement Element of this Plan.

Objective 1.12: The City, working in conjunction with Beautiful Palm Beach, Inc. and other public and private agencies, shall improve the aesthetic and environmental quality of West Palm Beach.

Policy 1.12.1: The City shall continue coordinating with the Florida Department of Transportation and the Town of Palm Beach to improve the aesthetic appearance of the three bridges that cross the Intracoastal Waterway.

Policy 1.12.2: By 2000, the City shall pursue the feasibility of placing a water jet in the southern end of Clear Lake.

Policy 1.12.3: The City shall continue to ensure that Flagler Drive be preserved for the aesthetic qualities it possesses and discourage the proliferation of residential docks located adjacent to a public right-of-way.

Policy 1.12.4: The City shall continue to enforce its revised Zoning Code which was amended in June 1990, regarding additional standards and requirements for the construction of residential docks.

Policy 1.12.5: By 2000, the City shall prepare and adopt an Urban Design Element for inclusion in this Comprehensive Plan.

Objective 1.13: The City shall coordinate future land uses with the appropriate topography, soil conditions, and the availability of appropriate facilities and services by Site Plan Review and by review of Developments of Significant Impact, Developments of Regional Impact, and Environmental Assessment Studies with the purpose of regulating development to protect against negative impacts.

Policy 1.13.1: The City shall require an environmental assessment, where appropriate, for any land use development as a part of the Development Application process, which will include identification and analysis of vegetation associations, topography, soils, elevations and flooding levels, and an aerial photography map. The Site Plan review process shall regulate land uses and development to protect natural drainage features and groundwater aquifer recharge areas.

Policy 1.13.2: The City shall continue to enforce its revised Zoning Code which was amended in October 1990 to restrict inappropriate developments on certain soil conditions.

Objective 1.14: By 1990, the City shall not increase permitted population densities in the coastal area which will result in an increase in evacuation order times established in the Palm Beach County Peacetime Emergency Plan, as revised on a triennial basis.

Policy 1.14.1: If any triennial update of the hurricane evacuation plan shows an increase in evacuation times, measures shall be undertaken to maintain the existing evacuation period. These measures shall include programming transportation improvements to increase the capacity of evacuation routes, providing public information programs, increasing the number of emergency shelters, or reducing population densities.

Objective 1.15: The City shall ensure the availability of suitable land for utility facilities necessary to support proposed development so that the level of service standards adopted in this plan will be met or will be in place when development occurs.

Policy 1.15.1: Property owners annexing into the City of West Palm Beach shall be required to provide suitable land for necessary utility facilities or services in order to meet the established level of service standards.

GOAL 2: TO DEVELOP THE CITY'S URBAN CORE WITHIN THE PRINCIPLES OF THE GOVERNOR'S OFFICE INITIATIVE KNOWN AS "EASTWARD HO!" THE EASTWARD HO! BOUNDARIES WITHIN THE CITY OF WEST PALM BEACH ARE DEFINED AS: THE CITY'S NORTHERN BORDER; THE WESTERN EDGE OF THE CITY'S COASTAL HIGH HAZARD AREA TO THE EAST; THE CITY'S SOUTHERN PERIMETER; THE CITY'S EDGE AS DEFINED BY THE EAST RIGHT-OF-WAY OF INTERSTATE 95, TO THE WEST.

Objective 2.1: The City shall facilitate and encourage infill development within the Eastward Ho! Boundaries.

Policy 2.1.1: By 2001, the City shall make all necessary land use plan and zoning district changes as recommended within the Northwood Master Plan. This Plan shall be implemented to the maximum extent practicable to enhance the existing neighborhoods within the northern urban core of the City.

Policy 2.1.2: The City shall continue to work with the Treasure Coast Regional Planning Council (TCRPC), business owners, the existing neighborhoods to develop and implement a land use plan for the Southern Boulevard Plaza, located in the block bounded by Parker Avenue to the north, Southern Boulevard to the south, South Lake Avenue to the east and Conniston Road to the north. The City Planning, Zoning and Building Department shall present a final plan to the City Commission by mid-2000.

Policy 2.1.3: In a manner similar to the Southern Boulevard Plaza, the City shall pursue further opportunities to redevelop the north and south of the City bounded by the Intracoastal Waterway (Lake Worth) to the east and Interstate 95 to the west. The City shall solicit alternative sites from the public as a means to start this process. By the year 2005, both the City Planning and Zoning Division and the Urban Design Division shall jointly prepare a study of potential areas within the Eastward Ho! corridor which may require redevelopment in the form of more urban spaces and which furnish commercial and residential mixed use development opportunities.

Policy 2.1.4: Although the City may review and approve further annexation requests, the City shall make every effort to redirect growth into the Eastward Ho! Corridor. This shall be done by creating alternative opportunities for housing, reducing crime in the inner urban core, and continuing its redevelopment of the Urban Central Business District (UCBD) and the edge to the UCBD. Within five (5) years of the adoption of the Comprehensive Plan, the City Police Department and the City Housing Division shall each prepare a plan of action to accomplish this Policy.

Policy 2.1.5: Within one year of the adoption of the Comprehensive Plan, the City shall review the possibilities of drafting regulations which permit the placement of higher densities of residential and higher intensities of commercial and other types of development within the Eastward Ho! Corridor.

Policy 2.1.6: The City shall continue to use the tenets of "New Urbanism," as defined in "H. Distribution of Land Uses -Mixed Use Land Use" in this Element, where practicable, to redevelop the City's inner urban core. By year 2004, the City shall review the possibility of rezoning the neighborhoods, to the immediate south of the UCBD, to conform more closely to the New Urbanism.

Objective 2.2: The City shall continue on its course to redevelop the Urban Central Business District (UCBD).

Policy 2.2.1: The City shall make every attempt to attract corporations to locate Downtown. The City shall seek one (1) large corporation to relocate into the Downtown by year 2004.

Policy 2.2.2: The City shall continue its attempts to induce a medium-size to full-size grocery store to locate in the UCBD. By year 2004, the City shall have attracted and caused the construction of a grocery store in the UCBD.

Policy 2.2.3: The City shall meet with developers who construct market-rate multifamily residential developments in an effort to obtain several multifamily developments within the Downtown. The City shall cause the construction of 500 multifamily, market rate dwelling

units by the year 2004.

Objective 2.3: The City shall encourage the preservation of historic structures in the area which is east of Interstate 95:

Policy 2.3.1: The City will work with private property owners to designate structures which are historic and to advise the correct way to restore these structures. By year 2003, the City shall update the inventory of the historic structures within the UCBD, and provide within this inventory a description of the current state of repair; the viability of repairing a structure; the structure's age; etc.

Policy 2.3.2: The City shall encourage downtown property owners to restore historic structures and to use these structures in accordance with the Downtown Master Plan Urban Code. The City's Historic Preservation Planner shall assist any property owners during this process.

Objective 2.4: The City shall work to reduce crime in the Eastward Ho! boundaries.

Policy 2.4.1: The City shall continue its current policy of Community Oriented Policing within the Eastward Ho! boundaries.

Objective 2.5: The City shall improve and create new recreational and cultural possibilities, where practical, within the Boundaries.

Policy 2.5.1: The City shall make every attempt to establish recreational nodes within the Downtown. The City shall study the possibility of establishing boat and walking docks, entertainment venues, such as street performers, temporary and mobile retail uses, parks or other similar activities along the Flagler Drive waterfront, or other public spaces throughout the Downtown. These areas shall be known as activity nodes, and shall be planned by year 2003. The activity nodes shall be constructed by year 2006.

Objective 2.6: The City shall use up-to-date transportation planning and traffic calming to create safer streets and provide for non-automobile modes of transportation.

Policy 2.6.1: The City shall implement its Transportation Vision, as defined in the Transportation Element of this Comprehensive Plan.

Policy 2.6.2: The City shall continue its traffic calming program within the City. The City shall have calmed 25 percent of its neighborhood streets by year 2004.

Policy 2.6.3: The City shall highly discourage street abandonments in order to preserve the interconnectivity and public ownership of its street network. The City shall not abandon City streets without the presentation of a study which addresses the following issues, (not necessarily all inclusive): the surrounding street grid and how the subject street functions within that grid; the current use of the street by motor vehicles, pedestrians and bicyclers, meaning the number of these users on that particular street, their destination and originating points; the City's current and future need to preserve the street for proper traffic management; the need for capital improvement to the street and the ability of the City to spend money and resources to enhance the street; etc.

Objective 2.7: The City shall encourage infill development within the Eastward Ho! boundaries.

Policy 2.7.1: By year 2002, the City Planning and Zoning Division shall inventory vacant lots within the Eastward Ho! boundaries.

Policy 2.7.2: By year 2004, the City Planning and Zoning Division, with assistance from other City Departments, shall complete a study and plan to attract infill development, and redevelopment of the existing urban core of the City. This study shall include, but not be limited to: the type of development; a plan of action to attract redevelopment; the possible timing of the redevelopment; the potential to incorporate design guidelines to direct the style of architecture and landscaping within these lots; etc.

Objective 2.8: The City shall protect the existing residential properties adjacent to the traditional U.S. 1 Commercial Corridor.

Policy 2.8.1: All requests to expand the Commercial Future Land Use designation adjacent to the U.S. 1 Commercial Corridor (a.k.a. Dixie Highway) require approval through the twice per year Comprehensive Plan Amendment process, regardless of the acreage involved.

Policy 2.8.2: In order to buffer residential areas adjacent to the U.S. 1 Commercial Corridor (a.k.a. Dixie Highway) from the adverse impacts of commercial uses, the Commercial Future Land Use may not expand past an existing adjacent alley or street.

Policy 2.8.3: In locations adjacent to the U.S. 1 Commercial Corridor (a.k.a. Dixie Highway) where the Commercial Future Land Use abuts Single Family or Multifamily Future Land Use without an intervening alley or street, the Commercial Future Land Use may expand under the following conditions:

a) The Commercial Future Land Use does not expand into a historically designated neighborhood, or onto property with a historically designated residential structure.

b) The area for which the future land use amendment is requested contains only land that has been vacant for more than two (2) years, a legal non-conforming commercial structure, a vacant residential structure that the Building Official has determined is structurally unsound, or a non-conforming multifamily residential structure.

GOAL 3: TO COORDINATE LOCATION OF NEW AND EXPANDED SITES FOR PUBLIC EDUCATION FACILITIES AND TO ENCOURAGE THE CO-LOCATION OF NEW PUBLIC EDUCATION FACILITIES WITH APPROPRIATE CITY PUBLIC FACILITIES, IN ORDER TO ENSURE COMPATIBILITY AND CONSISTENCY WITH THE CITY'S COMPREHENSIVE PLAN, IN ACCORDANCE WITH CHAPTER 235.193, F.S. AND TO MAINTAIN AND ENHANCE JOINT PLANNING PROCESSES AND PROCEDURES FOR COORDINATION AND DEVELOPMENT OF SCHOOL FACILITIES CONCURRENT WITH RESIDENTIAL DEVELOPMENT AND OTHER SERVICES. EDUCATION FACILITIES ARE DEFINED HEREIN AS ELEMENTARY SCHOOLS, SPECIAL EDUCATION FACILITIES, ALTERNATIVE EDUCATION FACILITIES, MIDDLE SCHOOLS, HIGH SCHOOLS, CHARTER SCHOOLS AND VOCATIONAL TECHNICAL SCHOOLS IN THE SCHOOL DISTRICT OF PALM BEACH COUNTY, (HEREINAFTER "DISTRICT").

Objective 3.1: The City shall support and facilitate coordination of planning with the District for both the location and development of public educational facilities in accordance with the District's adopted Educational Plant Survey and Capital Improvement Plan seven-year plan with a funding source.

Policy 3.1.1: The proposed public school facility use shall be compatible with adjacent existing land uses.

Policy 3.1.2: All educational facilities shall be an allowable use within the following future land use categories:

- Community Service
- Urban Central Business District
- Residential Districts as Special Use Permits

Policy 3.1.3: The location and construction of new public educational facilities (Elementary, Middle and High Schools) or the expansion of an existing site shall be allowed upon a determination by the local government that the proposed school development is consistent with the future land use categories as listed above.

Policy 3.1.4: Planners for the Palm Beach County School Board, the City, Palm Beach County Planners (Library, Parks and Recreation Planners), and the Public shall be included in both the development of the new school location criteria and the school siting process.

Objective 3.2: The City shall coordinate with the School District staff in the siting of school facilities so that their locations are consistent with, and to the degree possible, further the Goals, Objectives and Policies of the City's Comprehensive Plan. The development of new school location criteria shall be initiated and the location of potential sites for new schools shall be determined as early as possible so that the sites can be acquired well in advance of these new schools.

Policy 3.2.1: In accordance with the adopted Capital Improvement Plan(s) of the District, and the Intergovernmental Coordination and other related elements of the adopted Comprehensive Plan, public services and facilities required to support all public educational facilities shall be facilitated and coordinated in time and place with plans for residential development (235.193 F.S.).

Policy 3.2.2: For elementary schools, special education facilities, and alternative education facilities, proposed school sites shall have direct access to at least a minor collector road or as otherwise approved by the local government after determination of acceptable traffic impacts on adjacent roads of lesser classification. Outdoor recreational facilities and similar support facilities shall be located and buffered on the proposed site to minimize impacts on the adjacent properties in accordance with the City's Zoning Code. Playgrounds shall be collocated with elementary schools in areas with densities high enough to support them. Additionally, neighborhood parks, facilities for the elderly, neighborhood recreation centers and a possible library sub-branch may be included.

Policy 3.2.3: For middle schools, the proposed site shall have direct access to at least a minor collector road or as otherwise approved by the local government after determination of acceptable traffic impacts on adjacent roads of lesser classification. Outdoor recreational facilities and similar support facilities shall be located and buffered on the proposed site to minimize impacts on the adjacent properties in accordance with the City's Zoning Code. Community parks and athletic fields shall be appropriate to locate with middle schools. Community centers, if the school will not be used for this purpose, and a library sub-branch may be included depending on the school's location and the population served.

Policy 3.2.4: For high schools, the proposed location shall have direct access to at least a major collector road, or as otherwise approved by the local government after determination of acceptable traffic impacts on adjacent roads of lesser classification. Stadiums, outdoor recreational facilities and similar support facilities that are accessory to such high schools shall be located and buffered on the proposed site to minimize impacts on adjacent properties in accordance with the City's Zoning Code. The high school campus shall be large enough to encourage students to remain on-site and to ensure sufficient parking, or parking controls, to avoid disruptive off-site parking.

Policy 3.2.5: Consideration shall be given to making schools and their location the focal point for new developments.

Policy 3.2.6: Ingress and egress shall not create detrimental impacts on roads adjacent to the school site. Approaches to the site shall be safe for pedestrians, bicyclists, car drivers and bus users. A mass transit or bus stop shall be located near the site.

Objective 3.3: Local governments must identify sufficient land in their Future Land Use elements to accommodate Public Educational Facilities as necessary to service their student populations.

Policy 3.3.1: The City shall support and encourage the construction and rehabilitation of schools within the urbanized area of the City, east of Interstate 95. Proposed school sites shall be located away from objectionable land uses to avoid noise, odors, dust and traffic and/or hazards. New school sites shall be located within the urban growth boundaries or shall be compatible with compact urban growth patterns. It is the policy of this City to encourage a comprehensive range of design and site planning solutions that will cost effectively meet the capacity needs of the School District and the compatibility requirements of the community. In the existing urbanized areas, recommendations for increased capacity will consider the cost-benefits of expanding existing facilities as well as the provision of new

facilities on vacant land that would meet projected capacity needs. This analysis will include factors such as community impact, neighborhood vitality and relocation costs. Innovative and efficient designs that meet the performance requirements of the State Requirements for Educational Facilities will be fully considered.

Policy 3.3.2: The City shall work with the School District to promote alternative development standards based on mutually acceptable performance criteria that would meet the intent of the provision listed above. Schools shall be centrally located within their intended attendance zones, to the extent possible, and shall be consistent with walking and bus travel time standards. High schools may be an exception to this central location, as the large land area they require are usually not available.

Policy 3.3.3: The proposed site shall, at a minimum, meet the State requirements for Educational Facilities (SREF), plus a ten percent (10%) capacity flexibility allowance in conformance with the District's adopted Level of Service (LOS). In addition, the site shall be sized to accommodate all needed utilities, support facilities, and adequate buffering of surrounding land uses.

Policy 3.3.4: There shall be no significant environmental conditions on a proposed site that cannot be mitigated or otherwise preclude development of the site for Public Educational Facility.

Policy 3.3.5: There shall be no adverse impacts on archaeological sites listed in the National Register of Historic Places or otherwise designated in accordance with appropriate State and local guidelines as significant historical or archaeological resources.

Policy 3.3.6: The proposed site shall be suitable or adaptable for development in accordance with applicable water management standards, and shall not be in conflict with the South Florida Water Management Surface Water Management Plan or any applicable Storm Water Utility or Drainage District plans.

Policy 3.3.7: The proposed site shall be capable of accommodating adequate parking and on-site traffic circulation requirements to satisfy current and projected site generated vehicular demand. The site layout must also be consistent with the City's Transportation Vision. Disrupting influences caused by school yard noise and traffic may require that schools shall be located at sufficient distances from hospitals, adult communities, nursing homes and similar land uses or shall be buffered from these areas.

Policy 3.3.8: The proposed location shall not be in a coastal high hazard area or a floodway.

Policy 3.3.9: There shall be adequate setbacks, landscape buffering and design controls to eliminate or decrease any negative externalities such as noise from affecting neighboring developments, in accordance with the City's Zoning Code.

Policy 3.3.10: The location of the proposed site shall comply with Chapter 333.03(3), Florida Statutes as it relates to the construction of public education facilities in the vicinity of the Palm Beach International Airport.

Policy 3.3.11: New school facilities shall be designed, at a minimum, in accordance with the applicable requirements of SREF and the District's adopted facility list.

Objective 3.4: The City shall work with the District to make every effort to co-locate joint uses and to implement creative school design that provides the opportunity for utilizing smaller sites than current guidelines may allow.

Policy 3.4.1: The City shall make every attempt to cooperate with the District to share new school sites with City public facilities, such as, but not necessarily limited to, libraries (branches), parks and recreational facilities, neighborhood centers, etc.

APPENDIX
PROFILES OF MAJOR GEOLOGIC SOIL ASSOCIATIONS LOCATED IN WEST PALM BEACH AREA

St. Lucie Urban Land Paola Association

This association is on the mainland along the coast. It is made up of low ridges and knolls that are part of the coastal ridge. The natural vegetation is sand pine, scrub oak, and undergrowth of saw-palmetto, rosemary, cacti, and native grasses. St. Lucie soils are nearly level to sloping and are excessively drained. Typically, this association has a thin surface layer of gray sand. Below this is a white sand that extends to a depth of more than 80 inches. Paola soils are nearly level to sloping and are excessively drained. Typically, they have a thin surface layer of dark gray sand and a subsurface layer of white sand. The subsoil is strong brown sand in the upper part and light yellowish brown sand in the lower part. Limitations are slight for many urban uses however, severe limitations for structures designed for holding water, disposing of refuse material, and recreational development do exist.

Palm Beach Urban Land Canaveral Association

This association is on the offshore island that is along most of the coastline. It is made up of long, narrow ridges and lowlands. The natural vegetation is cabbage palm, seagrape, scrub live oak, cacti, sea oats, and other native grasses. Palm Beach soils are nearly level to sloping and are excessively drained. They are deep, sandy soils that have a high content of fine shell fragments throughout with a surface layer of dark grayish brown. This overlies a thick pale brown layer with a light yellowish brown layer that extends to a depth of more than 80 inches. Canaveral soils are nearly level and are moderately well drained to somewhat poorly drained. Typically, they have a surface layer of dark grayish brown sand and shell fragments over layers of pale brown and very pale brown sand and shell fragments that extend below a depth of 65 inches. Limitations are slight for many urban uses and severe limitations do exist for structures designed for holding water, disposing of refuse, and recreational development.

Pomello Immokalee Association

This association is in the areas just west of the coastal ridge. It is made up of low knolls and ridges and broad flatwoods areas interspersed with sloughs and small depressions or ponds. The natural vegetation is slash pine, sand pine, scrub oak, saw-palmetto, inkberry, runner oak and native grasses. Pomello soils are nearly level to gently sloping and are moderately well drained. Typically, they have a thin surface layer of gray fine sand and thick subsurface layer of light gray to white fine sand. Black fine sand, weakly cemented with organic matter at a depth of 44 inches. Next is a thin layer of dark reddish brown sand that extends to a depth of more than 80 inches. Immokalee soils are nearly level and are poorly drained. Typically, they have a thin surface layer of black and dark fine sand over layers of gray and light gray fine sand. Below a depth of 37 inches is a layer of black and very dark gray fine sand over a thick layer of black fine sand, weakly cemented with organic matter. Below that is a dark reddish brown and brown fine sand. These soil associations have severe limitations for most urban uses unless fill material is used to elevate the ground level up to suitable drainage levels.

Myakka Immokalee Basinger Association

This association is in the eastern quarter of the County and is moderately extensive. It is made up of broad, flatwoods areas interspersed with grassy sloughs and many shallow depressions or ponds. The natural vegetation is slash pine, saw-palmetto, inkier, fetterbush, southern bayberry, and native grasses. Water-tolerant grasses and water plants grow in low, wet areas. Cypress trees are in some of these low, wet areas. Myakka soils are nearly level and are poorly drained. Typically, they have a surface layer of black sand over layers of gray sand. A layer of black sand is at a depth of 26 inches, and a layer of dark reddish brown sand is below that. These layers are weakly cemented with organic matter. Next, a layer of dark brown sand overlies a layer of pale brown sand. Myakka soils in depressions are covered with water for long periods of time. Immokalee soils are nearly level and poorly drained. Typically they have a thin surface layer of black and dark gray fine sand over thick layers of gray and light gray fine sand. A layer of black and very dark fine sand is at a depth of 37 inches. It overlies thick layers of black fine sand that are weakly cemented with organic matter. Basinger soils are nearly level and poorly drained. Typically, they have a thin surface layer of light gray fine sand and a thick subsurface layer of white fine sand. Below this are layers of dark grayish brown fine sand. Below this are layers of dark grayish brown fine sand and dark reddish brown fine sand that are stained with organic matter. Below this is a pale brown fine sand to a depth of 72 inches or more. Basinger soils in depressions are covered with water for long periods of time. This association has severe limitations for most urban uses and requires water control to overcome wetness and the addition of fill material is also needed to make some areas suitable for building sites.

Immokalee Urban Land Pompano Basinger Association

This association is only in areas west of the coastal ridge. It is made up of broad, low flatwoods, interspersed with grassy flatlands and marshy sloughs. The natural vegetation is slash pine, saw-palmetto, inkberry, and native grasses in the flatwoods areas. The lower flatlands have southern bayberry, scattered cabbage palm, and a wide variety of grasses. Maidencane, sawgrass, and other water tolerant plants are in most slough areas. Immokallee soils are nearly level and poorly drained. Typically they have a thin surface layer of black and dark gray fine sand over thick layers of gray and light gray fine sand. A layer of black and very dark fine sand is at a depth of 37 inches. It overlies thick layers of black fine sand that are weakly cemented with organic matter. Below this is a dark reddish brown and brown fine sand. Pompano soils are nearly level and are poorly drained. Typically, their surface layer is dark grayish brown fine sand. It overlies layers of light gray, pale brown, and very pale brown fine sand that extend to a depth of more than 80 inches. Basinger soils are also nearly level and are poorly drained. Typically, they have a thin surface layer of light gray fine sand and thick subsurface layer of fine sand. Layers of dark grayish brown fine sand and dark reddish brown fine sand that is stained with organic matter are between depths of 25 and 36 inches. Below this is a pale brown fine sand that extends to a depth of 72 inches or more. Much of this association is developed for urban use and therefore much of the natural vegetation has been removed. Drainage and water control structures help to overcome wetness that affects urban uses.

APPENDIX 10.6

EXISTING STATE PERMITS

FDEP TITLE V
AIR OPERATING PERMIT
NO. 099-00042-004-AV

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

PERMITTEE:
Florida Power and Light Company
200-300 Broadway
Riviera Beach, Florida 33404

Permit No. 0990042-004-AV
Riviera Plant
Facility ID No. 0990042
Title V Air Operation Permit Renewal

The purpose of this permit is to renew the Title V air operation permit for the above referenced facility. The existing Riviera Plant is located at 200-300 Broadway, Riviera Beach, in Palm Beach County. UTM coordinates are: Zone 17, 594.249 km East and 2960.632 km North. Latitude is: 26° 45' 55" North; and, Longitude is: 80° 03' 09" West.

The Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213 and 62-214. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawings, plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Effective Date: January 1, 2009
Renewal Application Due Date: May 20, 2013
Expiration Date: December 31, 2013

Joseph Kahn, Director
Division of Air Resource Management

JK/tlv/jkh/tbc

NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Florida Power and Light Company
200-300 Broadway
Riviera Beach, Florida 33404

Responsible Official:
Mr. Jeff Smith, Plant General Manager

Permit No. 0990042-004-AV
Riviera Plant
Title V Air Operation Permit Renewal
Palm Beach County

Enclosed is the final permit package to renew the Title V air operation permit for the Riviera Plant. The existing facility is located in Palm Beach County, at 200-300 Broadway, in Riviera Beach, Florida. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Jonathan Wilton
for Trina L. Vielhauer, Chief
Bureau of Air Regulation

TLV/jkh/tbc

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final Permit and Final Determination), or a link to these documents available electronically on a publicly accessible server, was sent by electronic mail with received receipt requested to the persons listed below:

Mr. Jeff Smith, Florida Power and Light Company: jeff_smith@fpl.com
Mr. Kennard Kosky, P.E., Golder Associates: kkosky@golder.com
Ms. Sheila M. Wilkinson, Florida Power and Light Company: Sheila_Wilkinson@fpl.com
Mr. James Stormer, Palm Beach County Health Department: james_stormer@doh.state.fl.us
Ms. Katy Forney, US EPA Region 4: forney.kathleen@epa.gov
Ms. Ana Oquendo, US EPA Region 4: oquendo.ana@epa.gov
Ms. Barbara Friday, DEP BAR: Barbara.Friday@dep.state.fl.us (for posting with U.S. EPA, Region 4)
Ms. Victoria Gibson, DEP BAR: victoria.gibson@dep.state.fl.us (for reading file)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

Barbara J. Friday 4/5/09
(Clerk) (Date)

APPENDIX A

ABBREVIATIONS, ACRONYMS, CITATIONS AND IDENTIFICATION NUMBERS

° F: degrees Fahrenheit

acfm: actual cubic feet per minute

AOR: Annual Operating Report

ARMS: Air Resource Management System (Department's database)

BACT: best available control technology

Btu: British thermal units

CAM: compliance assurance monitoring

CEMS: continuous emissions monitoring system

cfm: cubic feet per minute

CFR: Code of Federal Regulations

CO: carbon monoxide

COMS: continuous opacity monitoring system

DARM: Division of Air Resources Management

DCA: Department of Community Affairs

DEP: Department of Environmental Protection

Department: Department of Environmental Protection

dscfm: dry standard cubic feet per minute

EPA: Environmental Protection Agency

ESP: electrostatic precipitator (control system for reducing particulate matter)

EU: emissions unit

F.A.C.: Florida Administrative Code

F.D.: forced draft

F.S.: Florida Statutes

FGR: flue gas recirculation

Fl: fluoride

ft^2: square feet

ft^3: cubic feet

gpm: gallons per minute

gr: grains

HAP: hazardous air pollutant

Hg: mercury

I.D.: induced draft

ID: identification

ISO: International Standards Organization (refers to those conditions at 288 Kelvin, 60% relative humidity and 101.3 kilopascals pressure.)

kPa: kilopascals

LAT: Latitude

lb: pound

lbs/hr: pounds per hour
LONG: Longitude
MACT: maximum achievable technology
mm: millimeter
MMBtu: million British thermal units
MSDS: material safety data sheets
MW: megawatt
NESHAP: National Emissions Standards for Hazardous Air Pollutants
NO_X: nitrogen oxides
NSPS: New Source Performance Standards
O&M: operation and maintenance
O_2: oxygen
ORIS: Office of Regulatory Information Systems
OS: Organic Solvent
Pb: lead
PM: particulate matter
PM_{10}: particulate matter with a mean aerodynamic diameter of 10 microns or less
PSD: prevention of significant deterioration
psi: pounds per square inch
PTE: potential to emit
RACT: reasonably available control technology
RATA: relative accuracy test audit
RMP: Risk Management Plan
RO: Responsible Official
SAM: sulfuric acid mist
scf: standard cubic feet
scfm: standard cubic feet per minute
SIC: standard industrial classification code
SNCR: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)
SOA: Specific Operating Agreement
SO_2: sulfur dioxide
TPH: tons per hour
lbs/hr: pounds per hour
LONG: Longitude
MACT: maximum achievable technology
mm: millimeter
MMBtu: million British thermal units
MSDS: material safety data sheets

MW: megawatt

NESHAP: National Emissions Standards for Hazardous Air Pollutants

NO_X: nitrogen oxides

NSPS: New Source Performance Standards

O&M: operation and maintenance

O_2: oxygen

ORIS: Office of Regulatory Information Systems

OS: Organic Solvent

Pb: lead

PM: particulate matter

PM_{10}: particulate matter with a mean aerodynamic diameter of 10 microns or less

PSD: prevention of significant deterioration

psi: pounds per square inch

PTE: potential to emit

RACT: reasonably available control technology

RATA: relative accuracy test audit

RMP: Risk Management Plan

RO: Responsible Official

SAM: sulfuric acid mist

scf: standard cubic feet

scfm: standard cubic feet per minute

SIC: standard industrial classification code

SNCR: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)

SOA: Specific Operating Agreement

SO_2: sulfur dioxide

TPH: tons per hour

TPY: tons per year

UTM: Universal Transverse Mercator coordinate system

VE: visible emissions

VOC: volatile organic compounds

x: By or times

Citations:

The following examples illustrate the methods used in this permit to abbreviate and cite the references of rules, regulations, guidance memorandums, permit numbers and ID numbers.

Code of Federal Regulations:

Example: **[40 CFR 60.334]**

Where:	40	refers to	Title 40
	CFR	refers to	Code of Federal Regulations
	60	refers to	Part 60
	60.334	refers to	Regulation 60.334

Florida Administrative Code (F.A.C.) Rules:

Example: **[Rule 62-213.205, F.A.C.]**

Where:	62	refers to	Title 62
	62-213	refers to	Chapter 62-213
	62-213.205	refers to	Rule 62-213.205, F.A.C.

Identification Numbers:

Facility Identification (ID) Number:

Example: Facility ID No.: 1050221

Where:

105 = 3-digit number code identifying the facility is located in Polk County
0221 = 4-digit number assigned by state database.

Permit Numbers:

Example: 1050221-002-AV, or
1050221-001-AC

Where:
AC = Air Construction Permit
AV = Air Operation Permit (Title V Source)
105 = 3-digit number code identifying the facility is located in Polk County
0221= 4-digit number assigned by permit tracking database
001 or 002= 3-digit sequential project number assigned by permit tracking database

Example: PSD-FL-185
PA95-01
AC53-208321
Where:
PSD = Prevention of Significant Deterioration Permit
PA = Power Plant Siting Act Permit
AC53 = old Air Construction Permit numbering identifying the facility is located in Polk County

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the matter of:	)	
	)	
Florida Electric Power Coordinating Group, Inc.,	)	ASP No. 97-B-01
	)	
Petitioner.	)	

ORDER ON REQUEST
FOR
ALTERNATE PROCEDURES AND REQUIREMENTS

Pursuant to Rule 62-297.620, Florida Administrative Code (F.A.C.), the Florida Electric Coordinating Group, Incorporated, (FCG) petitioned for approval to: (1) Exempt fossil fuel steam generators which burn liquid and/or solid fuel for less than 400 hours during the federal fiscal year from the requirement to conduct an annual particulate matter compliance test; and, (2) Exempt fossil fuel steam generators which burn liquid and/or solid fuel for less than 400 hours during the federal fiscal year from the requirement to conduct an annual particulate matter compliance test during the year prior to renewal of an operation permit. This Order is intended to clarify particulate testing requirements for those fossil fuel steam generators which primarily burn gaseous fuels including, but not necessarily limited to natural gas.

Having considered the provisions of Rule 62-296.405(1), F.A.C., Rule 62-297.310(7), F.A.C., and all supporting documentation, the following Findings of Fact, Conclusions of Law, and Order are entered:

FINDINGS OF FACT

1. The Florida Electric Power Coordinating Group, Incorporated, petitioned the Department to exempt those fossil fuel steam generators which have a heat input of more than 250 million Btu per hour and burn solid and/or liquid fuel less than 400 hours during the year from the requirement to conduct an annual particulate matter compliance test. [Exhibit 1]

2. Rule 62-296.405(1)(a), F.A.C., applies to those fossil fuel steam generators that are not subject to the federal standards of performance for new stationary sources (NSPS) in 40 CFR 60 and which have a heat input of more than 250 million Btu per hour.

3. Rule 62-296.405(1)(a), F.A.C., limits visible emissions from affected fossil fuel steam generators to, "20 percent opacity except for either one six-minute period per hour during which

not exceed 40 percent. The option selected shall be specified in the emissions unit's construction and operation permits. Emissions units governed by this visible emission limit shall test for particulate emission compliance annually and as otherwise required by Rule 62-297, F.A.C."

4. Rule 62-296.405(1)(a), F.A.C., further states, "Emissions units electing to test for particulate matter emission compliance quarterly shall be allowed visible emissions of 40 percent opacity. The results of such tests shall be submitted to the Department. Upon demonstration that the particulate standard has been regularly complied with, the Secretary, upon petition by the applicant, shall reduce the frequency of particulate testing to no less than once annually.

5. Rule 297.310(7)(a)1., F.A.C., states, "The owner or operator of a new or modified emissions unit that is subject to an emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining an operation permit for such emissions unit."

6. Rule 297.310(7)(a)3., F.A.C., states, "The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision.

7. Rule 297.310(7)(a)3., F.A.C., further states, "In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal: a. Did not operate; or, b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours."

8. Rule 297.310(7)(a)4., F.A.C., states, "During each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for: a. Visible emissions, if there is an applicable standard; b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant..."

9. Rule 297.310(7)(a)5., F.A.C., states, "An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours."

10. Rule 297.310(7)(a)6., F.A.C., states, "For fossil fuel steam generators on a semi-annual particulate matter emission compliance testing schedule, a compliance test shall not be

required for any six-month period in which liquid and/or solid fuel is not burned for more than 200 hours other than during startup."

11. Rule 297.310(7)(a)7., F.A.C., states, "For emissions units electing to conduct particulate matter emission compliance testing quarterly pursuant to Rule 62-296.405(2)(a), F.A.C., a compliance test shall not be required for any quarter in which liquid and/or solid fuel is not burned for more than 100 hours other than during startup." [Note: The reference should be to Rule 62-296.405(1)(a), F.A.C., rather than Rule 62-296.405(2)(a), F.A.C.]

12. The fifth edition of the U. S. Environmental Protection Agency's Compilation of Air Pollutant Emission Factors, AP-42, that emissions of filterable particulate from gas-fired fossil fuel steam generators with a heat input of more than about 10 million Btu per hour may be expected to range from 0.001 to 0.006 pound per million Btu. [Exhibit 2]

13. Rule 62-296.405(1)(b), F.A.C. and the federal standards of performance for new stationary sources in 40 CFR 60.42, Subpart D, limit particulate emissions from uncontrolled fossil fuel fired steam generators with a heat input of more than 250 million Btu to 0.1 pound per million Btu.

CONCLUSIONS OF LAW

1. The Department has jurisdiction to consider the matter pursuant to Section 403.061, Florida Statutes (F.S.), and Rule 62-297.620, F.A.C.

2. Pursuant to Rule 62-297.310(7), F.A.C., the Department may require Petitioner to conduct compliance tests that identify the nature and quantity of pollutant emissions, if, after investigation, it is believed that any applicable emission standard or condition of the applicable permits is being violated.

3. There is reason to believe that a fossil fuel steam generator which does not burn liquid and/or solid fuel (other than during startup) for a total of more than 400 hours in a federal fiscal year and complies with all other applicable limits and permit conditions is in compliance with the applicable particulate mass emission limiting standard.

ORDER

Having considered the requirements of Rule 62-296.405, F.A.C., Rule 62-297.310, F.A.C., and supporting documentation, it is hereby ordered that:

1. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours;

2. For fossil fuel steam generators on a semi-annual particulate matter emission compliance testing schedule, a compliance test shall not be required for any six-month period in which liquid and/or solid fuel is not burned for more than 200 hours other than during startup;

3. For emissions units electing to conduct particulate matter emission compliance testing quarterly pursuant to Rule 62-296.405(1)(a), F.A.C., a compliance test shall not be required for any quarter in which liquid and/or solid fuel is not burned for more than 100 hours other than during startup;

4. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of particulate matter emission compliance test results for any fossil fuel steam generator emissions unit that burned liquid and/or solid fuel for a total of no more than 400 hours during the year prior to renewal.

5. Pursuant to Rule 62-297.310(7), F.A.C., owners of affected fossil fuel steam generators may be required to conduct compliance tests that identify the nature and quantity of pollutant emissions, if, after investigation, it is believed that any applicable emission standard or condition of the applicable permits is being violated.

6. Pursuant to Rule 62-297.310(8), F.A.C., owners of affected fossil fuel steam generators shall submit the compliance test report to the District Director of the Department district office having jurisdiction over the emissions unit and, where applicable, the Air Program Administrator of the appropriate Department-approved local air program within 45 days of completion of the test.

PETITION FOR ADMINISTRATIVE REVIEW

The Department will take the action described in this Order unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 of the Florida Statutes, or a party requests mediation as an alternative remedy under section 120.573 before the deadline for filing a petition. Choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement. The procedures for petitioning for a hearing are set forth below, followed by the procedures for requesting mediation.

A person whose substantial interests are affected by the Department's proposed decision may petition for an administrative hearing in accordance with sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Petitions must be filed within 21 days of receipt of this Order. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition (or a request for mediation, as discussed below) within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 of

the Florida Statutes, or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department File Number, and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by each petitioner, if any;

(e) A statement of facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement identifying the rules or statutes each petitioner contends require reversal or modification of the Department's action or proposed action; and,

(g) A statement of the relief sought by each petitioner, stating precisely the action each petitioner wants the Department to take with respect to the Department's action or proposed action in the notice of intent.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this Order. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A person whose substantial interests are affected by the Department's proposed decision, may elect to pursue mediation by asking all parties to the proceeding to agree to such mediation and by filing with the Department a request for mediation and the written agreement of all such parties to mediate the dispute. The request and agreement must be filed in (received by) the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, by the same deadline as set forth above for the filing of a petition.

A request for mediation must contain the following information:

(a) The name, address, and telephone number of the person requesting mediation and that person's representative, if any;

(b) A statement of the preliminary agency action;

(c) A statement of the relief sought; and

(d) Either an explanation of how the requester's substantial interests will be affected by the action or proposed action addressed in this notice of intent or a statement clearly identifying the petition for hearing that the requester has already filed, and incorporating it by reference.

The agreement to mediate must include the following:

(a) The names, addresses, and telephone numbers of any persons who may attend the mediation;

(b) The name, address, and telephone number of the mediator selected by the parties, or a provision for selecting a mediator within a specified time;

(c) The agreed allocation of the costs and fees associated with the mediation;

(d) The agreement of the parties on the confidentiality of discussions and documents introduced during mediation;

(e) The date, time, and place of the first mediation session, or a deadline for holding the first session, if no mediator has yet been chosen;

(f) The name of each party's representative who shall have authority to settle or recommend settlement; and

(g) The signatures of all parties or their authorized representatives.

As provided in section 120.573 of the Florida Statutes, the timely agreement of all parties to mediate will toll the time limitations imposed by sections 120.569 and 120.57 for requesting and holding an administrative hearing. Unless otherwise agreed by the parties, the mediation must be concluded within sixty days of the execution of the agreement. If mediation results in settlement of the administrative dispute, the Department must enter a final order incorporating the agreement of the parties. Persons whose substantial interests will be affected by such a modified final decision of the Department have a right to petition for a hearing only in accordance with the requirements for such petitions set forth above. If mediation terminates without settlement of the dispute, the Department shall notify all parties in writing that the administrative hearing processes under sections 120.569 and 120.57 remain available for disposition of the dispute, and the notice will

specify the deadlines that then will apply for challenging the agency action and electing remedies under those two statutes.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under section 120.542 of the Florida Statutes. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000.

The petition must specify the following information:

(a) The name, address, and telephone number of the petitioner;

(b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any;

(c) Each rule or portion of a rule from which a variance or waiver is requested;

(d) The citation to the statute underlying (implemented by) the rule identified in (c) above;

(e) The type of action requested;

(f) The specific facts that would justify a variance or waiver for the petitioner;

(g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and

(h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver, when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in section 120.542(2) of the Florida Statutes, and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner. Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully

each of those terms is defined in section 120.542(2) of the Florida Statutes, and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner. Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

This Order constitutes final agency action unless a petition is filed in accordance with the above paragraphs. Upon timely filing of a petition, this Order will not be effective until further Order of the Department.

RIGHT TO APPEAL

Any party to this Order has the right to seek judicial review of the Order pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000; and, by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Notice of Agency Action is filed with the Clerk of the Department.

DONE AND ORDERED this 17 day of March, 1997 in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Howard L. Rhodes

HOWARD L. RHODES, Director
Division of Air Resources Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
(904) 488-0114

—Page 8 of 8—

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that a copy of the foregoing was mailed to Rich Piper, Chair, Florida Power Coordinating Group, Inc., 405 Reo Street, Suite 100, Tampa, Florida 33609-1004, on this 18th day of March 1997.

Clerk Stamp

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to §120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Martha McWise 3-18-97
Clerk Date

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the matter of:	)	
	)	
Florida Electric Power Coordinating Group, Inc.,	)	ASP No. 97-B-01
	)	
Petitioner.	)	

ORDER CORRECTING SCRIVENER'S ERROR

The Order which authorizes owners of natural gas fired fossil fuel steam generators to forgo particulate matter compliance testing on an annual basis and prior to renewal of an operation permit entered on the 17th day of March, 1997, is hereby corrected on page 4, paragraph number 4, by deleting the words "pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C.":

4. In renewing an air operation permit ~~pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C.,~~ the Department shall not require submission of particulate matter emission compliance test results for any fossil fuel steam generator emissions unit that burned liquid and/or solid fuel for a total of no more than 400 hours during the year prior to renewal.

DONE AND ORDERED this 2 day of July, 1997 in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

HOWARD L. RHODES, Director
Division of Air Resources Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
(904) 488-0114

The above two documents comprise Appendix ASP.

APPENDIX I

LIST OF INSIGNIFICANT EMISSIONS UNITS AND/OR ACTIVITIES

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, or that meet the criteria specified in Rule 62-210.300(3)(b)1., F.A.C., Generic Emissions Unit Exemption, are exempt from the permitting requirements of Chapters 62-210, 62-212 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

Brief Description of Emissions Units and/or Activities

1. Evaporation of boiler chemical cleaning waste
2. Natural gas metering area relief valves
3. Hydrazine mixing tank
4. Fuel oil storage tanks and related systems
5. Lube oil system
6. Oil/water separators and related equipment
7. Hazardous waste building
8. Paint and lube buildings
9. Misc. mobile vehicle operation

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STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of: Petition for Reduction in Quarterly Particulate Emissions Compliance Testing; FLORIDA POWER AND LIGHT COMPANY, Petitioner.	OGC Case Nos.: 83-0578 83-0577, 83-0576, 83-0585, 83-0586, 83-0587, 83-0588 83-0581, 83-0580

ORDER GRANTING PETITION FOR REDUCED FREQUENCY OF PARTICULATE TESTING

On September 16, 1983, the Petitioner, FLORIDA POWER AND LIGHT COMPANY, filed a Petition for Reduction in Quarterly Particulate Emissions Compliance Testing pursuant to Florida Administrative Code Rule 17-2.600(5)(b)1 for the following fossil fuel steam generating units:

Port Everglades Plant Unit No. 2
Port Everglades Plant Unit No. 3
Port Everglades Plant Unit No. 4
Turkey Point Plant Unit No. 1
Turkey Point Plant Unit No. 2
Riveria Plant Unit No. 3
Riveria Plant Unit No. 4
Manatee Plant Unit No. 1
Manatee Plant Unit No. 2

Each of the units has a heat input exceeding 250 million Btu per hour.

The petition and supporting documentation submitted by the Petitioner indicate that between August 1979 and July 21, 1983, these units were afforded relief from the particulate standard contained in Florida Administrative Code Rule 17-2.600(5)(b)2 under the terms of a Department-issued variance. During the same period of time the Company elected to test quarterly as permitted under Rule 17-2.600(5)(b)1. Despite the existence of the variance, the tests results submitted during the last two years reveal that each of the above-listed units met the particulate emissions limitations contained in Rule 17-2.600(5)(b)2 of 0.1 pounds per million Btu heat input.

Florida Administrative Code Rule 17-2.600(5)(b)1 specifically provides that I may reduce the frequency of particulate testing

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To Scott Sheplak	From RICH PIPER
Co.	Co.
Dept.	Phone #
Fax #	Fax #

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upon a demonstration that the particulate standard has been regularly met. The particulate standard referred to is the general standard found in the rule--0.1 parts per million BTU heat input--not a relaxed emission limit established by a variance.

The intent of Rule 17-2.600(5)(b)1 is to ensure that before the frequency of particulate testing is reduced, the source has established a record of complying with the requirements of Florida Administrative Code Chapter 17-2 relating to particulate matter emissions. Petitioner has documented that each of these units has a history of regulary complying with the particulate matter standard applicable to them.

IT IS ORDERED that the present petition is GRANTED. Under the terms of Rule 17-2.600(5)(b)1, Petitioner may reduce the frequency of particulate testing to an annual basis for each of the units named in this Order. If, however, any of the units fails to comply with the applicable particulate or visible emission standard, this Order will terminate upon written notice by the Department.

The Petitioner may request a hearing in accordance with Section 120.57, Florida Statutes, and Florida Administrative Code Chapters 17-1 and 28-5. The request for hearing must be filed (received) in the Office of General Counsel of the Department, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within (14) days of receipt of this Order. Failure to file a request for hearing within this time shall constitute a waiver of Petitioner's right to request a hearing under Section 120.57, Florida Statutes.

DONE and ORDERED this 24 day of April, 1984.

FILING AND ACKNOWLEDGEMENT
Filed on this date, pursuant to §120.52 (9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk Date

VICTORIA J. TSCHINKEL
Secretary

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION
2600 Blair Stone Road
Tallahassee, Florida 32301
(904)488-4805

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing Order Denying Petition for Reduced Frequency of Particulate Testing and the Order Granting Petition for Reduced Frequency of Particulate Testing have been furnished by U.S. Mail to Peter C. Cunningham, Esquire, Hopping Boyd Green and Sams, Post Office Box 6526, Tallahassee, Florida 32314 this 25th day of April, 1984.

Nancy E. Wright
NANCY E. WRIGHT
Assistant General Counsel

State of Florida Department
of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301
904/488-0730

FACILITY-WIDE REPORTING REQUIREMENTS

RR1. Reporting Schedule.

Report	Reporting Deadline(s)	Related Condition(s)
Plant Problems/Permit Deviations	Immediately upon occurrence (See RR2.d.)	RR2, RR3
Semi-Annual Monitoring Report	Every 6 months	RR4
Annual Operating Report	March 1	RR5
Annual Emissions Fee Form and Fee	March 1	RR6
Annual Statement of Compliance	Within 60 days after the end of each calendar year (or more frequently if specified by Rule 62-213.440(2), F.A.C., or by any other applicable requirement); and Within 60 days after submittal of a written agreement for transfer of responsibility, or Within 60 days after permanent shutdown.	RR7
Notification of Administrative Permit Corrections	As needed	RR8
Notification of Startup after Shutdown for More than One Year	Minimum of 60 days prior to the intended startup date or, if emergency startup, as soon as possible after the startup date is ascertained	RR9
Permit Renewal Application	225 days prior to the expiration date of permit	RR17

{Permitting Note: See permit Section III. Emissions Units and Specific Conditions, for any additional Emission Unit-specific reporting requirements.}

RR2. Reports of Problems.

a. Plant Operation-Problems. If the permittee is temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules.

b. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
   (1) A description of and cause of noncompliance; and
   (2) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

c. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

d. "Immediately" shall mean the same day, if during a workday (i.e., 8:00 a.m. - 5:00 p.m.), or the first business day after the incident, excluding weekends and holidays; and, for purposes of Rule 62-4.160(15) and 40 CFR 70.6(a)(3)(iii)(B), "promptly" or "prompt" shall have the same meaning as "immediately".

FACILITY-WIDE REPORTING REQUIREMENTS

[Rule 62-4.130, Rule 62-4.160(8), Rule 62-4.160(15), and Rule 62-213.440(1)(b), F.A.C.; 40 CFR 70.6(a)(3)(iii)(B)]

RR3. Reports of Deviations from Permit Requirements. The permittee shall report in accordance with the requirements of Rule 62-210.700(6), F.A.C. (below), and Rule 62-4.130, F.A.C. (condition RR2.), deviations from permit requirements, including those attributable to upset conditions as defined in the permit. Reports shall include the probable cause of such deviations, and any corrective actions or preventive measures taken.

Rule 62-210.700(6): In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. (See condition RR2.). A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.

[Rules 62-213.440(1)(b)3.b., and 62-210.700(6)F.A.C.]

RR4. Semi-Annual Monitoring Reports. The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports. [Rule 62-213.440(1)(b)3.a., F.A.C.]

RR5. Annual Operating Report.

a. The permittee shall submit to the Compliance Authority, each calendar year, on or before March 1, a completed DEP Form No 62-213.900(5), F.A.C., "Annual Operating Report for Air Pollutant Emitting Facility", for the preceding calendar year.

b. Emissions shall be computed in accordance with the provisions of Rule 62-210.370(2), F.A.C.

[Rules 62-210.370(2) & (3), and 62-213.440(3)2., F.A.C.]

RR6. Annual Emissions Fee Form and Fee. Each Title V source permitted to operate in Florida must pay between January 15 and March 1 of each year, upon written notice from the Department, an annual emissions fee in an amount determined as set forth in Rule 62-213.205(1), F.A.C.

a. If the Department has not received the fee by February 15 of the year following the calendar year for which the fee is calculated, the Department will send the primary responsible official of the Title V source a written warning of the consequences for failing to pay the fee by March 1. If the fee is not postmarked by March 1 of the year due, the Department shall impose, in addition to the fee, a penalty of 50 percent of the amount of the fee unpaid plus interest on such amount computed in accordance with Section 220.807, F.S. If the Department determines that a submitted fee was inaccurately calculated, the Department shall either refund to the permittee any amount overpaid or notify the permittee of any amount underpaid. The Department shall not impose a penalty or interest on any amount underpaid, provided that the permittee has timely remitted payment of at least 90 percent of the amount determined to be due and remits full payment within 60 days after receipt of notice of the amount underpaid. The Department shall waive the collection of underpayment and shall not refund overpayment of the fee, if the amount is less than 1 percent of the fee due, up to $50.00. The Department shall make every effort to provide a timely assessment of the adequacy of the submitted fee. Failure to pay timely any required annual emissions fee, penalty, or interest constitutes grounds for permit revocation pursuant to Rule 62-4.100, F.A.C.

b. Any documentation of actual hours of operation, actual material or heat input, actual production amount, or actual emissions used to calculate the annual emissions fee shall be retained by the owner for a minimum of five (5) years and shall be made available to the Department upon request.

c. A completed DEP Form 62-213.900(1), "Major Air Pollution Source Annual Emissions Fee Form", must be submitted by a responsible official with the annual emissions fee.

[Rules 62-213.205(1), (1)(g), (1)(i) & (1)(j), F.A.C.]

RR7. Annual Statement of Compliance.

a. The permittee shall submit a Statement of Compliance with all terms and conditions of the permit that includes all the provisions of 40 CFR 70.6(c)(5)(iii), incorporated by reference at Rule 62-204.800, F.A.C., using DEP Form No. 62-213.900(7). Such statement shall be accompanied by a certification in accordance with Rule 62-213.420(4), F.A.C., for Title V requirements and with Rule 62-214.350, F.A.C.,

for Acid Rain requirements. Such statements shall be submitted (postmarked) to the Department and EPA:

(1) Annually, within 60 days after the end of each calendar year during which the Title V permit was effective, or more frequently if specified by Rule 62-213.440(2), F.A.C., or by any other applicable requirement; and

(2) Within 60 days after submittal of a written agreement for transfer of responsibility as required pursuant to 40 CFR 70.7(d)(1)(iv), adopted and incorporated by reference at Rule 62-204.800, F.A.C., or within 60 days after permanent shutdown of a facility permitted under Chapter 62-213, F.A.C.; provided that, in either such case, the reporting period shall be the portion of the calendar year the permit was effective up to the date of transfer of responsibility or permanent facility shutdown, as applicable.

b. In lieu of individually identifying all applicable requirements and specifying times of compliance with, non-compliance with, and deviation from each, the responsible official may use DEP Form No. 62-213.900(7) as such statement of compliance so long as the responsible official identifies all reportable deviations from and all instances of non-compliance with any applicable requirements and includes all information required by the federal regulation relating to each reportable deviation and instance of non-compliance.

c. The responsible official may treat compliance with all other applicable requirements as a surrogate for compliance with Rule 62-296.320(2), Objectionable Odor Prohibited.

[Rules 62-213.440(3)(a)2. & 3. and (b), F.A.C.]

RR8. Notification of Administrative Permit Corrections.

a. A facility owner shall notify the Department by letter of minor corrections to information contained in a permit. Such notifications shall include:

(1) Typographical errors noted in the permit;

(2) Name, address or phone number change from that in the permit;

(3) A change requiring more frequent monitoring or reporting by the permittee;

(4) A change in ownership or operational control of a facility, subject to the following provisions:

(a) The Department determines that no other change in the permit is necessary;

(b) The permittee and proposed new permittee have submitted an Application for Transfer of Air Permit, and the Department has approved the transfer pursuant to Rule 62-210.300(7), F.A.C.; and

(c) The new permittee has notified the Department of the effective date of sale or legal transfer.

(5) Changes listed at 40 CFR 72.83(a)(1), (2), (6), (9) and (10), adopted and incorporated by reference at Rule 62-204.800, F.A.C., and changes made pursuant to Rules 62-214.340(1) and (2), F.A.C., to Title V sources subject to emissions limitations or reductions pursuant to 42 USC ss. 7651-7651o;

(6) Changes listed at 40 CFR 72.83(a)(11) and (12), adopted and incorporated by reference at Rule 62-204.800, F.A.C., to Title V sources subject to emissions limitations or reductions pursuant to 42 USC ss. 7651-7651o, provided the notification is accompanied by a copy of any EPA determination concerning the similarity of the change to those listed at Rule 62-210.360(1)(e), F.A.C.; and

(7) Any other similar minor administrative change at the source.

b. Upon receipt of any such notification, the Department shall within 60 days correct the permit and provide a corrected copy to the owner.

c. After first notifying the owner, the Department shall correct any permit in which it discovers errors of the types listed at Rules 62-210.360(1)(a) and (b), F.A.C., and provide a corrected copy to the owner.

d. For Title V source permits, other than general permits, a copy of the corrected permit shall be provided to EPA and any approved local air program in the county where the facility or any part of the facility is located.

[Rule 62-210.360, F.A.C.]

RR9. **Not federally enforceable.** Notification of Startup. The owners or operator of any emissions unit or facility which has a valid air operation permit which has been shut down more than one year, shall notify

the Department in writing of the intent to start up such emissions unit or facility, a minimum of 60 days prior to the intended startup date.

a. The notification shall include information as to the startup date, anticipated emission rates or pollutants released, changes to processes or control devices which will result in changes to emission rates, and any other conditions which may differ from the valid outstanding operation permit.
b. If, due to an emergency, a startup date is not known 60 days prior thereto, the owner shall notify the Department as soon as possible after the date of such startup is ascertained.

[Rule 62-210.300(5), F.A.C.]

RR10. Report Submission. The permittee shall submit all compliance related notifications and reports required of this permit to the Compliance Authority. {See front of permit for address and phone number.}

RR11. EPA Report Submission. Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to: Air, Pesticides & Toxics Management Division, United States Environmental Protection Agency, Region 4, Sam Nunn Atlanta Federal Center, 61 Forsyth Street SW, Atlanta, GA 30303-8960. Phone: 404/562-9077.

RR12. Acid Rain Report Submission. Acid Rain Program Information shall be submitted, as necessary, to: Department of Environmental Protection, 2600 Blair Stone Road, Mail Station #5510, Tallahassee, Florida 32399-2400. Phone: 850/488-6140. Fax: 850/922-6979.

RR13. Report Certification. All reports shall be accompanied by a certification by a responsible official, pursuant to Rule 62-213.420(4), F.A.C. [Rule 62-213.440(1)(b)3.c, F.A.C.]

RR14. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information. [Rule 62-213.420(4), F.A.C.]

RR15. Confidential Information. Whenever an applicant submits information under a claim of confidentiality pursuant to Section 403.111, F.S., the applicant shall also submit a copy of all such information and claim directly to EPA. Any permittee may claim confidentiality of any data or other information by complying with this procedure. [Rules 62-213.420(2), and 62-213.440(1)(d)6., F.A.C.]

RR16. Forms and Instructions. The forms used by the Department in the Title V source operation program are adopted and incorporated by reference in Rule 62-213.900, F.A.C. The form is listed by rule number, which is also the form number, and with the subject, title, and effective date. Copies of forms may be obtained by writing to the Department of Environmental Protection, Division of Air Resource Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, by contacting the appropriate permitting authority or by accessing the Department's .

a. Major Air Pollution Source Annual Emissions Fee Form. (Effective 01/03/2001)
b. Statement of Compliance Form. (Effective 06/02/2002)
c. Responsible Official Notification Form. (Effective 06/02/2002)

[Rule 62-213.900, F.A.C.: Forms (1), (7) and (8)]

RR17. Permit Renewal. For purposes of a permit renewal, a timely application is one that is submitted 225 days before the expiration of a permit that expires on or after June 1, 2009. [Rule 62-213.420(1)(a)2., F.A.C.]

FACILITY-WIDE TESTING REQUIREMENTS

Unless otherwise specified in the permit, the following testing requirements apply to each emissions unit for which testing is required. The terms "stack" and "duct" are used interchangeably in this appendix.

TR1. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]

TR2. Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. [Rule 62-297.310(2), F.A.C.]

TR3. Calculation of Emission Rate. For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

TR4. Applicable Test Procedures.

a. *Required Sampling Time.*

(1) Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

(2) Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

(a) For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.

(b) The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.

(c) The minimum observation period for opacity tests conducted by employees or agents of the

Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

b. *Minimum Sample Volume.* Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet.

c. *Required Flow Rate Range.* For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

d. *Calibration of Sampling Equipment.* Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.

TABLE 297.310-1 CALIBRATION SCHEDULE

ITEM	MINIMUM CALIBRATION FREQUENCY	REFERENCE INSTRUMENT	TOLERANCE
Liquid in glass thermometer	Annually	ASTM Hg in glass ref. thermometer or equivalent or thermometric points	+/-2%
Bimetallic thermometer	Quarterly	Calib. liq. in glass	5° F
Thermocouple	Annually	ASTM Hg in glass ref. thermometer, NBS calibrated reference and potentiometer	5° F
Barometer	Monthly	Hg barometer or NOAA station	+/-1% scale
Pitot Tube	When required or when damaged	By construction or measurements in wind tunnel D greater than 16" and standard pitot tube	See EPA Method 2, Fig. 2-2 & 2-3
Probe Nozzles	Before each test or when nicked, dented, or corroded	Micrometer	+/- 0.001" mean of at least three readings; Max. deviation between readings, 0.004"
Dry Gas Meter and Orifice Meter	1. Full Scale: When received, when 5% change observed, annually	Spirometer or calibrated wet test or dry gas test meter	2%
	2. One Point: Semiannually		
	3. Check after each test series	Comparison check	5%

e. *Allowed Modification to EPA Method 5.* When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.]

TR5. Determination of Process Variables.

a. *Required Equipment.* The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

b. *Accuracy of Equipment.* Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

TR6. Sampling Facilities. Permittees that are required to sample mass emissions from point sources shall install stack sampling ports and provide sampling facilities that meet the requirements of this condition. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must also comply with all applicable Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.

a. *Permanent Test Facilities.* The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent stack sampling facilities.

b. *Temporary Test Facilities.* The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.

c. *Sampling Ports.*

(1) All sampling ports shall have a minimum inside diameter of 3 inches.

(2) The ports shall be capable of being sealed when not in use.

(3) The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.

(4) For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.

(5) On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.

d. *Work Platforms.*

(1) Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.

(2) On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.

(3) On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees

around the stack.

(4) All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toe board, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.

e. *Access to Work Platform.*

(1) Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.

(2) Walkways over free-fall areas shall be equipped with safety rails and toe boards.

f. *Electrical Power.*

(1) A minimum of two 120-volt AC, 20-amp outlets shall be provided at the sampling platform within 20 feet of each sampling port.

(2) If extension cords are used to provide the electrical power, they shall be kept on the plant's property and be available immediately upon request by sampling personnel.

g. *Sampling Equipment Support.*

(1) A three-quarter inch eyebolt and an angle bracket shall be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts.

(a) The bracket shall be a standard 3 inch × 3 inch × one-quarter inch equal-legs bracket which is 1 and one-half inches wide. A hole that is one-half inch in diameter shall be drilled through the exact center of the horizontal portion of the bracket. The horizontal portion of the bracket shall be located 14 inches above the centerline of the sampling port.

(b) A three-eighth inch bolt which protrudes 2 inches from the stack may be substituted for the required bracket. The bolt shall be located 15 and one-half inches above the centerline of the sampling port.

(c) The three-quarter inch eyebolt shall be capable of supporting a 500 pound working load. For stacks that are less than 12 feet in diameter, the eyebolt shall be located 48 inches above the horizontal portion of the angle bracket. For stacks that are greater than or equal to 12 feet in diameter, the eyebolt shall be located 60 inches above the horizontal portion of the angle bracket. If the eyebolt is more than 120 inches above the platform, a length of chain shall be attached to it to bring the free end of the chain to within safe reach from the platform.

(2) A complete monorail or dual rail arrangement may be substituted for the eyebolt and bracket.

(3) When the sample ports are located in the top of a horizontal duct, a frame shall be provided above the port to allow the sample probe to be secured during the test.

[Rule 62-297.310(6), F.A.C.]

TR7. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

a. *General Compliance Testing.*

(1) The owner or operator of a new or modified emissions unit that is subject to an emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining an operation permit for such emissions unit.

(2) For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid and/or solid fuel for more than 400 hours other than during startup.

(3) The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct

an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to sub-subparagraph 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

(a) Did not operate; or

(b) In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.

(4) During each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

(a) Visible emissions, if there is an applicable standard;

(b) Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and

(c) Each NESHAP pollutant, if there is an applicable emission standard.

(5) An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.

(6) For fossil fuel steam generators on a semi-annual particulate matter emission compliance testing schedule, a compliance test shall not be required for any six-month period in which liquid and/or solid fuel is not burned for more than 200 hours other than during startup.

(7) For emissions units electing to conduct particulate matter emission compliance testing quarterly pursuant to paragraph 62-296.405(2)(a), F.A.C., a compliance test shall not be required for any quarter in which liquid and/or solid fuel is not burned for more than 100 hours other than during startup.

(8) Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.

(9) The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(10) An annual compliance test conducted for visible emissions shall not be required for units exempted from air permitting pursuant to subsection 62-210.300(3), F.A.C.; units determined to be insignificant pursuant to subparagraph 62-213.300(2)(a)1., A.C., or paragraph 62-213.430(6)(b), F.A.C.; or units permitted under the General Permit provisions in paragraph 62-210.300(4)(a) or Rule 62-213.300, F.A.C., unless the general permit specifically requires such testing.

b. *Special Compliance Tests.* When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

c. *Waiver of Compliance Test Requirements.* If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the

compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of paragraph 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.]

TR8. Test Reports.

a. The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.

b. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.

c. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information.

(1) The type, location, and designation of the emissions unit tested.
(2) The facility at which the emissions unit is located.
(3) The owner or operator of the emissions unit.
(4) The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
(5) The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
(6) The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
(7) A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
(8) The date, starting time and duration of each sampling run.
(9) The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
(10) The number of points sampled and configuration and location of the sampling plane.
(11) For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
(12) The type, manufacturer and configuration of the sampling equipment used.
(13) Data related to the required calibration of the test equipment.
(14) Data on the identification, processing and weights of all filters used.
(15) Data on the types and amounts of any chemical solutions used.
(16) Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
(17) The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
(18) All measured and calculated data required to be determined by each applicable test procedure for each run.
(19) The detailed calculations for one run that relate the collected data to the calculated emission rate.
(20) The applicable emission standard and the resulting maximum allowable emission rate for the emissions unit plus the test result in the same form and unit of measure.
(21) A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or

his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

TITLE V GENERAL CONDITIONS

(Version dated 9/12/2008)

Operation

TV1. General Prohibition. A permitted installation may only be operated, maintained, constructed, expanded or modified in a manner that is consistent with the terms of the permit.
[Rule 62-4.030, Florida Administrative Code (F.A.C.)]

TV2. Validity. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department. [Rule 62-4.160(2), F.A.C.]

TV3. Proper Operation and Maintenance. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules. [Rule 62-4.160(6), F.A.C.]

TV4. **Not Federally Enforceable.** Health, Safety and Welfare. To ensure protection of public health, safety, and welfare, any construction, modification, or operation of an installation which may be a source of pollution, shall be in accordance with sound professional engineering practices pursuant to Chapter 471, F.S. [Rule 62-4.050(3), F.A.C.]

TV5. Continued Operation. An applicant making timely and complete application for permit, or for permit renewal, shall continue to operate the source under the authority and provisions of any existing valid permit or Florida Electrical Power Plant Siting Certification, and in accordance with applicable requirements of the Acid Rain Program, applicable requirements of the CAIR Program, and applicable requirements of the Hg Budget Trading Program, until the conclusion of proceedings associated with its permit application or until the new permit becomes effective, whichever is later, provided the applicant complies with all the provisions of subparagraphs 62-213.420(1)(b)3., F.A.C. [Rules 62-213.420(1)(b)2., F.A.C.]

TV6. Changes Without Permit Revision. Title V sources having a valid permit issued pursuant to Chapter 62-213, F.A.C., may make the following changes without permit revision, provided that sources shall maintain source logs or records to verify periods of operation:

a. Permitted sources may change among those alternative methods of operation;
b. A permitted source may implement operating changes, as defined in Rule 62-210.200, F.A.C., after the source submits any forms required by any applicable requirement and provides the Department and EPA with at least 7 days written notice prior to implementation. The source and the Department shall attach each notice to the relevant permit;
   (1) The written notice shall include the date on which the change will occur, and a description of the change within the permitted source, the pollutants emitted and any change in emissions, and any term or condition becoming applicable or no longer applicable as a result of the change;
   (2) The permit shield described in Rule 62-213.460, F.A.C., shall not apply to such changes;
c. Permitted sources may implement changes involving modes of operation only in accordance with Rule 62-213.415, F.A.C.

[Rule 62-213.410, F.A.C.]

TV7. Circumvention. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

Compliance

TV8. Compliance with Chapter 403, F.S., and Department Rules. Except as provided at Rule 62-213.460, Permit Shield, F.A.C., the issuance of a permit does not relieve any person from complying with the requirements of Chapter 403, F.S., or Department rules. [Rule 62-4.070(7), F.A.C.]

TV9. Compliance with Federal, State and Local Rules. Except as provided at Rule 62-213.460, F.A.C., issuance of a permit does not relieve the owner or operator of a facility or an emissions unit from complying

with any applicable requirements, any emission limiting standards or other requirements of the air pollution rules of the Department or any other such requirements under federal, state, or local law. [Rule 62-210.300, F.A.C.]

TV10. Binding and enforceable. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions. [Rule 62-4.160(1), F.A.C.]

TV11. Timely information. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly. [Rule 62-4.160(15), F.A.C.]

TV12. Halting or reduction of source activity. It shall not be a defense for a permittee in an enforcement action that maintaining compliance with any permit condition would necessitate halting of or reduction of the source activity. [Rule 62-213.440(1)(d)3., F.A.C.]

TV13. Final permit action. Any Title V source shall comply with all the terms and conditions of the existing permit until the Department has taken final action on any permit renewal or any requested permit revision, except as provided at Rule 62-213.412(2), F.A.C. [Rule 62-213.440(1)(d)4., F.A.C.]

TV14. Sudden and unforeseeable events beyond the control of the source. A situation arising from sudden and unforeseeable events beyond the control of the source which causes an exceedance of a technology-based emissions limitation because of unavoidable increases in emissions attributable to the situation and which requires immediate corrective action to restore normal operation, shall be an affirmative defense to an enforcement action in accordance with the provisions and requirements of 40 CFR 70.6(g)(2) and (3), hereby adopted and incorporated by reference. [Rule 62-213.440(1)(d)5., F.A.C.]

TV15. Permit Shield. Except as provided in Chapter 62-213, F.A.C., compliance with the terms and conditions of a permit issued pursuant to Chapter 62-213, F.A.C., shall, as of the effective date of the permit, be deemed compliance with any applicable requirements in effect, provided that the source included such applicable requirements in the permit application. Nothing in this condition or in any permit shall alter or affect the ability of EPA or the Department to deal with an emergency, the liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance, or the requirements of the Federal Acid Rain Program, the CAIR Program. [Rule 62-213.460, F.A.C.]

Permit Procedures

TV16. Permit Revision Procedures. The permittee shall revise its permit as required by Rules 62-213.400, 62-213.412, 62-213.420, 62-213.430 & 62-4.080, F.A.C.; and, in addition, the Department shall revise permits as provided in Rule 62-4.080, F.A.C. & 40 CFR 70.7(f).

TV17. Permit Renewal. The permittee shall renew its permit as required by Rules 62-4.090, 62.213.420(1) and 62-213.430(3), F.A.C. Permits being renewed are subject to the same requirements that apply to permit issuance at the time of application for renewal. Permit renewal applications shall contain that information identified in Rules 62-210.900(1) [Application for Air Permit - Long Form], 62-213.420(3) [Required Information], 62-213.420(6) [CAIR Part Form], F.A.C. Unless a Title V source submits a timely and complete application for permit renewal in accordance with the requirements this rule, the existing permit shall expire and the source's right to operate shall terminate. For purposes of a permit renewal, a timely application is one that is submitted 225 days before the expiration of a permit that expires on or after June 1, 2009. No Title V permit will be issued for a new term except through the renewal process. [Rules 62-213.420 & 62-213.430, F.A.C.]

TV18. Insignificant Emissions Units or Pollutant-Emitting Activities. The permittee shall identify and evaluate insignificant emissions units and activities as set forth in Rule 62-213.430(6), F.A.C.

TV19. Savings Clause. If any portion of the final permit is invalidated, the remainder of the permit shall remain in effect. [Rule 62-213.440(1)(d)1., F.A.C.]

TV20. Suspension and Revocation.

a. Permits shall be effective until suspended, revoked, surrendered, or expired and shall be subject to the provisions of Chapter 403, F.S., and rules of the Department.
b. Failure to comply with pollution control laws and rules shall be grounds for suspension or revocation.
c. A permit issued pursuant to Chapter 62-4, F.A.C., shall not become a vested property right in the permittee. The Department may revoke any permit issued by it if it finds that the permit holder or his agent:
   (1) Submitted false or inaccurate information in his application or operational reports.
   (2) Has violated law, Department orders, rules or permit conditions.
   (3) Has failed to submit operational reports or other information required by Department rules.
   (4) Has refused lawful inspection under Section 403.091, F.S.
d. No revocation shall become effective except after notice is served by personal services, certified mail, or newspaper notice pursuant to Section 120.60(7), F.S., upon the person or persons named therein and a hearing held if requested within the time specified in the notice. The notice shall specify the provision of the law, or rule alleged to be violated, or the permit condition or Department order alleged to be violated, and the facts alleged to constitute a violation thereof.

[Rule 62-4.100, F.A.C.]

TV21. Not federally enforceable. Financial Responsibility. The Department may require an applicant to submit proof of financial responsibility and may require the applicant to post an appropriate bond to guarantee compliance with the law and Department rules. [Rule 62-4.110, F.A.C.]

TV22. Emissions Unit Reclassification.

a. Any emissions unit whose operation permit has been revoked as provided for in Chapter 62-4, F.A.C., shall be deemed permanently shut down for purposes of Rule 62-212.500, F.A.C. Any emissions unit whose permit to operate has expired without timely renewal or transfer may be deemed permanently shut down, provided, however, that no such emissions unit shall be deemed permanently shut down if, within 20 days after receipt of written notice from the Department, the emissions unit owner or operator demonstrates that the permit expiration resulted from inadvertent failure to comply with the requirements of Rule 62-4.090, F.A.C., and that the owner or operator intends to continue the emissions unit in operation, and either submits an application for an air operation permit or complies with permit transfer requirements, if applicable.
b. If the owner or operator of an emissions unit which is so permanently shut down, applies to the Department for a permit to reactivate or operate such emissions unit, the emissions unit will be reviewed and permitted as a new emissions unit.

[Rule 62-210.300(6), F.A.C.]

TV23. Transfer of Permits. Per Rule 62-4.160(11), F.A.C., this permit is transferable only upon Department approval in accordance with Rule 62-4.120, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations occurring prior to the sale or legal transfer of the facility. The permittee shall also comply with the requirements of Rule 62-210.300(7), F.A.C., and use DEP Form No. 62-210.900(7). [Rules 62-4.160(11), 62-4.120, and 62-210.300(7), F.A.C.]

Rights, Title, Liability, and Agreements

TV24. Rights. As provided in Subsections 403.987(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit. [Rule 62-4.160(3), F.A.C.]

TV25. Title. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. [Rule 62-4.160(4), (F.A.C.]

TV26. Liability. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of F.S. and Department rules, unless specifically authorized by an order from the Department. [Rule 62-4.160(5), F.A.C.]

TV27. Agreements.

a. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
   (1) Have access to and copy any records that must be kept under conditions of the permit;
   (2) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and,
   (3) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.

b. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

c. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

[Rules 62-4.160(7), (9), and (10), F.A.C.]

Recordkeeping and Emissions Computation

TV28. Permit. The permittee shall keep this permit or a copy thereof at the work site of the permitted activity. [Rule 62-4.160(12), F.A.C.]

TV29. Recordkeeping.

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least five (5) years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:
   (1) The date, exact place, and time of sampling or measurements, and the operating conditions at the time of sampling or measurement;
   (2) The person responsible for performing the sampling or measurements;
   (3) The dates analyses were performed;
   (4) The person and company that performed the analyses;
   (5) The analytical techniques or methods used;

(6) The results of such analyses.

[Rules 62-4.160(14) and 62-213.440(1)(b)2., F.A.C.]

TV30. Emissions Computation. Pursuant to Rule 62-210.370, F.A.C., the following required methodologies are to be used by the owner or operator of a facility for computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for computing emissions for purposes of the reporting requirements of subsection 62-210.370(3) and paragraph 62-212.300(1)(e), F.A.C., or of any permit condition that requires emissions be computed in accordance with Rule 62-210.370, F.A.C. Rule 62-210.370, F.A.C., is not intended to establish methodologies for determining compliance with the emission limitations of any air permit.

For any of the purposes specified above, the owner or operator of a facility shall compute emissions in accordance with the requirements set forth in this subsection.

a. Basic Approach. The owner or operator shall employ, on a pollutant-specific basis, the most accurate of the approaches set forth below to compute the emissions of a pollutant from an emissions unit; provided, however, that nothing in this rule shall be construed to require installation and operation of any continuous emissions monitoring system (CEMS), continuous parameter monitoring system (CPMS), or predictive emissions monitoring system (PEMS) not otherwise required by rule or permit, nor shall anything in this rule be construed to require performance of any stack testing not otherwise required by rule or permit.
   (1) If the emissions unit is equipped with a CEMS meeting the requirements of paragraph 62-210.370(2)(b), F.A.C., the owner or operator shall use such CEMS to compute the emissions of the pollutant, unless the owner or operator demonstrates to the department that an alternative approach is more accurate because the CEMS represents still-emerging technology.
   (2) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C, but emissions of the pollutant can be computed pursuant to the mass balance methodology of paragraph 62-210.370(2)(c), F.A.C., the owner or operator shall use such methodology, unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
   (3) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., and emissions cannot be computed pursuant to the mass balance methodology, the owner or operator shall use an emission factor meeting the requirements of paragraph 62-210.370(2)(d), F.A.C., unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
b. Continuous Emissions Monitoring System (CEMS).
   (1) An owner or operator may use a CEMS to compute emissions of a pollutant for purposes of this rule provided:
      (a) The CEMS complies with the applicable certification and quality assurance requirements of 40 CFR Part 60, Appendices B and F, or, for an acid rain unit, the certification and quality assurance requirements of 40 CFR Part 75, all adopted by reference at Rule 62-204.800, F.A.C.; or,
      (b) The owner or operator demonstrates that the CEMS otherwise represents the most accurate means of computing emissions for purposes of this rule.
   (2) Stack gas volumetric flow rates used with the CEMS to compute emissions shall be obtained by the most accurate of the following methods as demonstrated by the owner or operator:
      (a) A calibrated flowmeter that records data on a continuous basis, if available; or
      (b) The average flow rate of all valid stack tests conducted during a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
   (3) The owner or operator may use CEMS data in combination with an appropriate f-factor, heat input data, and any other necessary parameters to compute emissions if such method is demonstrated by the owner or operator to be more accurate than using a stack gas volumetric flow rate as set forth at subparagraph 62-210.370(2)(b)2., F.A.C., above.
c. Mass Balance Calculations.

(1) An owner or operator may use mass balance calculations to compute emissions of a pollutant for purposes of this rule provided the owner or operator:
   (a) Demonstrates a means of validating the content of the pollutant that is contained in or created by all materials or fuels used in or at the emissions unit; and,
   (b) Assumes that the emissions unit emits all of the pollutant that is contained in or created by any material or fuel used in or at the emissions unit if it cannot otherwise be accounted for in the process or in the capture and destruction of the pollutant by the unit's air pollution control equipment.

(2) Where the vendor of a raw material or fuel which is used in or at the emissions unit publishes a range of pollutant content from such material or fuel, the owner or operator shall use the highest value of the range to compute the emissions, unless the owner or operator demonstrates using site-specific data that another content within the range is more accurate.

(3) In the case of an emissions unit using coatings or solvents, the owner or operator shall document, through purchase receipts, records and sales receipts, the beginning and ending VOC inventories, the amount of VOC purchased during the computational period, and the amount of VOC disposed of in the liquid phase during such period.

d. Emission Factors.

(1) An owner or operator may use an emission factor to compute emissions of a pollutant for purposes of this rule provided the emission factor is based on site-specific data such as stack test data, where available, unless the owner or operator demonstrates to the department that an alternative emission factor is more accurate. An owner or operator using site-specific data to derive an emission factor, or set of factors, shall meet the following requirements.
   (a) If stack test data are used, the emission factor shall be based on the average emissions per unit of input, output, or gas volume, whichever is appropriate, of all valid stack tests conducted during at least a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
   (b) Multiple emission factors shall be used as necessary to account for variations in emission rate associated with variations in the emissions unit's operating rate or operating conditions during the period over which emissions are computed.
   (c) The owner or operator shall compute emissions by multiplying the appropriate emission factor by the appropriate input, output or gas volume value for the period over which the emissions are computed. The owner or operator shall not compute emissions by converting an emission factor to pounds per hour and then multiplying by hours of operation, unless the owner or operator demonstrates that such computation is the most accurate method available.

(2) If site-specific data are not available to derive an emission factor, the owner or operator may use a published emission factor directly applicable to the process for which emissions are computed. If no directly-applicable emission factor is available, the owner or operator may use a factor based on a similar, but different, process.

e. Accounting for Emissions During Periods of Missing Data from CEMS, PEMS, or CPMS. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of missing data from CEMS, PEMS, or CPMS using other site-specific data to generate a reasonable estimate of such emissions.

f. Accounting for Emissions During Periods of Startup and Shutdown. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit.

g. Fugitive Emissions. In computing the emissions of a pollutant from a facility or emissions unit, the owner or operator shall account for the fugitive emissions of the pollutant, to the extent quantifiable, associated with such facility or emissions unit.

h. Recordkeeping. The owner or operator shall retain a copy of all records used to compute emissions pursuant to this rule for a period of five years from the date on which such emissions information is submitted to the department for any regulatory purpose.

[Rule 62-210.370(1) & (2), F.A.C.]

Responsible Official

TV31. Designation and Update. The permittee shall designate and update a responsible official as required by Rule 62-213.202, F.A.C.

Prohibitions and Restrictions

TV32. Asbestos. This permit does not authorize any demolition or renovation of the facility or its parts or components which involves asbestos removal. This permit does not constitute a waiver of any of the requirements of Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, National Emission Standard for Asbestos, adopted and incorporated by reference in Rule 62-204.800, F.A.C. Compliance with Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, Section 61.145, is required for any asbestos demolition or renovation at the source. [40 CFR 61; Rule 62-204.800, F.A.C.; and, Chapter 62-257, F.A.C.]

TV33. Refrigerant Requirements. Any facility having refrigeration equipment, including air conditioning equipment, which uses a Class I or II substance (listed at 40 CFR 82, Subpart A, Appendices A and B), and any facility which maintains, services, or repairs motor vehicles using a Class I or Class II substance as refrigerant must comply with all requirements of 40 CFR 82, Subparts B and F, and with Chapter 62-281, F.A.C.

TV34. Open Burning Prohibited. Unless otherwise authorized by Rule 62-296.320(3) or Chapter 62-256, F.A.C., open burning is prohibited.

APPENDIX U

LIST OF UNREGULATED EMISSIONS UNITS AND/OR ACTIVITIES

Unregulated Emissions Units and/or Activities. An emissions unit which emits no "emissions-limited pollutant" and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards.

The below listed emissions units and/or activities are neither 'regulated emissions units' nor 'insignificant emissions units'.

E.U. ID No.	Brief Description of Emissions Units and/or Activity
005	Painting and solvent cleaning
006	Emergency diesel generator, and mobile equipment and engines

REFERENCED ATTACHMENTS.

The Following Attachments Are Included for Applicant Convenience:

Table H, Permit History.
Table 1, Summary of Air Pollutant Standards.
Table 2, Summary of Compliance Requirements.

FINAL DETERMINATION

PERMITTEE

Florida Power and Light Company
200-300 Broadway
Riviera Beach, Florida 33404

PERMITTING AUTHORITY

Florida Department of Environmental Protection (Department)
Division of Air Resource Management
Bureau of Air Regulation, Title V Section
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

PROJECT

Permit No. 0990042-004-AV
Riviera Plant

The purpose of this project is to renew the Title V air operation permit for the Riviera Plant.

NOTICE AND PUBLICATION

The Department distributed an Intent to Issue a Title V Air Operation Permit Renewal package on November 18, 2008. The applicant published the Public Notice of Intent to Issue a Title V Air Operation Permit Renewal in the Palm Beach Post on December 2, 2008. The Department received the proof of publication on December 8, 2008.

COMMENTS

No comments on the proposed permit were received from the EPA Region 4 Office.

CONCLUSION

The final action of the Department is to issue the permit with no changes.

NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Florida Power and Light Company
200-300 Broadway
Riviera Beach, Florida 33404

Responsible Official:
Mr. Jeff Smith, Plant General Manager

Permit No. 0990042-004-AV
Riviera Plant
Title V Air Operation Permit Renewal
Palm Beach County

Enclosed is the final permit package to renew the Title V air operation permit for the Riviera Plant. The existing facility is located in Palm Beach County, at 200-300 Broadway, in Riviera Beach, Florida. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Trina L. Vielhauer, Chief
Bureau of Air Regulation

TLV/jkh/tbc

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final Permit and Final Determination), or a link to these documents available electronically on a publicly accessible server, was sent by electronic mail with received receipt requested to the persons listed below:

Mr. Jeff Smith, Florida Power and Light Company: jeff_smith@fpl.com
Mr. Kennard Kosky, P.E., Golder Associates: kkosky@golder.com
Ms. Sheila M. Wilkinson, Florida Power and Light Company: Sheila_Wilkinson@fpl.com
Mr. James Stormer, Palm Beach County Health Department: james_stormer@doh.state.fl.us
Ms. Katy Forney, US EPA Region 4: forney.kathleen@epa.gov
Ms. Ana Oquendo, US EPA Region 4: oquendo.ana@epa.gov
Ms. Barbara Friday, DEP BAR: Barbara.Friday@dep.state.fl.us (for posting with U.S. EPA, Region 4)
Ms. Victoria Gibson, DEP BAR: victoria.gibson@dep.state.fl.us (for reading file)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

_____ (Clerk) _____ (Date)

TABLE H
PERMIT HISTORY

E.U. ID No.	Description	Permit No.	Effective Date	Expiration Date	Project Type
003	Fossil Fuel Steam Generator, Unit 3	AO50-206721	03/06/92	03/15/97	Operating Permit
004	Fossil Fuel Steam Generator, Unit 4	AO50-206722	03/06/92	03/15/97	Operating Permit
All	Facility	0990042-001-AV	01/01/1999	12/31/2003	Renewal
All	Facility	0990042-002-AV	01/11/2002	12/31/2003	Administrative Correction
All	Facility	0990042-003-AV	01/01/2004	12/31/2008	Renewal

Florida Power and Light Company
Riviera Plant
Facility ID No. 0990042
Palm Beach County

Title V Air Operation Permit Renewal

Final Permit No. 0990042-004-AV
(Renewal of Title V Air Operation Permit No. 0990042-003-AV)

Permitting Authority
State of Florida
Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
Title V Section

Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Telephone: 850/488-0114
Fax: 850/921-9533

Compliance Authority
State of Florida
Palm Beach County Health Department

Air Section
901 Evernia Street
Post Office Box 29
West Palm Beach, FL 33401

Telephone: 561/355-3070
Fax: 561/355-2442

Title V Air Operation Permit Renewal

Permit No. 0990042-004-AV

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Referenced Attachments. ..... At End
Table H, Permit History
Table 1, Summary of Air Pollutant Standards.
Table 2, Summary of Compliance Requirements.

PERMITTEE:
Florida Power and Light Company
200-300 Broadway
Riviera Beach, Florida 33404

Permit No. 0990042-004-AV
Riviera Plant
Facility ID No. 0990042
Title V Air Operation Permit Renewal

The purpose of this permit is to renew the Title V air operation permit for the above referenced facility. The existing Riviera Plant is located at 200-300 Broadway, Riviera Beach, in Palm Beach County. UTM coordinates are: Zone 17, 594.249 km East and 2960.632 km North. Latitude is: 26° 45' 55" North; and, Longitude is: 80° 03' 09" West.

The Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213 and 62-214. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawings, plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Effective Date: January 1, 2009
Renewal Application Due Date: May 20, 2013
Expiration Date: December 31, 2013

_____

Joseph Kahn, Director
Division of Air Resource Management

JK/tlv/jkh/tbc

SECTION I. FACILITY INFORMATION.

Subsection A. Facility Description.

This facility consists of two fossil fuel steam generators, Unit 3 and Unit 4, each rated at 300 megawatts (MW) (315 MW gross capacity) output. The steam generators each burn a variable combination of No. 6 fuel oil, No. 2 fuel oil, natural gas, propane, used oil from Florida Power and Light Company operations, and expired fuel oil samples from the company's central laboratory, discharging pollutants through a stack 298 feet above ground level. Each unit is a Foster-Wheeler outdoor type boiler, equipped with low nitrogen oxides (NO_x) burners and Research-Cotrell multiple cyclones with ash re-injection, with a General Electric Company steam turbine that drives an oil and hydrogen-cooled 300 MW class generator with capability of 315 MW. The facility had at one time operated a 75 MW steam generating unit, Unit 2, which is no longer in service. This unit was last operated for power production in 1985. Its operating permit was surrendered by letter dated July 7, 1997. The unit is permanently retired under the federal Acid Rain Program.

Subsection B. Summary of Emissions Units.

EU No.	Brief Description
Regulated Emissions Units	
003	Fossil Fuel Steam Generator, Unit 3
004	Fossil Fuel Steam Generator, Unit 4
Unregulated Emissions Units and Activities	
005	Painting and solvent cleaning
006	Emergency diesel generator, and mobile equipment and engines

Subsection C. Applicable Regulations.

Based on the Title V air operation permit renewal application received June 26, 2008, this facility is a major source of hazardous air pollutants (HAP). This facility is classified as a Prevention of Significant Deterioration (PSD) major facility. A summary of applicable regulations is shown in the following table.

Regulation	EU No(s).
40 CFR 75 Acid Rain Monitoring Provisions	003 and 004
State Rule Citations	
Rule 62-4, Florida Administrative Code (F.A.C.) (Permitting Requirements)	
Rule 62-204, F.A.C. (Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference)	
Rule 62-210, F.A.C. (Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms)	
Rule 62-212, F.A.C. (Preconstruction Review, PSD Review and Best Available Control Technology (BACT))	
Rule 62-213, F.A.C. (Title V Air Operation Permits for Major Sources of Air Pollution)	
Rule 62-214, F.A.C. (Requirements For Sources Subject To The Federal Acid Rain Program)	
Rule 62-296, F.A.C. (Emission Limiting Standards)	
Rule 62-297, F.A.C. (Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures)	

SECTION II. FACILITY-WIDE CONDITIONS.

The following conditions apply facility-wide to all emission units and activities:

FW1. Appendices. The permittee shall comply with all documents identified in Section V, Appendices, listed in the Table of Contents. Each document is an enforceable part of this permit unless otherwise indicated. [Rule 62-213.440, F.A.C.]

Emissions and Controls

FW2. Objectionable Odor Prohibited. No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rule 62-296.320(2) and 62-210.200 (Definitions), F.A.C.]

FW3. General Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. Nothing is deemed necessary and ordered at this time. [Rule 62-296.320(1)(a), F.A.C.]

FW4. General Visible Emissions. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]

FW5. Unconfined Particulate Matter. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:

a. Paving of roads, parking areas, and equipment yards;
b. Landscaping and planting vegetation;
c. Use of thick poly flaps over the doorways to prevent any sandblasting material from leaving the sandblasting facility. The facility also constructs temporary sandblasting enclosures when necessary, in order to perform sandblasting on fixed plant equipment;
d. Maintenance of paved roads as needed;
e. Regular mowing of grass and care of vegetation;
f. Limiting access to plant property by unnecessary vehicles;
g. Bagged chemical products are stored in weather-tight buildings until they are used. Spills of any powered chemical products are cleaned up as soon as practicable; and,
h. Vehicles are restricted to slow speeds on the plant site.

[Rule 62-296.320(4)(c)2., F.A.C.; and provided by the applicant in Title V air operation permit renewal application received June 26, 2008.]

Annual Reports and Fees

See Appendix RR, Facility-wide Reporting Requirements for additional details.

FW6. Annual Operating Report. The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by May 1st for 2009 and April 1st for each year thereafter. [Rule 62-210.370(3), F.A.C.]

FW7. Annual Emissions Fee Form and Fee. The annual Title V emissions fees are due by March 1st of each year. The completed form and calculated fee shall be submitted to: Major Air Pollution Source Annual Emissions Fee, P.O. Box 3070, Tallahassee, Florida 32315-3070. The forms are available for download by accessing the Title V Annual Emissions Fee On-line Information Center at the following Internet web site: http://www.dep.state.fl.us/Air/permitting/tvfee.htm. [Rule 62-213.205, F.A.C.]

FW8. Annual Statement of Compliance. The permittee shall submit an annual statement of compliance to the compliance authority at the address shown on the cover of this permit within 60 days after the end of each calendar year during which the Title V air operation permit was effective. [Rules 62-213.440(3)(a)2. & 3. and (b), F.A.C.]

FW9: Prevention of Accidental Releases (Section 112(r) of CAA).

a. As required by Section 112(r)(7)(B)(iii) of the CAA and 40 CFR 68, the owner or operator shall submit an updated Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center.
b. As required under Section 252.941(1)(c), F.S., the owner or operator shall report to the appropriate representative of the Department of Community Affairs (DCA), as established by department rule, within one working day of discovery of an accidental release of a regulated substance from the stationary source, if the owner or operator is required to report the release to the United States Environmental Protection Agency under Section 112(r)(6) of the CAA.
c. The owner or operator shall submit the required annual registration fee to the DCA on or before April 1, in accordance with Part IV, Chapter 252, F.S., and Rule 9G-21, F.A.C.
d. Any required written reports, notifications, certifications, and data required to be sent to the DCA, should be sent to: Department of Community Affairs, Division of Emergency Management, 2555 Shumard Oak Boulevard, Tallahassee, FL 32399-2100, Telephone: (850) 413-9921, Fax: (850) 488-1739.
e. Any Risk Management Plans, original submittals, revisions, or updates to submittals, should be sent to: RMP Reporting Center, Post Office Box 1515, Lanham-Seabrook, MD 20703-1515, Telephone: (301) 429-5018.
   Any required reports to be sent to the National Response Center, should be sent to: National Response Center, EPA Office of Solid Waste and Emergency Response, USEPA (5305 W), 401 M Street SW, Washington, D.C. 20460, Telephone: (800) 424-8802.
   Send the required annual registration fee using approved forms made payable to: Cashier, Department of Community Affairs, State Emergency Response Commission, 2555 Shumard Oak Boulevard, Tallahassee, FL 32399-2149

[Part IV, Chapter 252, F.S.; and, Rule 9G-21, F.A.C.]

FW10. Clean Air Interstate Rule (CAIR) Applicable Units. This facility contains emissions units that are subject to CAIR. On July 11, 2008, the U.S. Court of Appeals for the District of Columbia recommended vacatur of the Clean Air Interstate Rule. Because of this decision, the applicable CAIR requirements that were identified in the renewal application are not being included in the permit at this time. If, and at such time that, CAIR is ultimately upheld, you must begin complying with the CAIR program requirements contained in the renewal application and the Title V air operation permit must be revised accordingly. [Rules 62-213.440 and 62-296.470, F.A.C.]

The specific conditions in this section apply to the following emissions units:

EU No.	Brief Description
003	Fossil Fuel Steam Generator, Unit 3
004	Fossil Fuel Steam Generator, Unit 4

Fossil fuel fired steam generators Unit 3 and Unit 4 are each nominal 300 megawatts (315 MW gross capacity) (electric) steam generators. Each emissions unit consists of a boiler which drives a turbine generator. Emissions are controlled with low NO_x burners and multiple cyclones with ash re-injection. Each unit is equipped with a 298 foot stack with an exit diameter of 16 feet. Unit 3 flow rate is 1,063,401 actual cubic feet per minute (acfm), exit velocity is 88.2 feet per second (fps) and exit temperature is 263 ^{0}F. Unit 4 flow rate is 1,052,646 acfm, exit velocity is 87.3 fps and exit temperature is 263 ^{0}F.

Compliance Assurance Monitoring (CAM) does not apply to these units for the following reasons. There are no add-on pollution control devices for nitrogen oxides and sulfur dioxide. Compliance with the emission limits is demonstrated using continuous emissions monitoring systems (CEMS). Regarding particulate matter, the mechanical dust collectors are excluded from CAM, because they are (a) inherent process equipment contained entirely within the flue ductwork, (b) use a passive method of particulate matter separation from the flue gas stream, (c) recover unburned carbon and ash from the flue gas system, and (d) have no moving parts, no control inputs, nor any controllable parameters.

{Permitting note(s): These emissions units are regulated under Acid Rain, Phase II; and Rule 62-296.405, F.A.C., Fossil Fuel Steam Generators with More than 250 million Btu per Hour Heat Input. Fossil fuel fired steam generator Unit 3 began commercial operation in 1962 and fossil fuel fired steam generator Unit 4 began commercial operation in 1963. These emissions units may inject additives such as magnesium oxide, magnesium hydroxide and related compounds into each boiler.}

Essential Potential to Emit (PTE) Parameters

A.1. Permitted Capacity. The maximum operation heat input rate is as follows:

Unit No.	Million British Thermal Units per Hour (MMBtu/hr) Heat Input*	Fuel Type
003	3260	Natural Gas
	3050	No. 2 or 6 Fuel Oil
004	3260	Natural Gas
	3050	No. 2 or 6 Fuel Oil

*When a blend of fuel oil and natural gas are burned, the heat input is prorated based upon the percent heat input of each fuel.
[Rules 62-4.160(2), 62-204.800, 62-210.200(PTE) and 62-296.405, F.A.C., Revised Operation Permits AO 50-206721 and AO 50-206722, issued August 2, 1993]

{Permitting note: An estimated "real time" heat input value can be calculated for agency compliance inspectors upon request. The averaging time for the estimated heat input will be a 3-hour block that may utilize fuel flow or tank drop data to determine the fuel usage which will be multiplied by the last available heating value of the fuel. If sampling is needed to determine the current heat input value, the adjusted heat input value will be provided to the inspector after test results are received for the heat value of the fuel and a corrected fuel heat input is calculated.}

A.2. Emissions Unit Operating Rate Limitation After Testing. See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

A.3. Methods of Operation. Fuels.

a. Startup: The only fuels allowed to be burned are any combination of natural gas or fuel oil, except propane may be utilized for ignition of the main fuel.

b. Normal: The only fuels allowed to be burned are any combination of No. 6 fuel oil, No. 2 fuel oil, natural gas, propane, on-specification used oil from Florida Power and Light Company (FPL) operations, and expired fuel oil samples from FPL's Central Laboratory.

[Rule 62-213.410, F.A.C.; Applicant's request in Title V air operation permit renewal application received June 26, 2008; AO 50-206721, Specific Conditions 1 and 3; and, AO 50-206721, Specific Conditions 1 and 3]

A.4. Hours of Operation. These emissions units may operate continuously (8760 hours/year). [Rule 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

{Permitting Note: The attached Table 1, Summary of Air Pollutant Standards, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

Unless otherwise specified, the averaging times for Specific Conditions **A.5.-A.10.** are based on the specified averaging time of the applicable test method.

A.5. Visible Emissions. Visible emissions shall not exceed 40 percent opacity. Emissions units governed by this visible emissions standard shall compliance test for particulate matter emissions annually. [Rule 62-296.405(1)(a), F.A.C.; and OGC Case No. 83-0587 & 83-0588, Order dated April 24, 1984]

A.6. Visible Emissions - Soot Blowing and Load Change. Visible emissions shall not exceed 60 percent opacity during the 3-hours in any 24 hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more.

Visible emissions above 60 percent opacity shall be allowed for not more than 4, six (6)-minute periods, during the 3-hour period of excess emissions allowed by this condition.

[Rule 62-210.700(3), F.A.C., Note: these units have operational continuous opacity monitors.]

A.7. Particulate Matter. Particulate matter emissions shall not exceed 0.1 pound per million Btu heat input, as measured by applicable compliance methods. [Rule 62-296.405(1)(b), F.A.C.]

A.8. Particulate Matter - Soot Blowing and Load Change. Particulate matter emissions shall not exceed an average of 0.3 pound per million Btu heat input during the 3-hours in any 24-hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change. [Rule 62-210.700(3), F.A.C.]

A.9. Sulfur Dioxide. To avoid modeled violations of the ambient air quality standards established under Rule 62-204.240, F.A.C., sulfur dioxide emissions shall not exceed 1.3 pounds per million Btu (lb/MMBtu) heat input for the 24-hour average and 1.9 lb/MMBtu heat input for the 3-hour average, as measured by applicable compliance methods. Compliance shall be based on the total heat input from all liquid and gaseous fuels burned. The sulfur dioxide emission limitation shall apply at all times including startup, shutdown, and load change. [Rules 62-213.440 and 62-204.220, F.A.C.]

A.10. Nitrogen Oxides. Nitrogen oxides emissions shall not exceed 0.50 pounds per million Btu while firing natural gas, and 0.62 pounds per million Btu while firing oil. Compliance shall be demonstrated based on a 30-day rolling average as measured by a CEMS. The CEMS must meet the performance specifications contained in 40 CFR 60, Appendix B, or 40 CFR 75.
[Rules 62-296.570(4)(a)4. and (4)(b)3., F.A.C.; and, Revised Operation Permits AO 50-206721 and AO 50-206722, Issued August 2, 1993]

Excess Emissions

Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any requirement of an NSPS, NESHAP or Acid Rain program provision.

A.11. Excess Emissions from Malfunction. Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]

A.12. Excess Emissions Permitted. Excess emissions resulting from startup or shutdown shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized. (Note: This condition does not apply to Specific Condition **A.9.**) [Rule 62-210.700(2), F.A.C.]

A.13. Excess Emissions Prohibited. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

Continuous Monitoring Requirements

A.14. Sulfur Dioxide. The owner or operator of the emission units shall demonstrate compliance with the sulfur dioxide limit of this permit by the following:

a. Through the use of a continuous emission monitoring system (CEMS) installed, calibrated, operated and maintained in accordance with the quality assurance requirements of 40 CFR 75, adopted and incorporated by reference in Rule 62-204.800, F.A.C. A Relative Accuracy Test Audit (RATA) of the SO_2 CEMS shall be conducted no less than annually. Compliance shall be demonstrated based on a 3-hour rolling average.
b. In the event the CEMS becomes temporarily inoperable or interrupted, the fuels and the maximum fuel oil to natural gas firing ratio that shall be used is limited to that which was last used to demonstrate compliance prior to the loss of the CEMS, or the emissions units shall fuel switch and be fired with a fuel oil containing a maximum sulfur content of 1.18 %, by weight, or less.
c. When burning 100% fuel oil, the emissions units shall be fired with a fuel oil containing a maximum sulfur content of 1.18 %, by weight, or less.

[Rules 62-213.440, 62-204.800 and 62-296.405(1)(c)3., F.A.C.]

A.15. COMS for Periodic Monitoring. The owner or operator has installed continuous opacity monitoring systems (COMS) pursuant to 40 CFR Part 75. The owner or operator shall maintain and operate COMS and shall make and maintain records of opacity measured by the COMS, for purposes of periodic monitoring. [Rule 62-213.440, F.A.C.; and applicant agreement with EPA on March 3, 1998]

Test Methods and Procedures

{Permitting Note: The attached Table 2, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

A.16. Test Methods. Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
3A	Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources
5, 5B	Method for Determining Particulate Matter Emissions (All PM is assumed to be PM_{10}.)
6C	Determination of Sulfur Dioxide Emissions from Stationary Sources
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
17	Determination of Particulate Matter Emissions from Stationary Sources
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines
25A	Method for Determining Gaseous Organic Concentrations (Flame Ionization)

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-296.405, 62-297.401 and 62-213.440, F.A.C.]

A.17. Annual Tests Required. Except as provided in specific conditions **A.21** through **A.23**, emission testing for particulate matter emissions and visible emissions shall be performed annually, each federal fiscal year, except for units that are not operating because of scheduled maintenance outages and emergency repairs, which will be tested within thirty days of returning to service. [Rules 62-4.070(3) and 62-213.440, F.A.C.]

A.18. Compliance Tests Prior To Renewal. Prior to permit renewal, compliance tests shall be performed for the following pollutants: VE, PM, NO_x and SO_2. [Rule 62-297.310(7)(a)3., F.A.C.]

A.19. DEP Method 9. See Specific Condition **A.16.** The provisions of EPA Method 9 (40 CFR 60, Appendix A) are adopted by reference with the following exceptions:

a. EPA Method 9, Section 2.4, Recording Observations. Opacity observations shall be made and recorded by a certified observer at sequential fifteen second intervals during the required period of observation.

b. EPA Method 9, Section 2.5, Data Reduction. For a set of observations to be acceptable, the observer shall have made and recorded, or verified the recording of, at least 90 percent of the possible individual observations during the required observation period. For single-valued opacity standards (e.g., 20 percent opacity), the test result shall be the highest valid six-minute average for the set of observations taken. For multiple-valued opacity standards (e.g., 20 percent opacity, except that an opacity of 40 percent is permissible for not more than two minutes per hour) opacity shall be computed as follows:
   (1) For the basic part of the standard (i.e., 20 percent opacity) the opacity shall be determined as specified above for a single-valued opacity standard.
   (2) For the short-term average part of the standard, opacity shall be the highest valid short-term average (i.e., two-minute, three-minute average) for the set of observations taken.

In order to be valid, any required average (i.e., a six-minute or two-minute average) shall be based on all of the valid observations in the sequential subset of observations selected, and the selected subset shall contain at

least 90 percent of the observations possible for the required averaging time. Each required average shall be calculated by summing the opacity value of each of the valid observations in the appropriate subset, dividing this sum by the number of valid observations in the subset, and rounding the result to the nearest whole number. The number of missing observations in the subset shall be indicated in parenthesis after the subset average value. [Rule 62-297.401, F.A.C.]

A.20. Particulate Matter. See Specific Condition **A.16.** The test methods for particulate emissions shall be EPA Methods 17, 5, 5B, or 5F, incorporated by reference in Chapter 62-297, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet. EPA Method 5 may be used with filter temperature no more than 320 degrees Fahrenheit. For EPA Method 17, stack temperature shall be less than 375 degrees Fahrenheit. The owner or operator may use EPA Method 5 to demonstrate compliance. EPA Method 3 or 3A shall be used when the oxygen based F-factor, computed according to EPA Method 19, is used in lieu of heat input. Acetone wash shall be used with EPA Method 5 or 17. Particulate testing shall be conducted in accordance with the requirements of specific condition **A.23** of this permit. [Rules 62-213.440, 62-296.405(1)(e)2. and 62-297.401, F.A.C.]

A.21. Sulfur Dioxide. See Specific Condition **A.16.** The test methods for sulfur dioxide emissions shall be EPA Methods 6, 6A, 6B, or 6C, incorporated by reference in Chapter 62-297, F.A.C. If the emissions unit obtains an alternate procedure under the provisions of Rule 62-297.620, F.A.C., the procedure shall become a condition of the emissions unit's permit. The Department will retain the authority to require EPA Method 6 or 6C if it has reason to believe that exceedences of the sulfur dioxide emissions limiting standard are occurring. The permittee may use the EPA test methods, referenced above, to **demonstrate compliance using CEMS for sulfur dioxide.** See specific condition **A.14** of this permit. [Rules 62-213.440 and 62-296.405(1)(c)3. & (1)(e)3., F.A.C.]

A.22. When VE Tests Not Required. By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units while burning:
a. only gaseous fuel(s); or
b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
c. only liquid fuel(s) for less than 400 hours per year.
[Rule 62-297.310(7)(a)4., F.A.C.]

A.23. When PM Tests Not Required. Annual and permit renewal compliance testing for particulate matter emissions is not required for these emissions units while burning:
a. only gaseous fuel(s); or
b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
c. only liquid fuel(s) for less than 400 hours per year.
[Rules 62-297.310(7)(a)3. & 5., F.A.C.; and ASP Number 97-B-01]

A.24. Operating Conditions During Testing - PM and VE. Compliance testing during soot blowing and steady-state operation for particulate matter and visible emissions shall be conducted at least once annually, if liquid fuel is fired for more than 400 hours. A visible emissions test shall be conducted during one run of each particulate matter test. Particulate matter and visible emissions tests during soot blowing and steady-state operation shall be performed on such emissions unit while firing solely fuel oil containing at least 90% of the average sulfur content of the fuel oils fired in the previous 12 month period.
[Rules 62-4.070(3), 62-213.440, 62-296.405(1)(c)3. and 62-297.310(7)(a), F.A.C.]

A.25. Testing While Injecting Additives. The owner or operator shall conduct emission tests while injecting additives consistent with normal operating practices. [Rule 62-213.440, F.A.C.; and applicant agreement with EPA on March 3, 1998]

A.26. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310(7), F.A.C.]

Recordkeeping and Reporting Requirements

{Permitting Note: See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements.}

A.27. Reporting Schedule. The following reports and notifications shall be submitted to the Compliance Authority:

Report	Reporting Deadline	Related Condition(s)
Fuel Analysis Report	Monthly.	**A.29.**
Excess Emissions - Malfunctions	Quarterly.	**A.30.**

A.28. Fuel Records. The owner or operator shall create and maintain for each emission unit hourly records of the amount of each fuel fired, the ratio of fuel oil to natural gas if co-fired, and the heating value and sulfur content of each fuel fired. These records must be of sufficient detail to identify the testing requirements of specific condition **A.24**, and, when applicable, demonstrate compliance with the requirements of condition **A.14**, paragraphs **b** and **c**, of this permit. Fuel oil heating value and sulfur content shall be determined by taking a daily sample of the fuel fired, combining those samples into a monthly composite, and analyzing a representative sample of the composite. Analysis for sulfur content shall be performed using one of ASTM D2622-94, ASTM D4294-90(95), ASTM D1552-95, ASTM D1266-91, both ASTM D4057-88 and ASTM D129-95, or the latest edition(s). Comparison of the as-fired fuel oil sulfur content shall be made and recorded monthly upon receipt of each monthly composite analysis. [Rules 62-4.070(3), 62-213.410, 62-213.440 and 62-296.405(1)(c)3., F.A.C.]

A.29. Fuel Analyses Report. The owner or operator shall, by the fifteenth day of each month, submit to the Palm Beach County Health Department, Air Section, a report of fuel analyses that are representative of each fuel fired in the preceding month. The report shall document the heating value, the density or specific gravity, and the percent sulfur content by weight of each fuel fired. [Rule 62-4.070(3) and 62-213.440, F.A.C.; AO 50-206721 Specific Condition 3; and AO 50-206722 Specific Condition 3]

A.30. Excess Emissions - Reports. The permittee shall submit to the Palm Beach County Health Department, Air Section, a written report of emissions in excess of emission limiting standards as set forth in Rule 62-296.405(1), F.A.C., for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file at the facility by the permittee for a period of five years. [Rules 62-213.440 and 62-296.405(1)(g), F.A.C.]

Other Requirements

A.31. Used Oil. Burning of on-specification used oil is allowed at this facility in accordance with all other conditions of this permit and the following additional conditions:

a. *On-specification Used Oil Allowed as Fuel.* This permit allows the burning of used oil fuel meeting EPA "on-specification" used oil specifications, with a polychlorinated biphenyls (PCB) concentration of less than 50 ppm, originating from Florida Power and Light Company operations. Used oil that does not meet the specifications for on-specification used oil shall not be burned at this facility.

On-specification used oil shall meet the following specifications:

Arsenic shall not exceed 5.0 ppm;

Cadmium shall not exceed 2.0 ppm;
Chromium shall not exceed 10.0 ppm;
Lead shall not exceed 100.0 ppm;
Total halogens shall not exceed 1000 ppm;
Flash point shall not be less than 100 degrees F.
[40 CFR 279, Subpart B.]

b. *Quantity Limited.* The maximum total quantity of used oil that may be burned in both emissions units is 1.5 million gallons in any consecutive 12-month period.

c. *Used Oil Containing PCBs Not Allowed.* Used oil containing a PCB concentration of 50 or more ppm shall not be burned at this facility. Used oil shall not be blended to meet this requirement.

d. *PCB Concentration of 2 to less than 50 ppm.* On-specification used oil with a PCB concentration of 2 to less than 50 ppm shall be burned only at normal source operating temperatures. On-specification used oil with a PCB concentration of 2 to less than 50 ppm shall not be burned during periods of startup or shutdown.

e. *Testing Required.* The owner or operator shall sample and analyze each batch of used oil to be burned for the following parameters:

Arsenic, cadmium, chromium, lead, total halogens, flash point, and PCB.

Testing (sampling, extraction and analysis) shall be performed using approved methods specified in EPA Publication SW-846 (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods), or latest edition.

f. *Record Keeping Required.* The owner or operator shall obtain, make and keep the following records related to the use of used oil in a form suitable for inspection at the facility by the Department: [40 CFR 279.61 and 761.20(e)]
   (1) The gallons of on-specification used oil received and burned each month. (This record shall be completed no later than the fifteenth day of the succeeding month.)
   (2) The total gallons of on-specification used oil burned in the preceding consecutive 12-month period. (This record shall be completed no later than the fifteenth day of the succeeding month.)
   (3) Results of the analyses required above.

g. *Reporting Required.* The owner or operator shall submit, with the Annual Operation Report form, the analytical results and the total amount of on-specification used oil burned during the previous calendar year.

[Rules 62-4.070(3) and 62-213.440, F.A.C.; and, 40 CFR 279 and 40 CFR 761, unless otherwise noted]

A.32. Burning of Expired Fuel Oil Samples. The burning of bottles made from high density polyethylene (HDPE) containing expired fuel oil samples from FPL facilities that were retained after analysis by FPL's Central Laboratory shall be permitted under the following conditions:

a. The total annual amount of expired fuel oil samples burned shall not exceed 2.0 barrels of fuel oil.
b. The total annual amount of HDPE shall not exceed 80 pounds.
c. The owner or operator shall submit, with the Annual Operation Report form, the total amount of expired fuel oil samples and HDPE burned during the previous calendar year.

[Rule 62-4.070(3), F.A.C.; AO 50-206721; AO 50-206722; and applicant request in Title V air operation permit application received June 12, 1996]

Subsection A. This subsection addresses Acid Rain, Phase II.

Operated by: Florida Power and Light Company
ORIS Code: 0619

The emissions units listed below are regulated under Acid Rain, Phase II.

E.U. ID No.	Brief Description
003	Fossil Fuel Steam Generator, Unit 3
004	Fossil Fuel Steam Generator, Unit 4

A.1. Application. The Phase II Acid Rain Part application submitted for this facility, as approved by the Department, is a part of this permit. The owners and operators of these Phase II acid rain units must comply with the standard requirements and special provisions set forth in the application listed below:
a. DEP Form No. 62-210.900(1)(a), dated 06/10/08, received 06/26/08.
[Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

A.2. Allowance Allocations. Sulfur dioxide (SO_2) allowance allocations for each Acid Rain unit are as follows:

E.U. ID No.	EPA ID	Year	2009	2010	2011	2012	2013
003	PRV3	SO_2 allowances, under Table 2 of 40 CFR 73	3573*	3580*	3580*	3580*	3580*
004	PRV4	SO_2 allowances, under Table 2 of 40 CFR 73	3545*	3551*	3551*	3551*	3551*

* The number of allowances held by an Acid Rain source in a unit account may differ from the number allocated by the USEPA under Table 2 of 40 CFR 73.

A.3. Emission Allowances. Emissions from sources subject to the Federal Acid Rain Program (Title IV) shall not exceed any allowances that the source lawfully holds under the Federal Acid Rain Program. Allowances shall not be used to demonstrate compliance with a non-Title IV applicable requirement of the Act.
a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400(3), F.A.C.
b. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program.
c. Allowances shall be accounted for under the Federal Acid Rain Program.
[Rule 62-213.440(1)(c)1., 2. & 3., F.A.C.]

A.4. Other Considerations. Comments, notes, and justifications: None.

Acid Rain Part Application

For more information, see instructions and refer to 40 CFR 72.30, 72.31, and 74; and Chapter 62-214, F.A.C.

This submission is: ☐ New ■ Revised ☐ Renewal

STEP 1

Identify the source by plant name, state, and ORIS or plant code.

Plant name Riviera	State Florida	0619 ORIS/Plant Code

STEP 2
Enter the unit ID# for every Acid Rain unit at the Acid Rain source in column "a."

If unit a SO_2 Opt-in unit, enter "yes" in column "b".

For new units or SO_2 Opt-in units, enter the requested information in columns "d" and "e."

a	b	c	d	e
Unit ID#	SO_2 Opt-in Unit? (Yes or No)	Unit will hold allowances in accordance with 40 CFR 72.9(c)(1)	New or SO_2 Opt-in Units Commence Operation Date	New or SO_2 Opt-in Units Monitor Certification Deadline
PRV2	NO	Yes	N/A	N/A
PRV3	NO	Yes	N/A	N/A
PRV4	NO	Yes	N/A	N/A
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		

DEP Form No. 62-210.900(1)(a) – Form
Effective: 3/16/08

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Plant Name (from STEP 1) Riviera

STEP 3

Read the standard requirements.

Acid Rain Part Requirements.

(1) The designated representative of each Acid Rain source and each Acid Rain unit at the source shall:
(i) Submit a complete Acid Rain Part application (including a compliance plan) under 40 CFR Part 72 and Rules 62-214.320 and 330, F.A.C., in accordance with the deadlines specified in Rule 62-214.320, F.A.C.; and
(ii) Submit in a timely manner any supplemental information that the DEP determines is necessary in order to review an Acid Rain Part application and issue or deny an Acid Rain Part;
(2) The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:
(i) Operate the unit in compliance with a complete Acid Rain Part application or a superseding Acid Rain Part issued by the DEP; and
(ii) Have an Acid Rain Part

Monitoring Requirements.

(1) The owners and operators and, to the extent applicable, designated representative of each Acid Rain source and each Acid Rain unit at the source shall comply with the monitoring requirements as provided in 40 CFR Part 75, and Rule 62-214.420, F.A.C.
(2) The emissions measurements recorded and reported in accordance with 40 CFR Part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
(3) The requirements of 40 CFR Part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.
(4) For applications including a SO_2 Opt-in unit, a monitoring plan for each SO_2 Opt-in unit must be submitted with this application pursuant to 40 CFR 74.14(a). For renewal applications for SO_2 Opt-in units include an updated monitoring plan if applicable under 40 CFR 75.53(b)

Sulfur Dioxide Requirements.

(1) The owners and operators of each source and each Acid Rain unit at the source shall:
(i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)), or in the compliance subaccount of another Acid Rain unit at the same source to the extent provided in 40 CFR 73.35(b)(3), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
(ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide
(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
(3) An Acid Rain unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
(i) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2); or
(ii) Starting on the later of January 1, 2000, or the deadline for monitor certification under 40 CFR Part 75, an Acid Rain unit under 40 CFR 72.6(a)(3)
(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain Part application, the Acid Rain Part, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each Acid Rain unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements.

(1) The designated representative of an Acid Rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77.
(2) The owners and operators of an Acid Rain unit that has excess emissions in any calendar year shall:
(i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR Part 77; and
(ii) Comply with the terms of an approved offset plan, as required by 40 CFR Part 77.

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the source and each Acid Rain unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the EPA or the DEP:
(i) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with Rule 62-214.350, F.A.C.; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
(ii) All emissions monitoring information, in accordance with 40 CFR Part 75, provided that to the extent that 40 CFR Part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply;
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

Plant Name (from STEP 1) Riviera

STEP 3, Continued.

Recordkeeping and Reporting Requirements (cont)

(iv) Copies of all documents used to complete an Acid Rain Part application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program

(2) The designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR Part 72, Subpart I, and 40 CFR Part 75.

Liability.

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain Part application, an Acid Rain Part, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C 1001
(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
(4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program
(5) Any provision of the Acid Rain Program that applies to an Acid Rain source (including a provision applicable to the designated representative of an Acid Rain source) shall also apply to the owners and operators of such source and of the Acid Rain units at the source
(6) Any provision of the Acid Rain Program that applies to an Acid Rain unit (including a provision applicable to the designated representative of an Acid Rain unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 (NO_X averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR Part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative
(7) Each violation of a provision of 40 CFR Parts 72, 73, 74, 75, 76, 77, and 78 by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act

Effect on Other Authorities.

No provision of the Acid Rain Program, an Acid Rain Part application, an Acid Rain Part, or an exemption under 40 CFR 72.7or 72.8 shall be construed as:
(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an Acid Rain source or Acid Rain unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
(2) Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;
(3) Requiring a change of any kind in any state law regulating electric utility rates and charges, affecting any state law regarding such state regulation, or limiting such state regulation, including any prudence review requirements under such state law;
(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
(5) Interfering with or impairing any program for competitive bidding for power supply in a state in which such program is established

STEP 4
For SO_2 Opt-in units only.

In column "f" enter the unit ID# for every SO_2 Opt-in unit identified in column "a" of STEP 2.

For column "g" describe the combustion unit and attach information and diagrams on the combustion unit's configuration.

In column "h" enter the hours.

f	g	h (not required for renewal application)
Unit ID#	Description of the combustion unit	Number of hours unit operated in the six months preceding initial application

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Plant Name (from STEP 1) Riviera

STEP 5

For SO_2 Opt-in units only. (Not required for SO_2 Opt-in renewal applications.)

In column "i" enter the unit ID# for every SO_2 Opt-in unit identified in column "a" (and in column "f").

For columns "j" through "n," enter the information required under 40 CFR 74.20-74.25 and attach all supporting documentation required by 40 CFR 74.20-74.25.

i	j	k	l	m	n
Unit ID#	Baseline or Alternative Baseline under 40 CFR 74.20 (mmBtu)	Actual SO_2 Emissions Rate under 40 CFR 74.22 (lbs/mmBtu)	Allowable 1985 SO_2 Emissions Rate under 40 CFR 74.23 (lbs/mmBtu)	Current Allowable SO_2 Emissions Rate under 40 CFR 74.24 (lbs/mmBtu)	Current Promulgated SO_2 Emissions Rate under 40 CFR 74.25 (lbs/mmBtu)

STEP 6

For SO_2 Opt-in units only.

Attach additional requirements, certify and sign.

A. If the combustion source seeks to qualify for a transfer of allowances from the replacement of thermal energy, a thermal energy plan as provided in 40 CFR 74.47 for combustion sources must be attached
B. A statement whether the combustion unit was previously an affected unit under 40 CFR 74.
C. A statement that the combustion unit is not an affected unit under 40 CFR 72 6 and does not have an exemption under 40 CFR 72.7, 72.8, or 72.14.
D. Attach a complete compliance plan for SO_2 under 40 CFR 72 40.
E. The designated representative of the combustion unit shall submit a monitoring plan in accordance with 40 CFR 74.61. For renewal application, submit an updated monitoring plan if applicable under 40 CFR 75.53(b).
F. The following statement must be signed by the designated representative or alternate designated representative of the combustion source: "I certify that the data submitted under 40 CFR Part 74, Subpart C, reflects actual operations of the combustion source and has not been adjusted in any way."

Signature [signature] Date 6/10/08

STEP 7

Read the certification statement; provide name, title, owner company name, phone, and e-mail address; sign, and date.

Certification (for designated representative or alternate designated representative only)

I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name Sheila M Wilkinson | Title PGD Technical Services General Manager

Owner Company Name Florida Power & Light

Phone 561-691-2287 | E-mail address Sheila_M_Wilkinson@fpl.com

Signature [signature] Date 6/10/08

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Subsection B. This Subsection addresses Acid Rain, Phase II, Retired Unit Exemption.

The emissions unit listed below is regulated under Phase II of the federal Acid Rain Program.

E.U. ID No.	Description
002	Fossil Fuel Fired Steam Generator, Unit 2 - PERMANENTLY RETIRED

B.1. The Retired Unit Exemption form submitted for this facility constitutes the Acid Rain Part application pursuant to 40 CFR 72.8 and is a part of this permit. The owners and operators of this acid rain unit shall comply with the standard requirements and special provisions set forth in DEP Form No. 62- 210.900(1)(d), effective March 16, 2008, signed by the Designated Representative on June 16, 2008, and received by the Department on August 8, 2008. This unit is subject to the following: 40 CFR 72.1 which requires the unit to have an Acid Rain Part as part of its Title V air operation permit; 40 CFR 72.2 which provides associated definitions; 40 CFR 72.3 which provides measurements, abbreviations, and acronyms; 40 CFR 72.4 which provides the federal authority of the Administrator; 40 CFR 72.5 which provides the authority of the states; 40 CFR 72.6 which makes the boiler a Phase II unit; 40 CFR 72.10 which gives the public access to information about this unit; and, 40 CFR 72.13 which incorporates certain ASTM methods into 40 CFR Part 72. [Chapter 62-213, F.A.C. and Rule 62-214.340, F.A.C.]

B.2. Sulfur dioxide (SO_2) allowance allocations for the Acid Rain unit are as follows:

E.U. ID No.	EPA ID	Year	2009	2010	2011	2012	2013
002	PRV2	SO_2 allowances, under Table 2 of 40 CFR 73	94*	94*	94*	94*	94*

*The number of allowances held by an Acid Rain source in a unit account may differ from the number allocated by the U.S. EPA under Table 2 of 40 CFR 73.

B.3. Emission Allowances. Emissions from sources subject to the Federal Acid Rain Program (Title IV) shall not exceed any allowances that the source lawfully holds under the Federal Acid Rain Program. Allowances shall not be used to demonstrate compliance with a non-Title IV applicable requirement of the Act.

a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.440(3), F.A.C.
b. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain program.
c. Allowances shall be accounted for under the Federal Acid Rain Program.

[Rule 62-213.440(1)(c)1., 2., & 3., F.A.C.]

B.4. The designated representative of this acid rain unit applied for an exemption from the requirements of the Federal Acid Rain Program by submitting a completed and signed "Retired Unit Exemption" form (DEP Form No. 62-210.900(1)(d)., F.A.C., attached) to the Department. The date of permanent retirement is January 1, 1992. [Rule 62-214.340(2), F.A.C.; and, 40 CFR 72.8.]

B.5. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3), F.A.C., shall be submitted within 60 (sixty) days after the end of the calendar year. {See Appendix TV, Title V Conditions.} [Rule 62-214.420(11), F.A.C.]

B.6. Where an applicable requirement of the Act is more stringent than applicable regulations promulgated under Title IV of the Act, both provisions shall be incorporated into the permit and shall be enforceable by the Administrator. [40 CFR 70.6(a)(1)(ii); and, Rule 62-210.200, F.A.C., Definitions – Applicable Requirements.]

B.7. Comments, notes, and justifications: None.

Acid Rain, CAIR, and Hg Budget Retired Unit Exemption

For more information, see instructions and refer to 40 CFR 72.8, 96.105, 96.205, 96.305, and 60.4105; and Rules 62-214.340(2), 62-296.470, and 62-296.480, F.A.C.

This submission is: [ ] New [X] Revised

STEP 1

Identify the unit by plant name, State, ORIS code and unit ID#.

Plant Name	State	ORIS/Plant Code	Unit ID#
Riviera	Florida	612	PRV2

Applicable Program(s): ~ Acid Rain ~ CAIR NO_x Annual ~ CAIR SO_2 ~ CAIR NO_x Ozone Season ~ Mercury (Hg) Budget Trading

STEP 2

Identify the date on which the unit was (or will be) permanently retired.

12/01/1991

STEP 3

If an acid rain affected unit, identify the first full calendar year in which the unit meets (or will meet) the requirements of 40 CFR 72.8(d).

January 1, 1992

STEP 4

Read the special provisions.

Acid Rain Special Provisions

(1) A unit exempt under Rule 62-214.340(2), F.A.C., shall not emit any sulfur dioxide and nitrogen oxides starting on the date that the exemption takes effect. The owners and operators of the unit will be allocated allowances in accordance with 40 CFR Part 73, Subpart B. If the unit is a Phase I unit, for each calendar year in Phase I, the designated representative of the unit shall submit a Phase I permit application in accordance with 40 CFR Part 72, Subparts C and D, and an annual certification report in accordance with 40 CFR 72.90 through 72.92 and is subject to 40 CFR 72.95 and 72.96.
(2) A unit exempt under Rule 62-214.340(2), F.A.C., shall not resume operation unless the designated representative of the source that includes the unit submits a complete Acid Rain Part application under Rule 62-214.320, F.A.C., for the unit not less than 24 months prior to the date on which the unit is first to resume operation.
(3) The owners and operators and, to the extent applicable, the designated representative of a unit exempt under Rule 62-214.340(2), F.A.C., shall comply with the requirements of Chapter 62-214, F.A.C., and the Acid Rain Program concerning all periods for which the exemption is not in effect, even if such requirements arise, or must be complied with, after the exemption takes effect.
(4) For any period for which a unit is exempt under Rule 62-214.340(2), F.A.C., the unit is not an Acid Rain unit and is not eligible to be an opt-in source under 40 CFR Part 74. As a non-Acid Rain Unit, the unit shall continue to be subject to any other applicable requirements under Chapter 62-213, F.A.C.
(5) For a period of 5 years from the date the records are created, the owners and operators of a unit exempt under Rule 62-214.340(2), F.A.C., shall retain at the source that includes the unit records demonstrating that the unit is permanently retired. The 5-year period for keeping records may be extended for cause, at any time prior to the end of the period, in writing by the EPA or the DEP. The owners and operators bear the burden of proof that the unit is permanently retired.
(6) On the earlier of the following dates, a unit exempt under Rule 62-214.340(2), F.A.C., shall lose its exemption and become an Acid Rain Unit: (i) the date on which the designated representative submits an Acid Rain Part application under paragraph (2); or (ii) the date on which the designated representative is required under paragraph (2) to submit an Acid Rain Part application. For the purpose of applying monitoring requirements under 40 CFR Part 75, a unit that loses its exemption under Rule 62-214.340(2), F.A.C., shall be treated as a new unit that commenced commercial operation on the first date on which the unit resumes operation.

DEP Form No. 62-210.900(1)(d) - Form
Effective: 3/16/05

Plant Name (from STEP 1) Riviera

STEP 4
(continued)

CAIR Special Provisions

(1) A unit exempt under 40 CFR 96.105(a), 96.205(a), or 96.305(a), shall not emit any sulfur dioxide or nitrogen oxides starting on the date that the exemption takes effect. The DEP will allocate CAIR NO_x allowances in accordance with Rule 62-296.470, F.A.C.
(2) For a period of 5 years from the date the records are created, the owners and operators of a unit exempt under Rule 62-296.470, F.A.C., shall retain at the source that includes the unit, records demonstrating that the unit is permanently retired. The 5-year period for keeping records may be extended for cause, at any time prior to the end of the period, in writing by the EPA or the DEP. The owners and operators bear the burden of proof that the unit is permanently retired.
(3) The owners and operators and, to the extent applicable, the CAIR designated representative of a unit exempt under 40 CFR 96.105(a), 96.205(a), or 96.305(a), shall comply with the applicable requirements of the CAIR NO_x Annual Trading Program, the CAIR SO_2 Trading Program, and the CAIR NO_x Ozone Season Trading Program concerning all periods for which the exemption is not in effect, even if such requirements arise, or must be complied with, after the exemption takes effect.
(4) A unit exempt under 40 CFR 96.105(a), 96.205(a), or 96.305(a), and located at a source that is required, or but for this exemption would be required, to have a title V operating permit shall not resume operation unless the CAIR designated representative of the source submits a complete CAIR Part application under Rule 62-213.420, F.A.C., for the unit before the date on which the unit resumes operation.
(5) On the earlier of the following dates, a unit exempt under 40 CFR 96.105(a), 96.205(a), or 96.305(a) shall lose its exemption:
(i) the date on which the CAIR designated representative submits a CAIR Part application under Special Provision (4) above;
(ii) the date on which the CAIR designated representative is required under Special Provision (4) above to submit an CAIR Part application for the unit, or
(iii) the date on which the unit resumes operation, if the CAIR designated representative is not required to submit a CAIR Part application for the unit.
(6) For the purpose of applying monitoring, reporting and recordkeeping requirements under 40 CFR Part 96, Subparts HH, HHH, and/or HHHH, a unit that loses its exemption under 40 CFR 96.105(a), 96.205(a), or 96.305(a), shall be treated as a unit that commences commercial operation on the first date on which the unit resumes operation.

Mercury (Hg) Budget Trading Special Provisions

(1) A unit exempt under 40 CFR 60.4105(a) shall not emit any mercury starting on the date that the exemption takes effect.
(2) The DEP will allocate Hg allowances under Rule 62-296.480, F.A.C.
(3) For a period of 5 years from the date the records are created, the owners and operators of a unit exempt under 40 CFR 60.4105(a) shall retain at the source that includes the unit, records demonstrating that the unit is permanently retired. The 5-year period for keeping records may be extended for cause, at any before the end of the period, in writing by the EPA or the DEP. The owners and operators bear the burden of proof that the unit is permanently retired.
(4) The owners and operators and, to the extent applicable, the Hg designated representative of a unit exempt under 40 CFR 60.4105(a) shall comply with the requirements of the Hg Budget Trading Program concerning all periods for which the exemption is not in effect, even if such requirements arise, or must be complied with, after the exemption takes effect.
(5) A unit exempt under 40 CFR 60.4105(a), and located at a source that is required, or but for this exemption would be required, to have a title V operating permit shall not resume operation unless the Hg designated representative of the source submits a complete Hg Budget Part application under 40 CFR 60.4122 and Rule 62-213.420, F.A.C., for the unit before the date on which the unit resumes operation.
(6) On the earlier of the following dates, a unit exempt under 40 CFR 60.4105(a) shall lose its exemption:
(i) the date on which the Hg designated representative submits a Hg Budget Part application for the unit under Special Provision (5);
(ii) the date on which the Hg designated representative is required under Special Provision (5) to submit a Hg Budget Part application for the unit, or
(iii) the date on which the unit resumes operation, if the Hg designated representative is not required to submit a Hg Budget Part application for the unit.
(7) For the purpose of applying monitoring, reporting and recordkeeping requirements under 40 CFR 60.4170 through 60.4176, a unit that loses its exemption under 40 CFR 60.4105(a) shall be treated as a unit that commences operation and commercial operation on the first date on which the unit resumes operation.

DEP Form No. 62-210.900(1)(c) - Form
Effective: 3/16/05

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Plant Name (from STEP 1) Riviera	

STEP 5
Make Statement of Compliance.

Statement of Compliance
I state that the unit identified above in STEP 1 was (or will be) permanently retired on the date identified in STEP 2 and will comply with the Special Provisions listed in STEP 4.

STEP 6

Read the certification and sign and date.

Certification (for designated representatives or alternate designated representatives only)
I am authorized to make this submission on behalf of the owners and operators of the affected source and affected unit for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name Sheila M Wilkinson	Title PGD Technical Services General Manager
Owner Company Name Florida Power & Light	
Phone 561-691-2287	Email Sheila_m_wilkinson@fpl.com
Signature SMWilkinson	Date 6/18/08

DEP Form No. 62-210.900(1)(d) - Form
Effective: 3/16/08

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SECTION V. APPENDICES.

The Following Appendices Are Enforceable As Allowed By Rule Applicability And Are Supporting Documents For The Air Operating Permit:

Appendix A, Glossary.
Appendix ASP, ASP Number 97-B-01 (With Scrivener's Order Dated July 9, 1997).
Appendix I, List of Insignificant Emissions Units and/or Activities.
Appendix O, Order Granting Petition for Reduced Frequency of Particulate Testing.
Appendix RR, Facility-wide Reporting Requirements.
Appendix TR, Facility-wide Testing Requirements.
Appendix TV, Title V General Conditions.
Appendix U, List of Unregulated Emissions Units and/or Activities.

STATEMENT OF BASIS

Title V Air Operation Permit Renewal
Permit No. 0990042-004-AV

APPLICANT

The applicant for this project is Florida Power and Light Company. The applicant's responsible official and mailing address are: Mr. Jeff Smith, Plant General Manager, Florida Power and Light Company, Riviera Plant, 200-300 Broadway, Riviera Beach, Florida 33404.

FACILITY DESCRIPTION

The applicant operates the Riviera Plant, which is located at 200-300 Broadway, Riviera Beach, Florida.

This existing facility consists of two fossil fuel steam generators, Unit 3 and Unit 4, each rated at 300 megawatts (MW) (315 MW gross capacity) output. The steam generators each burn a variable combination of No. 6 fuel oil, No. 2 fuel oil, natural gas, propane, used oil from Florida Power and Light Company operations, and expired fuel oil samples from the company's central laboratory, discharging pollutants through a stack 298 feet above ground level. Each unit is a Foster-Wheeler outdoor type boiler, equipped with low nitrogen oxides (NO_x) burners and Research-Cotrell multiple cyclones with ash re-injection, with a General Electric Company steam turbine that drives an oil and hydrogen-cooled 300 MW class generator with capability of 315 MW.

The facility had at one time operated a 75 MW steam generating unit, Unit 2, which is no longer in service. This unit was last operated for power production in 1985. Its operating permit was surrendered by letter dated July 7, 1997. The unit is permanently retired under the federal Acid Rain Program.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

PROJECT DESCRIPTION

The purpose of this permitting project is to renew the existing Title V permit for the above referenced facility.

PRIMARY REGULATORY REQUIREMENTS

Title III: The facility is identified as a major source of hazardous air pollutants (HAP).

Title IV: The facility operates units subject to the acid rain provisions of the Clean Air Act.

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

CAM: Compliance Assurance Monitoring (CAM) does not apply to any of the units at the facility for the following reasons. There are no add-on pollution control devices for nitrogen oxides and sulfur dioxide. Compliance with the emission limits is demonstrated using continuous emissions monitoring systems (CEMS). Regarding particulate matter, the mechanical dust collectors are excluded from CAM, because they are (a) inherent process equipment contained entirely within the flue ductwork, (b) use a passive method of particulate matter separation from the flue gas stream, (c) recover unburned carbon and ash from the flue gas system, and (d) have no moving parts, no control inputs, nor any controllable parameters.

PROJECT REVIEW

Minor changes were made to the facility's existing Title V Air Operation Permit. Theses included reformatting of specific conditions, replacement of TV-4 with new Appendix TV, and streamlining of emissions unit sections by moving common conditions to the new appendices. Based on a review of the application and subsequent ambient modeling by personnel at the Palm Beach County Health Department, violations of the sulfur dioxide ambient air quality standards were predicted. Pursuant to Rule 62-204.220(2), F.A.C., the Department shall not issue an air

permit to any source that causes or contributes to a violation of an ambient air quality standard established under Rule 62-204.240, F.A.C. As required by the modeling results and upon agreement by the applicant, the SO_2 limit for units 3 and 4 has been reduced from 2.75 pounds per million British thermal unit (lbs/MMBtu) to 1.3 lbs/MMBtu heat input for the 24-hour average and 1.9 lb/MMBtu heat input for the 3-hour average. Specific conditions in the Title V air operation permit were changed as follows:

A.9. Sulfur Dioxide. To avoid modeled violations of the ambient air quality standards established under Rule 62-204.240, F.A.C., ~~S~~sulfur dioxide emissions shall not exceed ~~2.75~~ 1.3 pounds per million Btu (lb/MMBtu) heat input for the 24-hour average and 1.9 lb/MMBtu heat input for the 3-hour average, as measured by applicable compliance methods. Compliance shall be based on the total heat input from all liquid and gaseous fuels burned. The sulfur dioxide emission limitation shall apply at all times including startup, shutdown, and load change. [Rules 62-213.440 and ~~62-296.405(1)(c)1.j.~~, 62-204.220, F.A.C.]

A.14. Sulfur Dioxide. The owner or operator of the emission units shall demonstrate compliance with the sulfur dioxide limit of this permit by the following:

a. Through the use of a continuous emission monitoring system (CEMS) installed, calibrated, operated and maintained in accordance with the quality assurance requirements of 40 CFR 75, adopted and incorporated by reference in Rule 62-204.800, F.A.C. A Relative Accuracy Test Audit (RATA) of the SO_2 CEMS shall be conducted no less than annually. Compliance shall be demonstrated based on a 3-hour rolling average.

b. In the event the CEMS becomes temporarily inoperable or interrupted, the fuels and the maximum fuel oil to natural gas firing ratio that shall be used is limited to that which was last used to demonstrate compliance prior to the loss of the CEMS, or the emissions units shall fuel switch and be fired with a fuel oil containing a maximum sulfur content of ~~2.5~~ 1.18 %, by weight, or less.

c. When burning 100% fuel oil, the emissions units shall be fired with a fuel oil containing a maximum sulfur content of ~~2.5~~ 1.18 %, by weight, or less.

[Rules 62-213.440, 62-204.800 and 62-296.405(1)(c)3., F.A.C.]

A.24. Operating Conditions During Testing - PM and VE. Compliance testing during soot blowing and steady-state operation for particulate matter and visible emissions shall be conducted at least once annually, if liquid fuel is fired for more than 400 hours. A visible emissions test shall be conducted during one run of each particulate matter test. ~~Testing shall be conducted as follows:~~

~~a. *When Burning Fuel Oil Up To 2.5% Sulfur*. When only fuel oil containing less than or equal to 2.5% sulfur, by weight, is fired (or co-fired with natural gas) in an emissions unit, p~~Particulate matter and visible emissions tests during soot blowing and steady-state operation shall be performed on such emissions unit while firing solely fuel oil containing at least 90% of the average sulfur content of the fuel oils fired in the previous 12 month period.~~, except that such test shall not be required to be performed during any year that testing is performed in accordance with specific condition **A.24.b**.~~

~~b. *When Burning Fuel Oil Greater Than 2.5% Sulfur*. If fuel oil containing greater than 2.5% sulfur, by weight, is co-fired with natural gas in an emissions unit, particulate matter and visible emissions tests during soot blowing and steady-state operation shall be performed as soon as practicable, but in no event more than 60 days after firing such fuel oil, while co-firing such oil with the appropriate proportion of natural gas required to maintain SO_2 emissions between 90 to 100% of the SO_2 emission limit (corresponding to 2.475 and 2.75 lb/MMBtu heat input). Following successful completion of such PM and VE testing, further PM and VE testing shall not be required during the next 12 months unless fuel oil is fired that contains greater than 0.20% sulfur above the percentage sulfur concentration fired during the most recent co-firing test. If fuel oil is co-fired containing greater than 0.20% sulfur above the percentage sulfur concentration fired during the most recent co-firing test, additional PM and VE tests shall be performed as described above as soon as practicable, but in no event more than 60 days after firing such higher sulfur fuel oil.~~

[Rules 62-4.070(3), 62-213.440, 62-296.405(1)(c)3. and 62-297.310(7)(a), F.A.C.]

CONCLUSION

This project renews Title V air operation permit No. 0990042-003-AV, which was issued on January 1, 2004. This Title V air operation permit renewal is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C. In accordance with the terms and conditions of this permit, the above named permittee is hereby authorized to operate the facility as shown on the application and approved drawings, plans, and other documents, on file with the permitting authority.

Table 1, Summary of Air Pollutant Standards

Florida Power and Light Company
Riviera Plant

Permit No. 0990042-004-AV
Facility ID No. 0990042

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

E.U. ID No.	Brief Description
003	Fossil Fuel Steam Generator, Unit 3
004	Fossil Fuel Steam Generator, Unit 4

			Allowable Emissions			Equivalent Emissions*			
Pollutant Name	Fuel(s)	Hours/Year	Standard(s)	lbs./hour	TPY	lbs./hour	TPY	Regulatory Citation(s)	See permit condition(s)
VE	all	8760	40% Opacity	N/A	N/A			62-296.405(1)(a)	III. A.5.
VE	all	3-hr/24-hr	60% Opacity	N/A	N/A			62-210.700(3)	III. A.6.
PM	all	8760	0.1 lb/MMBtu			652	2855.8	62-296.405(1)(b)	III. A.7.
PM	all	3-hr/24-hr	0.3 lb/MMBtu			1956	1070.9	62-210.700(3)	III. A.8.
SO_2	all	8760	~~2.75~~ 1.3 lb/MMBtu			8476	37124.9	62-296.405(1)(c)1.j.	III.A.9.
NO_x	gas	8760	0.50 lb/MMBtu			3260	14278.8	62-296.570(4)(a)4.	III.A.10.
NO_x	oil	8760	0.62 lb/MMBtu			3782	16565.2	62-296.570(4)(b)3.	III.A.10.

Notes:
* The "Equivalent Emissions" listed are for informational purposes only.

Table 2, Summary of Compliance Requirements

Florida Power and Light Company
Riviera Plant

Permit No. 0990042-004-AV
Facility ID No. 0990042

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

E.U. ID No.	Brief Description
003	Fossil Fuel Steam Generator, Unit 3
004	Fossil Fuel Steam Generator, Unit 4

Pollutant Name or Parameter	Fuel(s)	Compliance Method	Testing Time Frequency	Frequency Base Date *	Min. Compliance Test Duration	CMS**	See permit condition(s)
VE	all	Method 9	annual		1 hour	YES	III.A.16, A.17.
PM	all	Method 17, 5, 5B, 5F	annual		1 hour		III.A.16, A.18.
SO_2	all	CMS Method 6, 6A, 6B, 6C			3-hr avg.	YES	III.A.16, A.19.
NOx	all	CMS				YES	III.A.16.

Notes:
* The frequency base date is established for planning purposes only; see Rule 62-297.310, F.A.C.
**CMS [=] continuous monitoring system
*** The latest edition of the ASTM methods may be used.

DRAFT PROPOSED
CLEAN AIR INTERSTATE RULE (CAIR)
PART OF THE
FDEP TITLE V
AIR OPERATING PERMIT
NO. 099-00042-005-AV

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

January 16, 2009

Electronic Mail – Received Receipt Requested.

Mr. Jeff Smith, Plant General Manager
Florida Power and Light Company
200-300 Broadway
Riviera Beach, Florida 33404

Re: Draft/Proposed Permit No. 0990042-005-AV
Florida Power and Light Company, Riviera Plant
Title V Air Operation Permit Revision
Clean Air Interstate Rule Part

Dear Mr. Smith:

On June 17, 2008, you submitted a Clean Air Interstate Rule (CAIR) Part Form (DEP Form No. 62-210.900(1)(b)) for incorporation into the Title V air operation permit for the Riviera Plant. This facility is located at 200-300 Broadway, Riviera Beach, Florida. Enclosed are the following documents:

- The proposed Draft/Proposed Title V Air Operation Permit Revision includes the CAIR Part which specifies that the owner/operator will operate the facility and each CAIR unit at the facility in accordance with 40 Code of Federal Regulations (CFR) 96 and Rule 62-296.470, Florida Administrative Code (F.A.C.).
- The Statement of Basis, which summarizes the facility, the equipment, the primary rule applicability, and any changes since the last Title V air operation permit revision.
- The Written Notice of Intent to Issue Title V Air Operation Permit Revision provides important information regarding: the Permitting Authority's intent to issue an air permit for the proposed project; the requirements for publishing a Public Notice of the Permitting Authority's intent to issue an air permit; the procedures for submitting comments on the revised Draft/Proposed Permit; the process for filing a petition for an administrative hearing; and the availability of mediation.
- The Public Notice of Intent to Issue Title V Air Operation Permit Revision is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The Public Notice of Intent to Issue Title V Air Operation Permit Revision must be published as soon as possible and the proof of publication must be provided to the Department within seven days of the date of publication.

If you have any questions, please contact the Project Engineer, Tom Cascio, by telephone at 850-921-9526 or by email at tom.cascio@dep.state.fl.us.

Sincerely,

Trina L. Vielhauer, Chief
Bureau of Air Regulation

TLV/jkh/tbc

Enclosures

WRITTEN NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION

In the Matter of an
Application for Air Permit by:

Florida Power and Light Company
200-300 Broadway
Riviera Beach, Florida 33404

Responsible Official:
Mr. Jeff Smith, Plant General Manager

Draft/Proposed Permit No. 0990042-005-AV
Facility ID No. 0990042
Riviera Plant
Title V Permit Revision
Palm Beach County, Florida

Facility Location: Florida Power and Light Company operates the Riviera Plant, which is located at 200-300 Broadway in Riviera Beach, Palm Beach County, Florida.

Project: The applicant has submitted a complete and certified Clean Air Interstate Rule (CAIR) Part Form and has requested its incorporation into the existing Title V air operation permit. Details of the project are provided in the application and the enclosed Statement of Basis.

This existing facility consists of two fossil fuel steam generators, Unit 3 and Unit 4, each rated at 300 megawatts (MW) (315 MW gross capacity) output. The steam generators each burn a variable combination of No. 6 fuel oil, No. 2 fuel oil, natural gas, propane, used oil from Florida Power and Light Company operations, and expired fuel oil samples from the company's central laboratory, discharging pollutants through a stack 298 feet above ground level. Each unit is a Foster-Wheeler outdoor type boiler, equipped with low nitrogen oxides (NO_x) burners and Research-Cotrell multiple cyclones with ash re-injection, with a General Electric Company steam turbine that drives an oil and hydrogen-cooled 300 MW class generator with capability of 315 MW.

The facility had at one time operated a 75 MW steam generating unit, Unit 2, which is no longer in service. This unit was last operated for power production in 1985. Its operating permit was surrendered by letter dated July 7, 1997. The unit is permanently retired under the federal Acid Rain Program.

Permitting Authority: Applications for Title V air operation permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, 62-213 and 62-296.470 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and a Title V air operation permit is required to operate the facility. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at the address indicated above for the Permitting Authority. The complete project file includes the Draft/Proposed Permit, the Statement of Basis, the CAIR Part Form, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may view the Draft/Proposed Permit by visiting the following website: http://www.dep.state.fl.us/air/eproducts/apds/default.asp and entering the permit number shown above. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above.

Notice of Intent to Issue Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft/Proposed Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and

120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Public Notice: Pursuant to Sections 403.815 and 403.087, F.S. and Rules 62-110.106 and 62-210.350(3), F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at above address or phone number. Pursuant to Rule 62-110.106(5) and (9), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within 7 days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

Comments: The Permitting Authority will accept written comments concerning the draft/proposed Title V air operation permit for a period of 30 days from the date of publication of the Public Notice. Written comments must be received by the close of business (5:00 p.m.), on or before the end of this 30-day period by the Permitting Authority at the above address. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the official web site for notices at Florida Administrative Weekly (FAW) at http://faw.dos.state.fl.us/ and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the Draft/Proposed Permit, the Permitting Authority shall issue a Revised Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this Written Notice of Intent to Issue Air Permit. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the attached Public Notice or within 14 days of receipt of this Written Notice of Intent to Issue Air Permit, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are

none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

EPA Review: EPA has agreed to treat the Draft/Proposed Title V air operation permit as a Proposed Title V air operation permit and to perform its 45-day review provided by the law and regulations concurrently with the public comment period. Although EPA's 45-day review period will be performed concurrently with the public comment period, the deadline for submitting a citizen petition to object to the EPA Administrator will be determined as if EPA's 45-day review period is performed after the public comment period has ended. The Final Title V air operation permit will be issued after the conclusion of the 45-day EPA review period so long as no adverse comments are received that results in a different decision or significant change of terms or conditions. The status regarding EPA's 45-day review of this project and the deadline for submitting a citizen petition can be found at the following website address: http://www.epa.gov/region4/air/permits/Florida.htm.

Objections: Finally, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within 60 days of the expiration of the Administrator's 45-day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to the issuance of any Title V air operation permit. Any petition shall be based only on objections to the Permit that were raised with reasonable specificity during the 30-day public comment period provided in the Public Notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460. For more information regarding EPA review and objections, visit EPA's Region 4 web site at http://www.epa.gov/region4/air/permits/Florida.htm .

Executed in Tallahassee, Florida.

Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Written Notice of Intent to Issue Air Permit package (including the Public Notice, the Statement of Basis, and the Draft/Proposed Permit), or a link to these documents available electronically on a publicly accessible server, was sent by electronic mail with received receipt requested before the close of business on 1/20/09 to the persons listed below.

Mr. Jeff Smith, Florida Power and Light Company: jeff_smith@fpl.com
Mr. Kennard Kosky, P.E., Golder Associates; kkosky@golder.com
Ms. Sheila M. Wilkinson, Florida Power and Light Company: Sheila_Wilkinson@fpl.com
Mr. James Stormer, Palm Beach County Health Department: james_stormer@doh.state.fl.us
Ms. Katy Forney, US EPA Region 4: forney.kathleen@epa.gov
Ms. Ana Oquendo, US EPA Region 4: oquendo.ana@epa.gov
Ms. Barbara Friday, DEP BAR: Barbara.Friday@dep.state.fl.us (for posting with U.S. EPA, Region 4)
Ms. Victoria Gibson, DEP BAR: victoria.gibson@dep.state.fl.us (for reading file)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

Barbara J. Friday 1/20/09
(Clerk) (Date)

Clean Air Interstate Rule (CAIR).

Operated by: Florida Power and Light Company
Plant: Riviera Plant
ORIS Code: 0619

The emissions units below are regulated under the Clean Air Interstate Rule.

EU No.	EPA Unit ID#	Brief Description
003	PRV3	Fossil Fuel Steam Generator, Unit 3
004	PRV4	Fossil Fuel Steam Generator, Unit 4

1. Clean Air Interstate Rule Application. The Clean Air Interstate Rule Part Form submitted for this facility is a part of this permit. The owners and operators of these CAIR units as identified in this form must comply with the standard requirements and special provisions set forth in the CAIR Part Form (DEP Form No. 62-210.900(1)(b)) dated June 13, 2008, which is attached at the end of this section. [Chapter 62-213, F.A.C. and Rule 62-210.200, F.A.C.]

Clean Air Interstate Rule (CAIR) Part

RECEIVED
JUN 17 2008
BUREAU OF AIR REGULATION

For more information, see instructions and refer to 40 CFR 96.121, 96.122, 96.221, 96.222, 96.321 and 96.322; and Rule 62-296.470, F.A.C.

This submission is: ☐ New ■ Revised ☐ Renewal

STEP 1

Identify the source by plant name and ORIS or EIA plant code

Plant Name: Riviera	State: Florida	ORIS or EIA Plant Code: 000619

STEP 2

In column "a" enter the unit ID# for every CAIR unit at the CAIR source.

In columns "b," "c," and "d," indicate to which CAIR program(s) each unit is subject by placing an "X" in the column(s).

For new units, enter the requested information in columns "e" and "f.

a	b	c	d	e	f
Unit ID#	Unit will hold nitrogen oxides (NO_X) allowances in accordance with 40 CFR 96.106(c)(1)	Unit will hold sulfur dioxide (SO_2) allowances in accordance with 40 CFR 96.206(c)(1)	Unit will hold NO_X Ozone Season allowances in accordance with 40 CFR 96.306(c)(1)	New Units Expected Commence Commercial Operation Date	New Units Expected Monitor Certification Deadline
PRV 3	X	X	X		
PRV 4	X	X	X		

DEP Form No. 62-210.900(1)(b) – Form
Effective: 3/16/08

1

Plant Name (from STEP 1)	Riviera

STEP 3

Read the standard requirements.

CAIR NO_X ANNUAL TRADING PROGRAM

CAIR Part Requirements.

(1) The CAIR designated representative of each CAIR NO_X source and each CAIR NO_X unit at the source shall:
(i) Submit to the DEP a complete and certified CAIR Part form under 40 CFR 96.122 and Rule 62-296.470, F.A.C., in accordance with the deadlines specified in Rule 62-213.420, F.A.C.; and
(ii) [Reserved];
(2) The owners and operators of each CAIR NO_X source and each CAIR NO_X unit at the source shall have a CAIR Part included in the Title V operating permit issued by the DEP under 40 CFR Part 96, Subpart CC, and operate the source and the unit in compliance with such CAIR Part.

Monitoring, Reporting, and Recordkeeping Requirements.

(1) The owners and operators, and the CAIR designated representative, of each CAIR NO_X source and each CAIR NO_X unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 96, Subpart HH, and Rule 62-296.470, F.A.C.
(2) The emissions measurements recorded and reported in accordance with 40 CFR Part 96, Subpart HH, shall be used to determine compliance by each CAIR NO_X source with the following CAIR NO_X Emissions Requirements.

NO_X Emission Requirements.

(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO_X source and each CAIR NO_X unit at the source shall hold, in the source's compliance account, CAIR NO_X allowances available for compliance deductions for the control period under 40 CFR 96.154(a) in an amount not less than the tons of total NO_X emissions for the control period from all CAIR NO_X units at the source, as determined in accordance with 40 CFR Part 96, Subpart HH.
(2) A CAIR NO_X unit shall be subject to the requirements under paragraph (1) of the NO_X Requirements starting on the later of January 1, 2009, or the deadline for meeting the unit's monitor certification requirements under 40 CFR 96.170(b)(1) or (2) and for each control period thereafter.
(3) A CAIR NO_X allowance shall not be deducted, for compliance with the requirements under paragraph (1) of the NO_X Requirements, for a control period in a calendar year before the year for which the CAIR NO_X allowance was allocated.
(4) CAIR NO_X allowances shall be held in, deducted from, or transferred into or among CAIR NO_X Allowance Tracking System accounts in accordance with 40 CFR Part 96, Subparts FF and GG.
(5) A CAIR NO_X allowance is a limited authorization to emit one ton of NO_X in accordance with the CAIR NO_X Annual Trading Program. No provision of the CAIR NO_X Annual Trading Program, the CAIR Part, or an exemption under 40 CFR 96.105 and no provision of law shall be construed to limit the authority of the state or the United States to terminate or limit such authorization.
(6) A CAIR NO_X allowance does not constitute a property right.
(7) Upon recordation by the Administrator under 40 CFR Part 96, Subpart EE, FF, or GG, every allocation, transfer, or deduction of a CAIR NO_X allowance to or from a CAIR NO_X unit's compliance account is incorporated automatically in any CAIR Part of the source that includes the CAIR NO_X unit.

Excess Emissions Requirements.

If a CAIR NO_X source emits NO_X during any control period in excess of the CAIR NO_X emissions limitation, then:
(1) The owners and operators of the source and each CAIR NO_X unit at the source shall surrender the CAIR NO_X allowances required for deduction under 40 CFR 96.154(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable state law; and
(2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AA, the Clean Air Act, and applicable state law.

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the CAIR NO_X source and each CAIR NO_X unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the DEP or the Administrator.
(i) The certificate of representation under 40 CFR 96.113 for the CAIR designated representative for the source and each CAIR NO_X unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation under 40 CFR 96.113 changing the CAIR designated representative.
(ii) All emissions monitoring information, in accordance with 40 CFR Part 96, Subpart HH, of this part, provided that to the extent that 40 CFR Part 96, Subpart HH, provides for a 3-year period for recordkeeping, the 3-year period shall apply.
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR NO_X Annual Trading Program.
(iv) Copies of all documents used to complete a CAIR Part form and any other submission under the CAIR NO_X Annual Trading Program or to demonstrate compliance with the requirements of the CAIR NO_X Annual Trading Program.
(2) The CAIR designated representative of a CAIR NO_X source and each CAIR NO_X unit at the source shall submit the reports required under the CAIR NO_X Annual Trading Program, including those under 40 CFR Part 96, Subpart HH.

Plant Name (from STEP 1)	Riviera

STEP 3, Continued

Liability.

(1) Each CAIR NO_X source and each CAIR NO_X unit shall meet the requirements of the CAIR NO_X Annual Trading Program.
(2) Any provision of the CAIR NO_X Annual Trading Program that applies to a CAIR NO_X source or the CAIR designated representative of a CAIR NO_X source shall also apply to the owners and operators of such source and of the CAIR NO_X units at the source.
(3) Any provision of the CAIR NO_X Annual Trading Program that applies to a CAIR NO_X unit or the CAIR designated representative of a CAIR NO_X unit shall also apply to the owners and operators of such unit.

Effect on Other Authorities.

No provision of the CAIR NO_X Annual Trading Program, a CAIR Part, or an exemption under 40 CFR 96.105 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO_X source or CAIR NO_X unit from compliance with any other provision of the applicable, approved State Implementation Plan, a federally enforceable permit, or the Clean Air Act.

CAIR SO_2 TRADING PROGRAM

CAIR Part Requirements.

(1) The CAIR designated representative of each CAIR SO_2 source and each CAIR SO_2 unit at the source shall:
(i) Submit to the DEP a complete and certified CAIR Part form under 40 CFR 96.222 and Rule 62-296.470, F.A.C., in accordance with the deadlines specified in Rule 62-213.420, F.A.C.; and
(ii) [Reserved];
(2) The owners and operators of each CAIR SO_2 source and each CAIR SO_2 unit at the source shall have a CAIR Part included in the Title V operating permit issued by the DEP under 40 CFR Part 96, Subpart CCC, for the source and operate the source and each CAIR unit in compliance with such CAIR Part.

Monitoring, Reporting, and Recordkeeping Requirements.

(1) The owners and operators, and the CAIR designated representative, of each CAIR SO_2 source and each SO_2 CAIR unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 96 ,Subpart HHH, and Rule 62-296.470, F.A.C.
(2) The emissions measurements recorded and reported in accordance with 40 CFR Part 96, Subpart HHH, shall be used to determine compliance by each CAIR SO_2 source with the following CAIR SO_2 Emission Requirements.

SO_2 Emission Requirements.

(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR SO_2 source and each CAIR SO_2 unit at the source shall hold, in the source's compliance account, a tonnage equivalent in CAIR SO_2 allowances available for compliance deductions for the control period, as determined in accordance with 40 CFR 96.254(a) and (b), not less than the tons of total sulfur dioxide emissions for the control period from all CAIR SO_2 units at the source, as determined in accordance with 40 CFR Part 96, Subpart HHH.
(2) A CAIR SO_2 unit shall be subject to the requirements under paragraph (1) of the Sulfur Dioxide Emission Requirements starting on the later of January 1, 2010 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 96.270(b)(1) or (2) and for each control period thereafter.
(3) A CAIR SO_2 allowance shall not be deducted, for compliance with the requirements under paragraph (1) of the SO_2 Emission Requirements, for a control period in a calendar year before the year for which the CAIR SO_2 allowance was allocated.
(4) CAIR SO_2 allowances shall be held in, deducted from, or transferred into or among CAIR SO_2 Allowance Tracking System accounts in accordance with 40 CFR Part 96, Subparts FFF and GGG.
(5) A CAIR SO_2 allowance is a limited authorization to emit sulfur dioxide in accordance with the CAIR SO_2 Trading Program. No provision of the CAIR SO_2 Trading Program, the CAIR Part, or an exemption under 40 CFR 96.205 and no provision of law shall be construed to limit the authority of the state or the United States to terminate or limit such authorization.
(6) A CAIR SO_2 allowance does not constitute a property right.
(7) Upon recordation by the Administrator under 40 CFR Part 96, Subpart FFF or GGG, every allocation, transfer, or deduction of a CAIR SO_2 allowance to or from a CAIR SO_2 unit's compliance account is incorporated automatically in any CAIR Part of the source that includes the CAIR SO_2 unit.

Excess Emissions Requirements.

If a CAIR SO_2 source emits SO_2 during any control period in excess of the CAIR SO_2 emissions limitation, then:
(1) The owners and operators of the source and each CAIR SO_2 unit at the source shall surrender the CAIR SO_2 allowances required for deduction under 40 CFR 96.254(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable state law; and
(2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AAA, the Clean Air Act, and applicable state law.

Plant Name (from STEP 1)	Riviera

STEP 3, Continued

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the CAIR SO_2 source and each CAIR SO_2 unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Department or the Administrator.

(i) The certificate of representation under 40 CFR 96.213 for the CAIR designated representative for the source and each CAIR SO_2 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation under 40 CFR 96.213 changing the CAIR designated representative.

(ii) All emissions monitoring information, in accordance with 40 CFR Part 96, Subpart HHH, of this part, provided that to the extent that 40 CFR Part 96, Subpart HHH, provides for a 3-year period for recordkeeping, the 3-year period shall apply.

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR SO_2 Trading Program.

(iv) Copies of all documents used to complete a CAIR Part form and any other submission under the CAIR SO_2 Trading Program or to demonstrate compliance with the requirements of the CAIR SO_2 Trading Program.

(2) The CAIR designated representative of a CAIR SO_2 source and each CAIR SO_2 unit at the source shall submit the reports required under the CAIR SO_2 Trading Program, including those under 40 CFR Part 96, Subpart HHH.

Liability.

(1) Each CAIR SO_2 source and each CAIR SO_2 unit shall meet the requirements of the CAIR SO_2 Trading Program.

(2) Any provision of the CAIR SO_2 Trading Program that applies to a CAIR SO_2 source or the CAIR designated representative of a CAIR SO_2 source shall also apply to the owners and operators of such source and of the CAIR SO_2 units at the source.

(3) Any provision of the CAIR SO_2 Trading Program that applies to a CAIR SO_2 unit or the CAIR designated representative of a CAIR SO_2 unit shall also apply to the owners and operators of such unit.

Effect on Other Authorities.

No provision of the CAIR SO_2 Trading Program, a CAIR Part, or an exemption under 40 CFR 96.205 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR SO_2 source or CAIR SO_2 unit from compliance with any other provision of the applicable, approved State Implementation Plan, a federally enforceable permit, or the Clean Air Act.

CAIR NO_x OZONE SEASON TRADING PROGRAM

CAIR Part Requirements.

(1) The CAIR designated representative of each CAIR NO_x Ozone Season source and each CAIR NO_x Ozone Season unit at the source shall:

(i) Submit to the DEP a complete and certified CAIR Part form under 40 CFR 96.322 and Rule 62-296.470, F.A.C., in accordance with the deadlines specified in Rule 62-213.420, F.A.C.; and

(ii) [Reserved];

(2) The owners and operators of each CAIR NO_x Ozone Season source required to have a Title V operating permit or air construction permit, and each CAIR NO_x Ozone Season unit required to have a Title V operating permit or air construction permit at the source shall have a CAIR Part included in the Title V operating permit or air construction permit issued by the DEP under 40 CFR Part 96, Subpart CCCC, for the source and operate the source and the unit in compliance with such CAIR Part.

Monitoring, Reporting, and Recordkeeping Requirements.

(1) The owners and operators, and the CAIR designated representative, of each CAIR NO_x Ozone Season source and each CAIR NO_x Ozone Season unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 96, Subpart HHHH, and Rule 62-296.470, F.A.C.

(2) The emissions measurements recorded and reported in accordance with 40 CFR Part 96, Subpart HHHH, shall be used to determine compliance by each CAIR NO_x Ozone Season source with the following CAIR NO_x Ozone Season Emissions Requirements.

NO_x Ozone Season Emission Requirements.

(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO_x Ozone Season source and each CAIR NO_x Ozone Season unit at the source shall hold, in the source's compliance account, CAIR NO_x Ozone Season allowances available for compliance deductions for the control period under 40 CFR 96.354(a) in an amount not less than the tons of total NO_x emissions for the control period from all CAIR NO_x Ozone Season units at the source, as determined in accordance with 40 CFR Part 96, Subpart HHHH.

(2) A CAIR NO_x Ozone Season unit shall be subject to the requirements under paragraph (1) of the NO_x Ozone Season Emission Requirements starting on the later of May 1, 2009 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 96.370(b)(1),(2), or (3) and for each control period thereafter.

(3) A CAIR NO_x Ozone Season allowance shall not be deducted, for compliance with the requirements under paragraph (1) of the NO_x Ozone Season Emission Requirements, for a control period in a calendar year before the year for which the CAIR NO_x Ozone Season allowance was allocated.

(4) CAIR NO_x Ozone Season allowances shall be held in, deducted from, or transferred into or among CAIR NO_x Ozone Season Allowance Tracking System accounts in accordance with 40 CFR Part 96, Subparts FFFF and GGGG.

(5) A CAIR NO_x Ozone Season allowance is a limited authorization to emit one ton of NO_x in accordance with the CAIR NO_x Ozone Season Trading Program. No provision of the CAIR NO_x Ozone Season Trading Program, the CAIR Part, or an exemption under 40 CFR 96.305 and no provision of law shall be construed to limit the authority of the state or the United States to terminate or limit such authorization.

(6) A CAIR NO_X Ozone Season allowance does not constitute a property right.
(7) Upon recordation by the Administrator under 40 CFR Part 96, Subpart EEEE, FFFF or GGGG, every allocation, transfer, or deduction of a CAIR NO_X Ozone Season allowance to or from a CAIR NO_X Ozone Season unit's compliance account is incorporated automatically in any CAIR Part of the source that includes the CAIR NO_X Ozone Season unit.

Plant Name (from STEP 1)	Riviera

STEP 3, Continued

Excess Emissions Requirements.

If a CAIR NO_X Ozone Season source emits NO_X during any control period in excess of the CAIR NO_X Ozone Season emissions limitation, then:
(1) The owners and operators of the source and each CAIR NO_X Ozone Season unit at the source shall surrender the CAIR NO_X Ozone Season allowances required for deduction under 40 CFR 96.354(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable state law; and
(2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AAAA, the Clean Air Act, and applicable state law.

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the CAIR NO_X Ozone Season source and each CAIR NO_X Ozone Season unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the DEP or the Administrator.
(i) The certificate of representation under 40 CFR 96.313 for the CAIR designated representative for the source and each CAIR NO_X Ozone Season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation under 40 CFR 96.113 changing the CAIR designated representative.
(ii) All emissions monitoring information, in accordance with 40 CFR Part 96, Subpart HHHH, of this part, provided that to the extent that 40 CFR Part 96, Subpart HHHH, provides for a 3-year period for recordkeeping, the 3-year period shall apply.
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR NO_X Ozone Season Trading Program.
(iv) Copies of all documents used to complete a CAIR Part form and any other submission under the CAIR NO_X Ozone Season Trading Program or to demonstrate compliance with the requirements of the CAIR NO_X Ozone Season Trading Program.
(2) The CAIR designated representative of a CAIR NO_X Ozone Season source and each CAIR NO_X Ozone Season unit at the source shall submit the reports required under the CAIR NO_X Ozone Season Trading Program, including those under 40 CFR Part 96, Subpart HHHH.

Liability.

(1) Each CAIR NO_X Ozone Season source and each CAIR NO_X Ozone Season unit shall meet the requirements of the CAIR NO_X Ozone Season Trading Program.
(2) Any provision of the CAIR NO_X Ozone Season Trading Program that applies to a CAIR NO_X Ozone Season source or the CAIR designated representative of a CAIR NO_X Ozone Season source shall also apply to the owners and operators of such source and of the CAIR NO_X Ozone Season units at the source.
(3) Any provision of the CAIR NO_X Ozone Season Trading Program that applies to a CAIR NO_X Ozone Season unit or the CAIR designated representative of a CAIR NO_X Ozone Season unit shall also apply to the owners and operators of such unit.

Effect on Other Authorities.

No provision of the CAIR NO_X Ozone Season Trading Program, a CAIR Part, or an exemption under 40 CFR 96.305 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO_X Ozone Season source or CAIR NO_X Ozone Season unit from compliance with any other provision of the applicable, approved State Implementation Plan, a federally enforceable permit, or the Clean Air Act.

STEP 4

Read the certification statement; provide name, title, owner company name, phone, and e-mail address; sign, and date.

Certification (for designated representative or alternate designated representative only)

I am authorized to make this submission on behalf of the owners and operators of the CAIR source or CAIR units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name Sheila M Wilkinson	Title PGD Technical Services General Manager (DR)
Company Owner Name Florida Power & Light	
Phone 561-691-2287	E-mail Address Sheila_M_Wilkinson@fpl.com
Signature	Date 6/13/08

DEP Form No. 62-210.900(1)(b) – Form
Effective: 3/16/08

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PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION

Florida Department of Environmental Protection
Division of Air Resource Management, Bureau of Air Regulation
Draft/Proposed Air Permit No. 0990042-005-AV
Florida Power and Light Company, Riviera Plant
Palm Beach County, Florida

Applicant: The applicant for this project is Florida Power and Light Company. The applicant's authorized representative and mailing address are: Mr. Jeff Smith, Plant General Manager, Florida Power and Light Company, Riviera Plant, 200-300 Broadway, Riviera Beach, Florida 33404.

Facility Location: Florida Power and Light Company operates the existing Riviera Plant, which is located in Palm Beach County at 200-300 Broadway in Riviera Beach, Florida.

Project: The applicant has submitted a complete and certified Clean Air Interstate Rule (CAIR) Part Form and has requested its incorporation into the existing Title V air operation permit.

This existing facility consists of two fossil fuel steam generators, Unit 3 and Unit 4, each rated at 300 megawatts (MW) (315 MW gross capacity) output. The steam generators each burn a variable combination of No. 6 fuel oil, No. 2 fuel oil, natural gas, propane, used oil from Florida Power and Light Company operations, and expired fuel oil samples from the company's central laboratory, discharging pollutants through a stack 298 feet above ground level. Each unit is a Foster-Wheeler outdoor type boiler, equipped with low nitrogen oxides (NO_x) burners and Research-Cotrell multiple cyclones with ash re-injection, with a General Electric Company steam turbine that drives an oil and hydrogen-cooled 300 MW class generator with capability of 315 MW.

The facility had at one time operated a 75 MW steam generating unit, Unit 2, which is no longer in service. This unit was last operated for power production in 1985. Its operating permit was surrendered by letter dated July 7, 1997. The unit is permanently retired under the federal Acid Rain Program.

Permitting Authority: Applications for Title V air operation permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, 62-213 and 62-296.470 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and a Title V air operation permit is required to operate the facility. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at the address indicated above for the Permitting Authority. The complete project file includes the Draft/Proposed Permit, the Statement of Basis, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may view the Draft/Proposed Permit by visiting the following website: http://www.dep.state.fl.us/air/eproducts/apds/default.asp and entering the permit number shown above. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above.

Notice of Intent to Issue Air Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft/Proposed Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

(Public Notice to be Published in the Newspaper)

PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION

Comments: The Permitting Authority will accept written comments concerning the Draft/Proposed Title V air operation permit for a period of 30 days from the date of publication of this Public Notice. Written comments must be received by the close of business (5:00 p.m.), on or before the end of this 30-day period by the Permitting Authority at the above address. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the official web site for notices at Florida Administrative Weekly (FAW) at http://faw.dos.state.fl.us/ and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the Draft/Proposed Permit, the Permitting Authority shall issue a Revised Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address and telephone number of the petitioner; the name address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial rights will be affected by the agency determination; (c) A statement of when and how the petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Public Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available for this proceeding.

EPA Review: EPA has agreed to treat the Draft/Proposed Title V air operation permit as a Proposed Title V

air operation permit and to perform its 45-day review provided by the law and regulations concurrently with the public comment period. Although EPA's 45-day review period will be performed concurrently with the public comment period, the deadline for submitting a citizen petition to object to the EPA Administrator will be determined as if EPA's 45-day review period is performed after the public comment period has ended. The Final Title V air operation permit will be issued after the conclusion of the 45-day EPA review period so long as no adverse comments are received that results in a different decision or significant change of terms or conditions. The status regarding EPA's 45-day review of this project and the deadline for submitting a citizen petition can be found at the following website address: http://www.epa.gov/region4/air/permits/Florida.htm.

Objections: Finally, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within 60 days of the expiration of the Administrator's 45-day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to the issuance of any Title V air operation permit. Any petition shall be based only on objections to the Permit that were raised with reasonable specificity during the 30-day public comment period provided in the Public Notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460. For more information regarding EPA review and objections, visit EPA's Region 4 web site at http://www.epa.gov/region4/air/permits/Florida.htm .

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

January 16, 2009

Electronic Mail – Received Receipt Requested.

Mr. Jeff Smith, Plant General Manager
Florida Power and Light Company
200-300 Broadway
Riviera Beach, Florida 33404

Re: Draft/Proposed Permit No. 0990042-005-AV
Florida Power and Light Company, Riviera Plant
Title V Air Operation Permit Revision
Clean Air Interstate Rule Part

Dear Mr. Smith:

On June 17, 2008, you submitted a Clean Air Interstate Rule (CAIR) Part Form (DEP Form No. 62-210.900(1)(b)) for incorporation into the Title V air operation permit for the Riviera Plant. This facility is located at 200-300 Broadway, Riviera Beach, Florida. Enclosed are the following documents:

- The proposed Draft/Proposed Title V Air Operation Permit Revision includes the CAIR Part which specifies that the owner/operator will operate the facility and each CAIR unit at the facility in accordance with 40 Code of Federal Regulations (CFR) 96 and Rule 62-296.470, Florida Administrative Code (F.A.C.).
- The Statement of Basis, which summarizes the facility, the equipment, the primary rule applicability, and any changes since the last Title V air operation permit revision.
- The Written Notice of Intent to Issue Title V Air Operation Permit Revision provides important information regarding: the Permitting Authority's intent to issue an air permit for the proposed project; the requirements for publishing a Public Notice of the Permitting Authority's intent to issue an air permit; the procedures for submitting comments on the revised Draft/Proposed Permit; the process for filing a petition for an administrative hearing; and the availability of mediation.
- The Public Notice of Intent to Issue Title V Air Operation Permit Revision is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The Public Notice of Intent to Issue Title V Air Operation Permit Revision must be published as soon as possible and the proof of publication must be provided to the Department within seven days of the date of publication.

If you have any questions, please contact the Project Engineer, Tom Cascio, by telephone at 850-921-9526 or by email at tom.cascio@dep.state.fl.us.

Sincerely,

Trina L. Vielhauer, Chief
Bureau of Air Regulation

TLV/jkh/tbc

Enclosures

WRITTEN NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION

In the Matter of an
Application for Air Permit by:

Florida Power and Light Company
200-300 Broadway
Riviera Beach, Florida 33404

Responsible Official:
Mr. Jeff Smith, Plant General Manager

Draft/Proposed Permit No. 0990042-005-AV
Facility ID No. 0990042
Riviera Plant
Title V Permit Revision
Palm Beach County, Florida

Facility Location: Florida Power and Light Company operates the Riviera Plant, which is located at 200-300 Broadway in Riviera Beach, Palm Beach County, Florida.

Project: The applicant has submitted a complete and certified Clean Air Interstate Rule (CAIR) Part Form and has requested its incorporation into the existing Title V air operation permit. Details of the project are provided in the application and the enclosed Statement of Basis.

This existing facility consists of two fossil fuel steam generators, Unit 3 and Unit 4, each rated at 300 megawatts (MW) (315 MW gross capacity) output. The steam generators each burn a variable combination of No. 6 fuel oil, No. 2 fuel oil, natural gas, propane, used oil from Florida Power and Light Company operations, and expired fuel oil samples from the company's central laboratory, discharging pollutants through a stack 298 feet above ground level. Each unit is a Foster-Wheeler outdoor type boiler, equipped with low nitrogen oxides (NO_x) burners and Research-Cotrell multiple cyclones with ash re-injection, with a General Electric Company steam turbine that drives an oil and hydrogen-cooled 300 MW class generator with capability of 315 MW.

The facility had at one time operated a 75 MW steam generating unit, Unit 2, which is no longer in service. This unit was last operated for power production in 1985. Its operating permit was surrendered by letter dated July 7, 1997. The unit is permanently retired under the federal Acid Rain Program.

Permitting Authority: Applications for Title V air operation permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, 62-213 and 62-296.470 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and a Title V air operation permit is required to operate the facility. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at the address indicated above for the Permitting Authority. The complete project file includes the Draft/Proposed Permit, the Statement of Basis, the CAIR Part Form, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may view the Draft/Proposed Permit by visiting the following website: http://www.dep.state.fl.us/air/eproducts/apds/default.asp and entering the permit number shown above. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above.

Notice of Intent to Issue Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft/Proposed Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and

120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Public Notice: Pursuant to Sections 403.815 and 403.087, F.S. and Rules 62-110.106 and 62-210.350(3), F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at above address or phone number. Pursuant to Rule 62-110.106(5) and (9), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within 7 days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

Comments: The Permitting Authority will accept written comments concerning the draft/proposed Title V air operation permit for a period of 30 days from the date of publication of the Public Notice. Written comments must be received by the close of business (5:00 p.m.), on or before the end of this 30-day period by the Permitting Authority at the above address. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the official web site for notices at Florida Administrative Weekly (FAW) at http://faw.dos.state.fl.us/ and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the Draft/Proposed Permit, the Permitting Authority shall issue a Revised Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

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A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are

none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

EPA Review: EPA has agreed to treat the Draft/Proposed Title V air operation permit as a Proposed Title V air operation permit and to perform its 45-day review provided by the law and regulations concurrently with the public comment period. Although EPA's 45-day review period will be performed concurrently with the public comment period, the deadline for submitting a citizen petition to object to the EPA Administrator will be determined as if EPA's 45-day review period is performed after the public comment period has ended. The Final Title V air operation permit will be issued after the conclusion of the 45-day EPA review period so long as no adverse comments are received that results in a different decision or significant change of terms or conditions. The status regarding EPA's 45-day review of this project and the deadline for submitting a citizen petition can be found at the following website address: http://www.epa.gov/region4/air/permits/Florida.htm.

Objections: Finally, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within 60 days of the expiration of the Administrator's 45-day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to the issuance of any Title V air operation permit. Any petition shall be based only on objections to the Permit that were raised with reasonable specificity during the 30-day public comment period provided in the Public Notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460. For more information regarding EPA review and objections, visit EPA's Region 4 web site at http://www.epa.gov/region4/air/permits/Florida.htm .

Executed in Tallahassee, Florida.

_____

Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Written Notice of Intent to Issue Air Permit package (including the Public Notice, the Statement of Basis, and the Draft/Proposed Permit), or a link to these documents available electronically on a publicly accessible server, was sent by electronic mail with received receipt requested before the close of business on _____ to the persons listed below.

Mr. Jeff Smith, Florida Power and Light Company: jeff_smith@fpl.com
Mr. Kennard Kosky, P.E., Golder Associates: kkosky@golder.com
Ms. Sheila M. Wilkinson, Florida Power and Light Company: Sheila_Wilkinson@fpl.com
Mr. James Stormer, Palm Beach County Health Department: james_stormer@doh.state.fl.us
Ms. Katy Forney, US EPA Region 4: forney.kathleen@epa.gov
Ms. Ana Oquendo, US EPA Region 4: oquendo.ana@epa.gov
Ms. Barbara Friday, DEP BAR: Barbara.Friday@dep.state.fl.us (for posting with U.S. EPA, Region 4)
Ms. Victoria Gibson, DEP BAR: victoria.gibson@dep.state.fl.us (for reading file)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

_____ (Clerk) _____ (Date)

Florida Power and Light Company
Riviera Plant
Facility ID No. 0990042
Palm Beach County

Title V Air Operation Permit Revision

Draft/Proposed Permit No. 0990042-005-AV
(1st Revision of Title V Air Operation Permit No. 0990042-004-AV)

Permitting Authority
State of Florida
Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
Title V Section

Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Telephone: 850/488-0114
Fax: 850/921-9533

Compliance Authority
State of Florida
Palm Beach County Health Department

Air Section
901 Evernia Street
Post Office Box 29
West Palm Beach, FL 33401

Telephone: 561/355-3070
Fax: 561/355-2442

Title V Air Operation Permit Renewal

Draft/Proposed Permit No. 0990042-005-AV

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- Appendix RR, Facility-wide Reporting Requirements.
- Appendix TR, Facility-wide Testing Requirements.
- Appendix TV, Title V General Conditions.
- Appendix U, List of Unregulated Emissions Units and/or Activities.

Referenced Attachments. ..... At End
- Table H, Permit History
- Table 1, Summary of Air Pollutant Standards.
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PERMITTEE:
Florida Power and Light Company
200-300 Broadway
Riviera Beach, Florida 33404

Permit No. 0990042-005-AV
Riviera Plant
Facility ID No. 0990042
Title V Air Operation Permit Revision

The purpose of this permit is for the revision of Title V Air Operation Permit No. 0990042-004-AV to incorporate the Clean Air Interstate Rule (CAIR) Part as an enforceable section of the permit. In addition, Facility-wide condition FW10 of the recently renewed Title V permit No. 0990042-004-AV is hereby deleted.

The existing Riviera Plant is located at 200-300 Broadway, Riviera Beach, in Palm Beach County. UTM coordinates are: Zone 17, 594.249 km East and 2960.632 km North. Latitude is: 26° 45' 55" North; and, Longitude is: 80° 03' 09" West.

The Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213 and 62-214. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawings, plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Effective Date: January 1, 2009
Revision Effective Date:
Renewal Application Due Date: May 20, 2013
Expiration Date: December 31, 2013

(Draft/Proposed)

_____
Joseph Kahn, Director
Division of Air Resource Management

JK/tlv/jkh/tbc

SECTION VI. APPENDICES.

The Following Appendices Are Enforceable As Allowed By Rule Applicability And Are Supporting Documents For The Air Operating Permit:

Appendix A, Glossary.
Appendix ASP, ASP Number 97-B-01 (With Scrivener's Order Dated July 9, 1997).
Appendix I, List of Insignificant Emissions Units and/or Activities.
Appendix O, Order Granting Petition for Reduced Frequency of Particulate Testing.
Appendix RR, Facility-wide Reporting Requirements.
Appendix TR, Facility-wide Testing Requirements.
Appendix TV, Title V General Conditions.
Appendix U, List of Unregulated Emissions Units and/or Activities.

PROJECT DESCRIPTION

On June 7, 2008, the applicant submitted a CAIR Part Form in order to incorporate the Clean Air Interstate Rule provisions into Title V air operation permit 0990042-004-AV.

FACILITY DESCRIPTION

This existing facility consists of two fossil fuel steam generators, Unit 3 and Unit 4, each rated at 300 megawatts (MW) (315 MW gross capacity) output. The steam generators each burn a variable combination of No. 6 fuel oil, No. 2 fuel oil, natural gas, propane, used oil from Florida Power and Light Company operations, and expired fuel oil samples from the company's central laboratory, discharging pollutants through a stack 298 feet above ground level. Each unit is a Foster-Wheeler outdoor type boiler, equipped with low nitrogen oxides (NO_x) burners and Research-Cotrell multiple cyclones with ash re-injection, with a General Electric Company steam turbine that drives an oil and hydrogen-cooled 300 MW class generator with capability of 315 MW.

The facility had at one time operated a 75 MW steam generating unit, Unit 2, which is no longer in service. This unit was last operated for power production in 1985. Its operating permit was surrendered by letter dated July 7, 1997. The unit is permanently retired under the federal Acid Rain Program.

PRIMARY REGULATORY REQUIREMENTS

The existing facility is regulated under:

Title III: The facility is identified as a major source of hazardous air pollutants (HAP).

Title IV: The facility operates units subject to the acid rain provisions of the Clean Air Act.

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

CAM: Compliance Assurance Monitoring (CAM) does not apply to any of the units at the facility for the following reasons. There are no add-on pollution control devices for nitrogen oxides and sulfur dioxide. Compliance with the emission limits is demonstrated using continuous emissions monitoring systems (CEMS). Regarding particulate matter, the mechanical dust collectors are excluded from CAM, because they are (a) inherent process equipment contained entirely within the flue ductwork, (b) use a passive method of particulate matter separation from the flue gas stream, (c) recover unburned carbon and ash from the flue gas system, and (d) have no moving parts, no control inputs, nor any controllable parameters.

CAIR: The facility is subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

APPLICABLE REGULATIONS

In addition to federal rules above, this facility is subject to the following state rules:

APPLICABLE REGULATIONS	EU ID
Rule 62-4, Florida Administrative Code (F.A.C.) (Permitting Requirements)	003 and 004
Rule 62-204, F.A.C. (Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference)	
Rule 62-210, F.A.C. (Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms)	
Rule 62-212, F.A.C. (Preconstruction Review, PSD Review and Best Available Control Technology (BACT))	
Rule 62-213, F.A.C. (Title V Air Operation Permits for Major Sources of Air Pollution)	
Rule 62-214, F.A.C. (Requirements For Sources Subject To The Federal Acid Rain Program)	

STATEMENT OF BASIS

APPLICABLE REGULATIONS	EU ID
Rule 62-296, F.A.C. (Emission Limiting Standards)	003 and 004
Rule 62-297, F.A.C. (Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures)	

PROJECT REVIEW

The CAIR Part Form is now a part of this permit and has been incorporated as Section V, CAIR Part Form. This section identifies the units that must comply with the standard requirements and special provisions set forth in the CAIR Part Form. Section V – Appendices was renumbered to Section VI – Appendices. In addition, Facility-wide condition FW10 of the renewed Title V permit, No. 0990042-004-AV, which was effective on January 1, 2009, is hereby deleted.

~~**FW10.** Clean Air Interstate Rule (CAIR) Applicable Units. This facility contains emissions units that are subject to CAIR. On July 11, 2008, the U.S. Court of Appeals for the District of Columbia recommended vacature of the Clean Air Interstate Rule. Because of this decision, the applicable CAIR requirements that were identified in the renewal application are not being included in the permit at this time. If, and at such time that, CAIR is ultimately upheld, you must begin complying with the CAIR program requirements contained in the renewal application and the Title V permit must be revised accordingly. [Rules 62-213.440 and 62-296.470, F.A.C.]~~

CONCLUSION

This project revises Title V air operation permit No. 0990042-004-AV, which was effective on January 1, 2009. This Title V Air Operation Permit Revision is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C. In accordance with the terms and conditions of this permit, the above named permittee is hereby authorized to operate the facility as shown on the application and approved drawings, plans, and other documents, on file with the permitting authority.

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
PERMIT NO. FL0001546

MANATEE PROTECTION PLAN

Department of
Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

In the matter of:
Approval of FPL Riviera Power Plant
Manatee Protection Plan

DEP Permit No. FL0001546
Palm Beach County

Mr. Ron Hix
FPL-5ES/JB
Florida Power & Light Company (FPL)
P. O. Box 14000
Juno Beach, FL 33408

NOTICE OF AGENCY ACTION

The Department of Environmental Protection hereby gives notice of its approval of the enclosed Manatee Protection Plan for the FPL Riviera Plant, dated August 7, 2000. The Manatee Protection Plan was completed pursuant to Specific Condition 12 of the above referenced permit.

A person whose substantial interests are affected by the Department action may petition for an administrative hearing in accordance with sections 120.569 and 120.57 of the Florida Statutes.

The petition must contain the information set forth below and must be filed (received) in the Department of Environmental Protection, Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within twenty-one days of receipt of this notice of intent. Petitions filed by any other person must be filed within twenty-one days of publication of the public notice or within twenty-one days of receipt of this notice of intent, whichever occurs first. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 of the Florida Statutes, or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the discretion of the presiding officer upon the filing of a motion in compliance with rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information:
(a) The name, address, and telephone number of each petitioner; the Department case identification number and the county in which the subject matter or activity is located;
(b) A statement of how and when each petitioner received notice of the Department action;

(c) A statement of how each petitioner's substantial interests are affected by the Department action;
(d) A statement of the material facts disputed by the petitioner, if any;
(e) A statement of facts that the petitioner contends warrant reversal or modification of the Department action;
(f) A statement of which rules or statutes the petitioner contends require reversal or modification of the Department action; and
(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department final action may be different from the position taken by it in this order. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation under section 120.573 of the Florida Statutes is not available for this proceeding.

This action is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above. Upon the timely filing of a petition this order will not be effective until further order of the Department.

Any party to the order has the right to seek judicial review of the order under section 120.68 of the Florida Statutes, by the filing of a notice of appeal under rule 9.110 of the Florida Rules of Appellate Procedure with the Clerk of the Department of Environmental Protection, Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000; and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within 30 days from the date when the final order is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Mimi Drew

Mimi Drew
Director
Division of Water Resource Management

2600 Blair Stone Road
Tallahassee, FL 32399-2400
(850) 487-1855

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF AGENCY ACTION and all copies were mailed before the close of business on 12-21-00 to the listed persons.

FILING AND ACKNOWLEDGMENT

FILED, on this date, under section 120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

S. Shields 12-21-00
(Clerk) (Date)

Copies furnished to:

Kipp Frohlich, FWC Tallahassee
Chairman, Board of Palm Beach County Commissioners
Jim Valade, U.S. Fish and Wildlife Service
Save the Manatee Club
Tim Powell, DEP West Palm Beach
Betsy Hewitt, DEP Office of General Counsel

Florida Power & Light – Riviera
Manatee Protection Plan
(August 7, 2000)

Purpose:

The purpose of the Manatee Protection Plan is to set forth Florida Power & Light Company's (FPL) procedures to comply with Specific Condition 12 of the facility's State Industrial Wastewater Permit Number FL0001546 that was issued on February 16, 1998. This Specific Condition reads, in part:

12. The permittee, in so far as required to comply with Tasks 25 and 251 of the U.S. Fish and Wildlife Service (USFWS) "Florida Manatee Recovery Plan," shall develop a plan and procedures addressing potential manatee impacts, ...All plans, if required, shall include an implementation schedule and address, at a minimum:

    (a) Plans to minimize disruption to warm-water outflows during the winter and response procedures in case of disruptions.

    (b) Strategy to maintain discharge temperatures that will sustain manatees during cold events.

    (c) Plan to monitor ambient and discharge temperatures.

    (d) Precautions to minimize hazards to manatees at intake and outfall areas.

    (e) Timely communication to manatee recovery program personnel of any long term changes in the availability of warm water.

Compliance with Specific Condition 12:

1. This Manatee Protection Plan will be in effect during the term of the permit. In order for the plant's warm water discharge to provide a safe, warm water refuge for the manatees and to comply with Specific Condition 12, FPL will take the following actions:

    a) In the case of an unplanned shutdown or a plant failure that will affect the warm water refuge from November 15 through March 31, when the ambient water temperature is below 61°F., the Florida Fish and Wildlife Conservation Commission (FWC) and USFWS will be notified no later than four (4) hours after the event has occurred. If an unplanned shutdown occurs that is expected to result in no thermal discharge for 24 hours or longer, regardless of ambient water temperature, the Florida Marine Research Institute should be notified.

    The following agency representatives shall be notified in the above referenced events or if any distressed manatees are observed at any time:

    FWC/Florida Marine Research Institute-Marine Mammal Pathobiology Lab:(727)-893-2904

USFWS - Jacksonville Field Office: (904) 232-2580

The FWC, Bureau of Protected Species Management (BPSM) shall be provided a schedule of any anticipated in-water work within the discharge area or work that will affect the warm water refuge during the period of November 15 through March 31 each year. No routine in-water maintenance work shall occur in the discharge area from November 15 through March 31, unless it is considered essential by FPL and approved by BPSM prior to the start of work. If emergency in-water work is needed, the BPSM will be notified and consulted no later than two weeks following the commencement of the activity. All vessels used in the operation or associated with the activity shall be operated pursuant to the attached standard manatee construction conditions.

b) From November 15 through March 31 each year, to coincide with the time of greatest manatee abundance, if the ambient water temperature falls below 61°F., the FPL Riviera power plant shall endeavor to operate in a manner that maintains the water temperature in an adequate portion of the Unit 1 and 2 "discharge area" at or above 68°F., until such time as the ambient water temperature reaches 61°F., unless otherwise authorized by BPSM and the USFWS, or unless safety or reliability of the plant would be compromised. The main method for heating this area will be the "manatee siphons" that discharge heated effluent from the Unit 3 and 4 seal wells to the abandoned Unit 1 and 2 discharge area.

c) FPL Riviera power plant will provide personnel from the BPSM, USFWS, Florida Marine Research Institute, USGS-Sirenia Project, or a designee of these agencies, access to the FPL Riviera plant property to conduct manatee research and monitoring activities which may include, placing, maintaining and downloading data from temperature data loggers. (These temperature data loggers will be used to collect air and water temperature data in an ongoing research effort to better understand manatee behavior patterns in response to artificial warm water refugia and environmental variables. The temperature data loggers will be placed in the discharge canal and at ambient water and air locations.) Access would be limited to normal business hours (8:00am - 5:00pm) unless arrangements are made in advance with the FPL Riviera power plant.

d) Intake Area: No special surveys will be required for the intake area.

Discharge Area: No special surveys will be required for the intake area.

e) Should FPL decide to retire these units, notice will be provided to FWC and USFWS as soon as practical after a definite decision is made or, if possible, at least five years prior to the date of retirement.

f) To assist in documenting long-term use patterns of this facility, FPL should conduct periodic aerial surveys of manatees at the Riviera facility. The continuation of the ongoing statewide aerial survey that FPL has funded in the past years meets these criteria.

g) The FPL Rivera power plant will provide phone numbers for weekday and weekend notification of appropriate plant personnel for the purpose of allowing FWC or USFWS to coordinate manatee rescue operations as necessary.

2) FPL actions, pursuant to this plan, that will be conducted on a one-time basis unless there are significant physical or operational changes to the FPL Riviera power plant.

a) Provide a site map of the facility as a part of the plan that includes the following information;

1. The location of the intake pipes and outfall pipes.
2. Proximate streams, rivers, bays, etc.
3. The location of the condenser inlet and outlet temperature monitoring stations.
4. The location of any fuel barge docking facilities in relation to the discharge canal.
5. The delineation of the no-entry boundary at the discharge canal.

b) In order to evaluate and determine what portions of the thermal discharge will provide a sufficient warm water refuge for manatees under potential cold stress water conditions; the FPL Riviera power plant will, within two (2) years of the effective date of this plan, provide a profile of the thermal gradient (either actual or calculated) of the discharge canal waters, as well as its gross bathymetry, at the mean rate of discharge when the ambient water temperature reaches a seasonal low.

FLORIDA POWER & LIGHT – RIVIERA PLANT
MANATEE PROTECTION PLAN

1a) STANDARD MANATEE CONSTRUCTION CONDITIONS FOR ARTIFICIAL WARM WATER REFUGIA DURING THE PERIOD OF NOVEMBER 15 THROUGH MARCH 31.

The permittee shall comply with the following manatee protection conditions:

a. The permittee shall instruct all personnel associated with in-water work within the discharge canal and/or the warm water refuge of the potential presence of manatees and the need to avoid collisions with manatees. All vessels used in the operation or in association with the in-water work shall have an observer on board responsible for identifying the presence and location of manatee(s).

b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972, The Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act.

c. All vessels associated with in-water work associated with the discharge canal and/or warm water refuge shall operate at "no wake/idle" speeds at all times while in the manatee warm water refuge area. All vessels will follow routes of deep water whenever possible.

d. If manatee(s) are seen within the discharge canal and/or warm water refuge area all appropriate precautions shall be implemented to ensure protection of the manatee(s). These precautions shall include the immediate shutdown of equipment if necessary. Activities will not resume until the manatee(s) has departed to a safe distance on its own volition.

e. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Fish & Wildlife Conservation Commission at (1-800-342-5367). Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-232-2580).

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

MUTLI-SECTOR GENERIC PERMIT

Department of
Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

December 20, 2005

Jeffrey A Smith
Florida Power & Light Go Riviera Power Plant 200-
300 Broadway
Riviera Beach, FL 33404

RE Facility ID: FLR05A771
Florida Power & Light Go Riviera Power Plant 200-
300 Broadway
Riviera Beach, FL 33404

Dear Permittee:

The Florida Department of Environmental Protection has received and processed your *Notice of Intent to Use Multi-Sector Generic Permit for Stormwater Discharge Associated with Industrial Activity* (NO1), and the accompanying processing fee, for the facility referenced above. This letter serves to acknowledge that your NO1 is complete, your fee is paid-in-full, and your facility
is covered under the generic permit effective **December** 9,2005. Your coverage under the generic permit will expire **December** 8, **2010.**

The *Multi-Sector Generic Permit* (MSGP) was issued under the provisions of Section 403.0885, Florida Statutes, and applicable rules of the Florida Administrative Code. Stormwater discharge associated with industrial activity requires a permit under 40 CFR Part 122.26(a) (ii). This
permit constitutes authorization to discharge stormwater associated with industrial activity to surface waiers under ihe Nationai Poiiutant Discharge Eiimination System tNPDES). Until this permit is terminated, modified or revoked, permittees that have properly obtained coverage under this permit are authorized to operate facilities and to discharge to surface waters in accordance with the terms and conditions of this permit.

Your facility identification number is FLROSA771. Please make reference to this number on all future correspondence including any checks made out to the Department

This letter is not your permit. Your NO1 allows you to discharge stormwater associated with industrial activities by complying with the terms and conditions of the MSGP which you may obtain by contacting the NPDES Stormwater Notices Center or online at
www .dep.state fi. u *slwaterlstormwater/n* pdes/i ndustrial5. htm

Key provisions of the permit are (1) implementation of your storm water pollution prevention
plan (SWPPP) that was required to be developed prior to NO1 submittal, (2) retention of records required by the permit, including retention of a copy of the SWppp at the facility, and

Facility ID: FLR05A771
December 20, 2005

(3) routine stormwater monitoring with results submitted to Florida **DEP**. Attached is a copy of the discharge monitoring report (DMR) forms that should be used to submit your monitoring results.

Your facility falls under Sector O of the MSGP. Consequently, a DMR form must be completed and submitted for monitoring results obtained in years 2 and 4 of your 5-year MSGP coverage cycle. Your year two monitoring period begins January l' 2006 and ends December 31,2006. Your year four monitoring period begins January l' 2008 and ends December 31 I 2008.

Monitoring results for each monitoring period are due by March 31 st of the year following each monitoring period (for example, monitoring results for 2006 would be due March 31, 2007) Mail the completed DMR forms to the following address:

NPDES Stormwater MSGP DMR, MS #2511 Florida
Department of Environmental Protection 2600 Blair
Stone Road
Tallahassee, **FL** 32399-2400

If your facility will continue discharging stormwater associated with industrial activity beyond expiration of the current coverage, request for continued coverage shall be made by filing a completed NO1 at least 2 days before expiration of the current coverage period If you discontinue discharging stormwater associated with industrial activity, are no longer the operator of the facility, or otherwise qualify to discontinue coverage under the MSGP, you may terminate permit coverage by filing a Notice of Termination of Generic Permit Coverage (NOT).

If you have any questions concerning this acknowledgment letter, please contact the NPDES Stormwater Notices Center at (866) 336-6312 or (850) 297-1232.

CERTIFICATE OF SERVICE

THE UNDERSIGNED HEREBY CERTIFIES that the foregoing acknowledgment of coverage under the Multi-Sector Generic Permit, Rule 62-621.300(5), F.A.C., was mailed by Science Applications International Corporation working under FDEP Contract Number WM788, on behalf of the Florida ~ , .. , Protection, on the date indicated below via the United States Postal Service.

Department of Environmental

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

PERMIT NO. FL00001546 TO OPERATE WASTEWATER TREATMENT AND EFFLUENT DISPOSAL FACILITIES

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

NOTICE OF PERMIT

CERTIFIED MAIL

In the Matter of an
Application for Permit by:
Florida Power & Light Company
200-300 Broadway
Riviera Beach, Florida 33404

DEP File # FL00001546-003- IW1S/NR

Attention: Mr. Rick Blomgren

Enclosed is Permit Number FL00001546 to Florida Power & Light Company, 200-300 Broadway, Riviera Beach, FL 33404, to operate wastewater treatment and effluent disposal facilities for Units 2, 3 and 4 of the FPL Riviera Beach Plant located in Palm Beach County, Florida, issued under Section 403.0885, Florida Statutes and DEP Rule 62-620, Florida Administrative Code.

Any party to this order (permit) has the right to seek judicial review of the permit under Section 120.68, Florida Statutes, by the filing of a Notice of Appeal under Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection, Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000 and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this notice is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Mimi Drew
Director
Division of Water Resource Management

2600 Blair Stone Road
Tallahassee, FL 32399-2400
(850) 245-8336

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 02-03-04 to the listed persons.

[Clerk Stamp]

FILING AND ACKNOWLEDGMENT

FILED, on this date, under Section 120.52 (9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

G. Shields 02-03-04
(Clerk) (Date)

Copies furnished to:

Chairman, Board of Palm Beach County Commissioners
Jill Watson - FPL Juno Beach
Betsy Hewitt - DEP Tallahassee
Tim Powell –DEP West Palm Beach

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

SECOND AMENDMENT TO THE FACT SHEET FOR APPLICATION FOR PERMIT TO DISCHARGE TREATED WASTEWATER TO WATERS OF THE STATE

Permit Number: FL0001546
Permit Writer: Bala Nori

Application Date: August 19, 2002
Application No: FL0001546-003-IW1S/NR
Notice of Intent Issued: November 5, 2003;

1. SYNOPSIS OF APPLICATION

A. Name and Address of Applicant
Florida Power & Light Company
200- 300 Broadway
Riviera Beach, Florida 33404
For:
Riviera Power Plant
200-300 Broadway
Riviera Beach, FL 33404

2. MINOR CHANGES TO THE PROPOSED PERMIT

The following changes are based on comments from the Permittee during November and December 2003. They are intended to correct minor errors in the Proposed Permit, and provide non-substantive changes in language to clarify certain permit conditions.

1. Item I.E.9. was reworded to clarify monitoring requirements in the event of a bypass.
2. Item I.E.14., stormwater monitoring requirements for discharge from diked petroleum storage areas which were in the Draft Permit but were deleted from the Proposed Permit, were reinserted into the Final Permit. The requirements are in the permit because the stormwater discharges are not covered under the Multi-Sector General Permit (MSGP), or another individual permit.
3. Items II. (Industrial Sludge Management Requirements) and IV. (Other Land Application Requirements). In the Proposed Permit, requirements for both industrial sludge management and maintenance of settling and percolation basins were all located in Item II. In the Final Permit, Item II. includes only the specific requirements for industrial sludge management, while requirements for settling and percolation basin maintenance have been moved to Item IV.

3. SIGNIFICANT CHANGES TO PERMIT CONDITIONS

The changes to permit conditions described herein are not considered significant because they do not change effluent limitations, monitoring, or affect the quantity or quality of discharge.

STATE OF FLORIDA
INDUSTRIAL WASTEWATER FACILITY PERMIT

PERMITTEE:
Florida Power & Light Company
200-300 Broadway
Riviera Beach, Florida 33404

PERMIT NUMBER: FL0001546
PA FILE NUMBER: FL0001546-003-IW1S/NR
ISSUANCE DATE: February 10, 2004
EXPIRATION DATE: February 09, 2009

RESPONSIBLE AUTHORITY:

Mr. Rick Blomgren
Plant General Manager

FACILITY:

FPL-Riviera Plant
200-300 Broadway
Riviera Beach, FL 33404
Palm Beach County

Latitude: 26° 45' 55" N Longitude: 80° 3' 10" W
This permit is issued under the provisions of Chapter 403, Florida Statutes, and applicable rules of the Florida Administrative Code and constitutes authorization to discharge to waters of the state under the National Pollutant Discharge Elimination System. The above named permittee is hereby authorized to operate the facilities shown on the application and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

The plant consists of three steam electric power generating units with a total name plate rating of 673 MW. Plant fuel is natural gas and oil. The plant has a Once Through Cooling Water (OTCW) system that uses water from Lake Worth, a coastal marine waterbody. The OTCW is intermittently chlorinated for bio-fouling control and dechlorinated prior to discharge. Discharges of OTCW and Auxiliary Equipment Cooling Water (AECW) are discharged through a submerged pipeline approximately 2,000 feet in length via Lake Worth to the Intracoastal Waterway.

WASTEWATER TREATMENT:

All wastewaters except screen washwater from the operation of Units 3 and 4 are treated prior to discharge. Once through cooling water Auxiliary Equipment Cooling Water are intermittently chlorinated and dechlorinated using sodium bisulfite prior to discharge. Other wastewaters include water treatment plant effluent (reverse osmosis concentrate, softener regeneration, and filter backwash) low volume wastes and metal cleaning wastes. Wastewater treatment for curbed equipment areas consists of oil separation. Wastewater is routed to two solids settling basins. The solids settling basins are lined with HDPE membrane liners. Wastewater from the solids settling basins discharges to three unlined percolation/evaporation ponds.

EFFLUENT DISPOSAL:

Surface Water Discharge:

An existing discharge to Intracoastal Waterway [Lake Worth] (Class III Marine waters), **Outfall D-012/D0182**, The Once Through Cooling Water and auxiliary equipment cooling water outfall line is located approximately at latitude 26° 45'52" N/ 26° 45'57" N longitude 80° 03'03" W/ 80° 03'03" W.

An existing discharge to Intracoastal Waterway [Lake Worth] (Class III Marine waters), **Outfall D-013/D0183**. The Once through cooling water and auxiliary equipment cooling water outfall line is located approximately at latitude 26° 45'52 " N/26° 45'52 " N, longitude 80°03 '02" W.

An existing discharge to Intracoastal Waterway [Lake worth] (Class III Marine waters), **Outfall D-014/D0184**. The Once through cooling water and auxiliary equipment cooling water outfall line is located approximately at latitude 26°45'52" N, longitude 80°03'02" W.

An existing discharge to Intracoastal Waterway [Lake Worth] (Class III Marine waters), **Outfall D-0163**. The Boiler blowdown from Unit 3 to the OTCW intake wells and then to the Intracoastal Waterway.[Lake Worth] outfall line is located approximately at latitude26°46'00" N, longitude80°03'09" W.

An existing discharge to Intracoastal Waterway [Lake Worth] (Class III Marine waters), **Outfall D-0164**. The Boiler blowdown from Unit 4 to intake well of OTCW and then to the Intracoastal Waterway outfall line is located approximately at latitude 26°46'00" N, longitude80°03'09" W.

An existing discharge to Inter Coastal Waterway [Lake Worth] (Class III Marine waters), **Outfall D-009**. The Intake Screen Washwater to Intracoastal Waterway outfall line is located approximately at latitude 26°45'59" N, longitude 80°03'03" W.

Land Application:

An existing 0.05 MGD, projected average flow rate land application system **Outfall R-001** consisting of an unlined percolation pond designated Basin EP-1, discharging to Class G-II ground water, and located approximately at latitude 26° 45' 53" N, longitude 80° 03' 13" W.

An existing 0.05 MGD, projected average flow rate land application system **Outfall R-002** consisting of an unlined percolation pond designated Basin EP-2, discharging to Class G-II ground water, and located approximately at latitude 26° 45' 53" N, longitude 80° 03' 14" W.

An existing 0.0003 MGD, projected average flow rate, land application system **(Outfall R-003)** consisting of an unlined percolation pond designated Basin EP-3, discharging to Class G-II ground water, and located approximately at latitude 26° 45' 55" N, longitude 80° 03' 15" W.

IN ACCORDANCE WITH: The limitations, monitoring requirements and other conditions as set forth in Part I through Part VIII on pages 3 through 23 of this permit.

PERMITTEE:
Florida Power & Light Company
200-300 Broadway Company
Riviera Beach, Florida 33404

PERMIT NUMBER: FL0001546
Issuance date: February 10, 2004
Expiration date: February 09, 2009

I. Effluent Limitations and Monitoring Requirements

A. Surface Water Discharges

1. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge from **Outfall D-012/D-0182 Once-Through Non-Contact Cooling Water and Auxiliary Equipment Cooling Water** from Unit 2 to the Intracoastal Waterway (Lake Worth).

a. Such discharge shall be limited and monitored by the permittee as specified below:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Monthly Average**	**Daily Maximum**	**Instantaneous Maximum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
Flow (MGD)	Report	Report	N/A	Daily	Pump logs	INT-1
Temperature of Discharge (°F)	Report, see I.A.1.d.	Report	N/A	6/Day	Recorder	EFF-1
Temp. Diff. Between Intake and Discharge (°F)	Report, see I.A.1.d.	Report	N/A	6/Day	Calculated	EFF-1

b. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.A.1 and as described below:

Sample Point	Description of Monitoring Location
INT-1	Plant intake for Unit 2
EFF-1	Outlet corresponding to Unit 2 prior to discharging to receiving waters or mixing with other waste streams.

c. The discharge of TRO from the chlorination of D0012 or D0182 is not authorized to waters of the state by this permit.

d. Discharge from D-0012 is subject to the limitations established by Rule 62-302.520(1), F.A.C.

2. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge from **Outfall D-013/D-0183 Once-Through Cooling Water and Auxiliary Equipment Cooling Water** from Unit 3 to the Intracoastal Waterway (Lake Worth).

a. Such discharge shall be limited and monitored by the permittee as specified below:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Monthly Average**	**Daily Maximum**	**Instantaneous Maximum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
Flow (MGD)	Report	Report	N/A	Daily	Pump logs	INT-2
Temp. Diff. Between Intake and Discharge (°F)	Report, see I.A.2.f.	Report	N/A	6/Day	Calculation	EFF-2

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Monthly Average**	**Daily Maximum**	**Instantaneous Maximum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
Temperature of Discharge (°F)	Report, see I.A.2.f.	Report	N/A	6/Day	Recorder	EFF-2
Oxidants, Total Residual (MG/L)	N/A	N/A	0.01[1,2]	1/Week	Multiple Grabs[3]	EFF-4
Chlorination Duration AECW/ (MINUTES)	Report	1440	N/A	Daily	Logs	INT-2
Chlorination Duration OTCW/ (MINUTES)	Report	120	N/A	Daily	Logs	INT-2

b. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.A.2. and as described below:

Sample Point	Description of Monitoring Location
INT-2	Plant intake for Unit 3
EFF-2	Outlet corresponding to Unit 3 prior to discharging to receiving waters or mixing with other waste streams.
EFF-4	The combined discharge of AECW and OTCW at the seal well corresponding to Unit 3

c. Limitations and monitoring requirements for TRO are not applicable for any week in which chlorine is not added to Unit 3.
d. Discharge from D-0013 is subject to the limitations established by Rule 62-302.520(1), F.A.C.

[1] The discharge shall comply with a TRO limitation of 0.026 mg/l until the Permittee notifies the Department that the chlorination optimization study described in Section VI.4. of this permit has been completed, or until two years following issuance of this permit, whichever occurs first. At such time the discharge shall comply with the TRO limitation of 0.01 mg/l.
[2] The facility is authorized a mixing zone for TRO encompassing a circular area of 125,600 m^2 centered on the POD. Water Quality Standards (WQS) shall be achieved at the edge of the mixing zone. When the Permittee notifies the Department that the chlorination optimization study described in Section VI.4. of this permit has been completed, or two years following issuance of this permit, whichever occurs first, the mixing zone for TRO shall be eliminated and the limitation of 0.01 mg/l, which is the WQS, shall be applicable at the POD, as monitored at EFF-4.
[3] Multiple grabs shall consist of grab samples collected at approximately the beginning, middle, and end of the chlorination period.

3. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge **Once-Through Cooling Water and Auxiliary Equipment Cooling Water from Outfall D-014/D0184.**

a. Such discharge shall be limited and monitored by the permittee as specified below:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Monthly Average**	**Daily Maximum**	**Instantaneous Maximum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
Flow (MGD)	Report	Report	N/A	Daily	Pump logs	INT-3
Temp. Diff. Between Intake and Discharge (°F)	Report, see I.A.3.f.	Report	N/A	6/Day	Calculated	EFF-3
Temperature of Discharge (°F)	Report, see I.A.3.f.	Report	N/A	6/Day	Recorder	EFF-3
Oxidants, Total Residual (MG/L)	N/A	N/A	0.01[1,2]	1/Week	Multiple Grabs[3]	EFF-5
Chlorination Duration AECW (MINUTES)	Report	1440	N/A	Daily	Logs	INT-3
Chlorination Duration OTCW (MINUTES)	Report	120	N/A	Daily	Logs	INT-3

b. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.A.3 and as described below:

Sample Point	Description of Monitoring Location
INT-3	Plant intake for Unit 4
EFF-3	Outlet corresponding to Unit 4 prior to discharging to receiving waters or mixing with other waste streams.
EFF-5	The combined discharge of AECW and OTCW at the seal well corresponding to Unit 4

c. Limitations and monitoring requirements are not applicable for any week during which chlorine is not added to Unit 4.

d. Discharge from D-0014 is subject to the limitations established by Rule 62-302.520(1), F.A.C.

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[1] The discharge shall comply with a TRO limitation of 0.026 mg/l until the Permittee notifies the Department that the chlorination optimization study described in item VI.4. of this permit has been completed, or until two years following issuance of this permit, whichever occurs first. At such time the discharge shall comply with the TRO limitation of 0.01 mg/l.

[2] The facility is authorized a mixing zone for TRO encompassing a circular area of 125,600 m^2 centered on the POD. Water Quality Standards (WQS) shall be achieved at the edge of the mixing zone. When the Permittee notifies the Department that the chlorination optimization study described in Section VI.4. of this permit has been completed, or two years following issuance of this permit, whichever occurs first, the mixing zone for TRO shall be eliminated and the limitation of 0.01 mg/l, which is the WQS, shall be applicable at the POD, as monitored at EFF-5.

[3] Multiple grabs shall consist of grab samples collected at approximately the beginning, middle, and end of the chlorination period.

4. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge **Boiler Blowdown** from **Outfall D-0163**.

a. Such discharge shall be limited and monitored by the permittee as specified below:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Monthly Average**	**Daily Maximum**	**Instantaneous Maximum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
Flow (MGD)	Report	Report	N/A	Semiannually	Calculated	EFF-6
Oil and Grease (MG/L)	15.0	20.0	N/A	Semiannually	Grab	EFF-6
Solids, Total Suspended (MG/L)	30.0	100.0	N/A	Semiannually	Grab	EFF-6
Hydrazine (MG/L)	N/A	N/A	0.30	Semiannually	Grab	EFF-6

b. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.A.4 and as described below:

Sample Point	Description of Monitoring Location
EFF-6	Within boiler drum, flash tank or other location prior to discharge to receiving waters or mixing with any other streams from Unit 3.

5. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge **Boiler Blowdown** from **Outfall D-0164**.

a. Such discharge shall be limited and monitored by the permittee as specified below:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Monthly Average**	**Daily Maximum**	**Daily Minimum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
Flow (MGD)	Report	Report	N/A	Semiannually	Calculated	EFF-7
Oil and Grease (MG/L)	15.0	20.0	N/A	Semiannually	Grab	EFF-7
Solids, Total Suspended (MG/L)	30.0	100.0	N/A	Semiannually	Grab	EFF-7
Hydrazine (MG/L)	N/A	N/A	0.30	Semiannually	Grab	EFF-7

b. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.A.5 and as described below:

Sample Point	Description of Monitoring Location
EFF-7	Within boiler drum, flash tank or other location prior to discharge to receiving waters or mixing with any other waste streams from Unit 4.

6. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge **Intake Screen Wash Water** from **Outfall D-009**. Discharge of intake screen wash water is permitted without limitation or monitoring requirements.

B. Underground Injection Control Systems

This section is not applicable to this facility.

C. Land Application Systems

a. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge process wastewater, storm water, boiler make up water treatment wastewater, equipment area floor drains, curbed water treatment area floor drains, fuel oil burner pump and unloading equipment area drainage and low volume and metal cleaning wastewater to Land Application System R-001, a percolation pond designated Basin EP-1, R-002, a percolation pond designated Basin EP-2 and R-003, a percolation pond designated Basin EP-3. Discharge into Basins EP-1,2, and 3 is permitted without limitations and without monitoring, except as follows. The Permittee shall monitor discharge flow into Basins 1,2, and 3, and shall maintain a record of the monthly average discharge into each basin. Monitoring and limitations on discharge from Basins EP-1,2, and 3 to ground water are addressed in item III.B. of this permit.

D. Other Methods of Disposal or Recycling

There shall be no discharge of industrial wastewater from this facility to ground or surface waters, except as authorized by this permit.

E. Other Limitations and Monitoring and Reporting Requirements

1. The sample collection, analytical test methods and method detection limits (MDLs) applicable to this permit shall be in accordance with Rule 62-4.246, Chapter 62-160, and 40 CFR 136, as appropriate. The list of Department established analytical methods, and corresponding MDLs (method detection limits) and PQLs (practical quantification limits), which is titled "Florida Department of Environmental Protection Table as Required By Rule 62-4.246(4) Testing Methods for Discharges to Surface Water" dated June 21, 1996, is available from the Department on request. The MDLs and PQLs as described in this list shall constitute the minimum acceptable MDL/PQL values and the Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those described above unless alternate MDLs and/or PQLs have been specifically approved by the Department for this permit. Any method included in the list may be used for reporting as long as it meets the following requirements:

   a. The laboratory's reported MDL and PQL values for the particular method must be equal or less than the corresponding method values specified in the Department's approved MDL and PQL list;

   b. The laboratory reported PQL for the specific parameter is less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Parameters that are listed as "report only" in the permit shall use methods that provide a PQL, which is equal to or less than the applicable water quality criteria stated in Chapter 62-302 FAC; and

   c. If the PQLs for all methods available in the approved list are above the stated permit limit or applicable water quality criteria for that parameter, then the method with the lowest stated PQL shall be used.

   Where the analytical results are below method detection or practical quantification limits, the permittee shall report the actual laboratory MDL and/or PQL values for the analyses that were performed following the instructions on the applicable discharge monitoring report. Approval of alternate laboratory MDLs or PQLs are not necessary if the laboratory reported MDLs and PQLs are less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. However, where necessary, the permittee may request approval for alternative methods or for alternative MDLs and PQLs for any approved analytical method, in accordance with the criteria of Rules 62-160.520 and .530, F.A.C.

2. Monitoring requirements under this permit are effective on the first day of the second month following permit issuance. Until such time, the permittee shall continue to monitor and report in accordance with previously

effective permit requirements, if any. During the period of operation authorized by this permit, the permittee shall complete and submit to the Southeast District Office Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e., monthly, toxicity, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this permit. Monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below.

REPORT Type on DMR	Monitoring Period	DMR Due Date
Monthly or Toxicity	First day of month – last day of month	28th day of following month
Quarterly	January 1 – March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	April 28 July 28 October 28 January 28
Semiannual	January 1 – June 30 July 1 – December 31	July 28 January 28
Annual	January 1 – December 31	January 28

DMRs shall be submitted for each required monitoring period including months of no discharge.

The permittee shall make copies of the attached DMR form(s) and shall submit the completed DMR form(s) to the Department at the address specified below:

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3551
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

3. Unless specified otherwise in this permit, all reports and notifications required by this permit, including twenty-four hour notifications, shall be submitted to or reported to the Southeast District Office at the address specified below:

   Southeast District Office
   400 N. Congress Ave., Suite 200
   West Palm Beach, FL33416

   Phone Number – (561) 681-6600
   FAX Number - (561) 681-6766 (All FAX copies shall be followed by original copies.)

4. All reports and other information shall be signed in accordance with requirements of Rule 62-620.305, F.A.C.

5. Total Residual oxidants (TRO) means the value obtained using the amperometric titration method for total residual chlorine, or the Hach model 19300 or equivalent). Testing for TRO by titration shall be conducted according to either the low-level amperometric method, or the DPD calorimetric method as specified in section 4500-CI E. or 4500 CI G., respectively, Standard Methods for the examination of Water and Waste water, 18th Edition (or most current edition).

6. The permittee shall provide safe access points for obtaining representative samples which are required by this permit.

7. If there is no discharge from the facility on a day scheduled for sampling, the sample shall be collected on the day of the next discharge.

8. There shall be no discharge of polychlorinated biphenyl compounds.

9. Bypasses subject to General conditions VIII.20 and VIII.22 shall be monitored or estimated daily, or as approved by the Department for flow and other parameters required for the specific outfall which is bypassed. Monitoring results shall be reported to the Department.

10. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of a visible oil sheen at any time in accordance with Rules 62-302.500(1)(a) and 62-302.530(50)(b), F.A.C. Any such discharges to water of the State shall be reported to the Department when submitting DMRs.

11. Discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which ultimately may be released to waters of the State is prohibited unless specifically authorized elsewhere in this permit. This requirement is not applicable to products used for lawn and agricultural purposes or to the use of herbicides if used in accordance with labeled instructions and any applicable State permit.

    The company shall notify the Department in writing no later than six (6) months prior to instituting use of any biocide or chemical used in the cooling systems or any other portion of the treatment system which may be toxic to aquatic life. Such notification shall include:

    a. Name and general composition of biocide or chemical
    b. Frequencies of use
    c. Quantities to be used
    d. Proposed effluent concentrations
    e. Acute and/or chronic toxicity data (laboratory reports shall be prepared according to Section 12 of EPA document no. EPA/600/4-90/027 entitled, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters for Freshwater and Marine Organisms, or most current addition.)
    f. Product data sheet
    g. Product label

    The Department shall review the above information to determine if a substantial or minor permit revision is necessary. Discharge associated with the use of such biocide or chemical except Chlorine or Hydrazine as authorized elsewhere in this permit is not authorized without a permit revision by the Department. Permit revisions shall be processed in accordance with the requirements of Chapter 62-620, F.A.C.

12. Discharge of any waste resulting from the combustion of toxic, hazardous, or metal cleaning wastes to any waste stream which ultimately discharges to waters of the State is prohibited, unless specifically authorized elsewhere in this permit.

13. The permittee shall continue compliance with the facility's Manatee Protection Plan approved by the Department on December 21, 2000.

14. The permittee is authorized to discharge storm water from diked petroleum storage or handling areas, provided the following conditions are met:

    Such discharges shall be limited and monitored by permittee as specified below:

    1. The facility shall have a valid Spill Prevention Control and Countermeasure Plan (SPCC) Plan pursuant to 40 CFR Part 112.

    2. In draining the diked area, a portable oil skimmer or similar device or absorbent material shall be used to remove oil and grease (as indicated by the presence of a sheen) immediately prior to draining.

    3. Monitoring records shall be maintained in the form of a log and shall contain the following information, as minimum:

        a. Date and time of discharge;
        b. Estimated volume of discharge;
        c. Initials of person making visual inspection and authorizing discharge; and
        d. observed conditions of storm water discharged .

    4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil sheen at any time.

II. Industrial Sludge Management Requirements

1. The sediments and sludge excavated from the settling basins and percolation basins must be properly stored onsite until they are disposed in accordance with requirements in Chapter 62-701, F.A.C., and other applicable state and Federal requirements.

III. Ground Water Monitoring Requirements

A. Construction Requirements

1. This section is not applicable to this facility.

B. Operational Requirements

1. During the period of operation authorized by this permit, the permittee shall sample ground water in accordance with this permit and the approved ground water monitoring plan prepared under Rule 62-522.600, F.A.C.

2. The following monitoring wells shall be sampled for Well Group For: percolation pond, Land Application System R-001, R-002 and R-003:

Monitoring Well ID	Alternate Well Name and/or Description of Monitoring Location	Depth (Feet)	Aquifer Monitored	New or Existing
MWB-01	RI-MW-1 (previous intermediate well); approximately 20 feet east of the center of the eastern ends of the Solids Settling Basins.	22.25	Surficial	Existing
MWI-01	OB-5R (previous background well; relocation of previous OB-5); approximately 150 feet west of the center of the western ends of the Solids Settling Basins.	15	Surficial	Existing
MWC-01	OB-6; approximately 80 feet south of the center of the southern boundary for the south Solids Settling Basin SSB-2.	19.25	Surficial	Existing

MWB = Background; MWI = Intermediate; MWC = Compliance, MWP = Piezometer

3. The monitor wells specified in Condition III.B.2 shall be sampled for the parameters listed below:

Parameter Name	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Water Level Relative to MSL	Report	FEET	Measured	Quarterly
Solids, Total Dissolved (TDS)	Report	MG/L	Grab	Quarterly
PH	Report	SU	In-situ	Quarterly
Chloride (as Cl)				
Sulfate, Total				
Iron, Total Recoverable				
Sodium, Total Recoverable	160	MG/L	Grab	Quarterly
Arsenic, Total Recoverable	0.05	MG/L	Grab	Semiannually
Chromium, Total Recoverable	0.1	MG/L	Grab	Semiannually
Copper, Total Recoverable	Report	MG/L	Grab	Semiannually

Parameter Name	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Manganese, Total Recoverable	Report	MG/L	Grab	Semiannually
Nickel, Total Recoverable	0.1	MG/L	Grab	Semiannually
Silver, Total Recoverable	Report	MG/L	Grab	Semiannually
Zinc, Total Recoverable	Report	MG/L	Grab	Semiannually
Oil and Grease	Report	MG/L	Grab	Semiannually

4. A zone of discharge is established for R-001, R-002 and R-003, more specifically described as follows: The zone of discharge extends horizontally along the ground surface to the property line, and vertically to the base of the surficial aquifer.

5. The permittee's discharge to ground water shall not cause a violation of water quality standards for ground waters at the boundary of the zone of discharge in accordance with Rules 62-520.400 and 62-520.420, F.A.C.

6. The permittee's discharge to ground water shall not cause a violation of the minimum criteria for ground water specified in Rule 62-520.400, F.A.C., within the zone of discharge.

7. If the concentration for any constituent listed in Permit Condition III.B.3, in the natural background quality of the ground water is greater than the stated maximum, or in the case of pH is also less than the minimum, the representative natural background quality shall be the prevailing standard.

8. Water levels shall be recorded prior to evacuating the well for sample collection. Elevation references shall include the top of the well casing and land surface at each well site (NGVD allowable) at a precision of plus or minus 0.1 feet.

9. Ground water monitoring wells shall be purged prior to sampling to obtain a representative sample.

10. Analyses shall be conducted on unfiltered samples, unless filtered samples have been approved in writing by the Department as being more representative of ground water conditions.

11. If a monitoring well becomes damaged or cannot be sampled for an appropriate reason, the permittee shall notify the Department immediately and a written report shall follow within seven days detailing the circumstances and remedial measures taken or proposed. Repair or replacement of monitoring wells shall require approval in writing by the Department.

12. All piezometers and wells not part of the approved ground water monitoring plan are to be plugged and abandoned in accordance with Rule 62-532.500(4), F.A.C., unless there is intent for their future use.

13. The permittee shall provide verbal notice to the Department as soon as practical after discovery of a sinkhole within an area for the management or application of wastewater or sludge. The permittee shall immediately implement measures appropriate to control the entry of contaminants, and shall detail these measures to the Department in a written report within 7 days of the sinkhole discovery.

14. Ground water monitoring test results shall be submitted on Part D of DEP Form 62-620.910(10) (attached) and shall be submitted to the address specified in I.E.3. Results shall be submitted with the DMR for each month listed in the following schedule.

SAMPLE PERIOD	REPORT DUE DATE
January – March	April 28
April – June	July 28
July – September	October 28
October – December	January 28

IV. Other Land Application Requirements

The bottoms for the settling basins and percolation basins shall be cleaned out periodically, or when necessary, to remove the excess buildup of sediments, and to ensure continuous percolation capability for the percolation basins. Materials removed from the basins shall be managed as required in item II.of this permit. Routine weed control and regular maintenance of basin embankments and access areas are required. The permittee shall inspect the condition of the impermeable liners for the lined settling basins and the percolation basins with lined side slopes. Any liners that display signs of significant deterioration or evidence of leakage or instability, shall be replaced immediately.

V. Operation and Maintenance Requirements

A. Operation of Treatment and Disposal Facilities

1. The permittee shall ensure that the operation of this facility is as described in the application and supporting documents.
2. The operation of the pollution control facilities described in this permit shall be under the supervision of a person who is qualified by formal training and/or practical experience in the field of water pollution control.

B. Record keeping Requirements:

1. The permittee shall maintain the following records on the site of the permitted facility and make them available for inspection:
   a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, including, if applicable, a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;
   b. Copies of all reports, other than those required in items a. and f. of this section, required by the permit for at least three years from the date the report was prepared, unless otherwise specified by Department rule;
   c. Records of all data, including reports and documents used to complete the application for the permit for at least three years from the date the application was filed, unless otherwise specified by Department rule;
   d. A copy of the current permit;
   e. A copy of any required record drawings;
   f. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from the date on the logs or schedule.

VI. Schedules

1. The permittee shall achieve compliance with the other conditions of this permit as follows:

Action Item and Operational level attained	Scheduled Completion and Issuance Date of permit
Continue implementing existing BMP3 plan pursuant to section VII.D of this permit.	

2. No later than 14 calendar days following a date identified in the above schedule(s) of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by an identified date, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

Within 180 days following permit issuance, the Permittee shall provide to the Department existing or new biological or water quality information related to thermal discharges.

4. Within 180 days following permit issuance, the permit shall initiate a chlorine optimization study for its cooling water chlorination and dechlorination system. The chlorine minimization study shall be completed within two years after it is initiated. The permittee shall provide the Department status updates until the study is complete. The chlorination optimization study shall incorporate the following milestones:

a. Notify Department of Initiation of Chlorination Optimization Study .....Within 2 Weeks of Initiation

b. Submit Summary Report of Phase I of Chlorination Optimization Study ..... Upon Completion

c. Submit Quarterly Reports of Phase II of Chlorination Optimization Study ..... Every three months until completion

d. Notify Department of Completion of Chlorination Optimization Study ..... Upon Completion

e. Submit Final Chlorination Optimization Study Report .....Upon completion but within two years following permit issuance.

f. Incorporate Chlorination Optimization Strategy into BMP3 .....Upon Completion of Chlorination Optimization Study

VII. Other Specific Conditions

A. Specific Conditions Applicable to All Permits

1. Drawings, plans, documents or specifications submitted by the permittee, not attached hereto, but retained on file at the Unknown District Office, are made a part hereof.

2. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.) Florida Statutes, applicable portions of reports to be submitted under this permit, shall be signed and sealed by the professional(s) who prepared them.

3. This permit satisfies Industrial Wastewater program permitting requirements only and does not authorize operation of this facility prior to obtaining any other permits required by local, state or federal agencies.

B. Specific Conditions Related to Construction

1. This section is not applicable to this facility.

C. Duty to Reapply

1. The permittee shall submit an application to renew this permit at least 180 days before the expiration date of this permit.

2. The permittee shall apply for renewal of this permit on the appropriate form listed in Rule 62-620.910, F.A.C., and in the manner established in Chapter 62-620, F.A.C., and the Department of Environmental Protection Guide to Wastewater Permitting including submittal of the appropriate processing fee set forth in Rule 62-4.050, F.A.C.

3. An application filed in accordance with subsections 1. and 2. of this part shall be considered timely and sufficient. When an application for renewal of a permit is timely and sufficient, the existing permit shall not expire until the Department has taken final action on the application for renewal or until the last day for seeking judicial review of the agency order or a later date fixed by order of the reviewing court.

4. The late submittal of a renewal application shall be considered timely and sufficient for the purpose of extending the effectiveness of the expiring permit only if it is submitted and made complete before the expiration date.

D. Specific Conditions Related to Best Management Practices/Pollution Prevention Conditions

1. General Conditions

In accordance with Section 304(e) and 402(a)(2) of the Clean Water Act (CWA) as amended, 33 U.S.C. §§ 1251 et seq., and the Pollution Prevention Act of 1990, 42 U.S.C. §§ 13101-13109, the permittee must develop and implement a plan for utilizing practices incorporating pollution prevention measures. References to be considered in developing the plan are "Criteria and Standards for Best Management Practices Authorized Under Section 304(e) of the Act," found at 40 CFR 122.44 Subpart K and the Waste Minimization Opportunity Assessment Manual, EPA/625/7-88/003.

a. Definitions

(1) The term "pollutants" refers to conventional, non-conventional and toxic pollutants.

(2) Conventional pollutants are: biochemical oxygen demand (BOD), suspended solids, pH, fecal coliform bacteria and oil & grease.

(3) Non-conventional pollutants are those which are not defined as conventional or toxic.

(4) Toxic pollutants include, but are not limited to: (a) any toxic substance listed in Section 307(a)(1) of the CWA, any hazardous substance listed in Section 311 of the CWA, or chemical listed in Section 313(c) of the Superfund Amendments and Reauthorization Act of 1986; and (b) any substance (that is not also a conventional or non-conventional pollutant except ammonia) for which EPA has published an acute or chronic toxicity criterion.

(5) "Pollution prevention" and "waste minimization" refer to the first two categories of EPA's preferred hazardous waste management strategy: first, source reduction and then, recycling.

(6) "Recycle/Reuse" is defined as the minimization of waste generation by recovering and reprocessing usable products that might otherwise become waste; or the reuse or reprocessing of usable waste products in place of the original stock, or for other purposes such as material recovery, material regeneration or energy production.

(7) "Source reduction" means any practice which: (a) reduces the amount of any pollutant entering a waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment or disposal; and (b) reduces the hazards to public health and the environment associated with the release of such pollutant. The term includes equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and

improvements in housekeeping, maintenance, training, or inventory control. It does not include any practice which alters the physical, chemical, or biological characteristics or the volume of a pollutant through a process or activity which itself is not integral to, or previously considered necessary for, the production of a product or the providing of a service.

(8) "BMP3" means a Best Management Plan incorporating the requirements of 40 CFR § 122.44, Subpart K, plus pollution prevention techniques associated with a Waste Minimization Assessment.

(9) "Waste Minimization Assessment" means a systematic planned procedure with the objective of identifying ways to reduce or eliminate waste.

2. Best Management Practices/Pollution Prevention Plan

The permittee shall develop and implement a BMP3 plan for the facility which is the source of wastewater and storm water discharges covered by this permit. The plan shall be directed toward reducing those pollutants of concern which discharge to surface waters and shall be prepared in accordance with good engineering and good housekeeping practices. For the purposes of this permit, pollutants of concern shall be limited to toxic

pollutants, as defined above, known to the discharger. The plan shall address all activities which could or do contribute these pollutants to the surface water discharge, including process, treatment, and ancillary activities.

a. Signatory Authority & Management Responsibilities

The BMP3 plan shall be signed in accordance with Item VII.A.2. and shall be reviewed by the plant engineering staff and plant manager. A copy of the plan shall be retained at the facility and shall be made available to the permit issuing authority upon request.

The BMP3 plan shall contain a written statement from corporate or plant management indicating management's commitment to the goals of the BMP3 program. Such statements shall be publicized or made known to all facility employees. Management shall also provide training for the individuals responsible for implementing the BMP3 plan.

b. BMP3 Plan Requirements

(1) Name & description of facility, a map illustrating the location of the facility & adjacent receiving waters, and other maps, plot plans or drawings, as necessary;

(2) Overall objectives (both short-term and long-term) and scope of the plan, specific reduction goals for pollutants, anticipated dates of achievement of reduction, and a description of means for achieving each reduction goal;

(3) A description of procedures relative to spill prevention, control & countermeasures and a description of measures employed to prevent storm water contamination;

(4) A description of practices involving preventive maintenance, housekeeping, recordkeeping, inspections, and plant security; and

(5) The description of a waste minimization assessment performed in accordance with the conditions outlined in condition e below, results of the assessment, and a schedule for implementation of specific waste reduction practices.

c. Waste Minimization Assessment

A waste minimization assessment (WMA) shall be conducted for this facility to determine actions that could be taken to reduce waste loadings and chemical losses to all wastewater and/or storm water streams as described in Part VII.D.2 of this permit. It shall address both short-term and long-term opportunities for minimizing waste generation at this facility, utilizing at a minimum, applicable criteria selected from Part VII.D.2: Required Components of a Waste Minimization Assessment, particularly for high volume and/or high toxicity components of wastewater and storm water streams. Initially, the WMA should focus primarily on actions that could be implemented quickly, thereby realizing tangible benefits to surface water quality. Long term goals and actions pertaining to waste reduction shall include investigation of the feasibility of eliminating toxic chemical use, instituting process changes, raw material replacements, etc.

Implementation of Results: The permittee shall implement each waste reduction practice recommended by the WMA as soon as practicable. Any waste reduction practices which are identified but will not be implemented shall be described in the required Pollution Prevention plan summary or progress/update reports, along with the factors inhibiting their adoption. Any waste reduction practices which cannot be implemented immediately shall be described in the Pollution Prevention plan.

Timeframe: The permit issuing authority does not herein establish a time limit for completion of the WMA; the study may be conducted throughout the term of this permit. However, a suggested target completion date is six months after the effective date of the permit, so that the WMA results and recommended waste reduction practices may be incorporated into the BMP3 plan. Continual studies toward minimizing waste are encouraged.

Practices which reduce pollutant loading in wastewater or storm water discharges with a consequent increase in solid hazardous waste generation, decrease in air quality, or adverse affect to groundwater shall not be considered waste reduction for the purposes of this assessment.

d. Best Management Practices & Pollution Prevention Committee Recommended:

A Best Management Practices Committee (Committee) should be established to direct or assist in the implementation of the BMP3 plan. The Committee should be comprised of individuals within the plant organization who are responsible for developing the BMP3 plan and assisting the plant manager in its implementation, monitoring of success, and revision. The activities and responsibilities of the Committee should address all aspects of the facility's BMP3 plan. The scope of responsibilities of the Committee should be described in the plan.

e. Employee Training

Employee training programs shall inform personnel at all levels of responsibility of the components & goals of the BMP3 plan and shall describe employee responsibilities for implementing the plan. Training shall address topics such as good housekeeping, materials management, record keeping & reporting, spill prevention & response, as well as specific waste reduction practices to be employed. Training should also disclose how individual employees may contribute suggestions concerning the BMP3 plan or suggestions regarding Pollution Prevention. The plan shall identify periodic dates for such training.

f. Plan Development & Implementation

The BMP3 plan shall be developed and implemented 6 months after the effective date of this permit, unless any later dates are specified in this permit. Any portion of the WMA which is ongoing at the time of development or implementation shall be described in the plan. Any waste reduction practice which is recommended for implementation over a period of time shall be identified in the plan, including a schedule for its implementation.

g. Submission of Plan Summary & Progress/Update Reports

(1) Plan Summary: Not later than 2 years after the effective date of the permit, a summary of the BMP3 plan shall be developed and maintained at the facility and made available to the permit issuing authority upon request. The summary should include the following: a brief description of the plan, its implementation process, schedules for implementing identified waste reduction practices, and a list of all waste reduction practices being employed at the facility. The results of waste minimization assessment studies already completed as well as any scheduled or ongoing WMA studies shall be discussed.

(2) Progress/Update Reports: Annually thereafter for the duration of the permit progress/update reports documenting implementation of the plan shall be maintained at the facility and made available to the permit issuing authority upon request. The reports shall discuss whether or not implementation schedules were met and revise any schedules, as necessary. The plan shall also be updated as necessary and the attainment or progress made toward specific pollutant reduction targets documented. Results of any ongoing WMA studies as well as any additional schedules for implementation of waste reduction practices shall be included.

(3) A timetable for the various plan requirements follows:

Timetable for BMP3 Plan Requirements:

REQUIREMENT	TIME FROM EFFECTIVE DATE OF THIS PERMIT
Complete WMA	6 months
Develop & Implement Plan	6 months
Develop Plan Summary	2 Years
Progress/Update Reports	3 years, and then annually thereafter

The permittee shall maintain the plan and subsequent reports at the facility and shall make the plan available to the Department upon request.

h. Plan Review & Modification

If following review by the Department, the BMP3 plan is determined insufficient, the permittee will be notified that the BMP3 plan does not meet one or more of the minimum requirements of this Part. Upon such notification from the Department, the permittee shall amend the plan and shall submit to the Department a written certification that the requested changes have been made. Unless otherwise provided by the Department, the permittee shall have 30 days after such notification to make the changes necessary.

The permittee shall modify the BMP3 plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to waters of the State or if the plan proves to be ineffective in achieving the general objectives of reducing pollutants in wastewater or storm water discharges. Modifications to the plan may be reviewed by the Department in the same manner as described above.

5. Required Components Of A Waste Minimization Assessment

a. Plant Water Balance

The WMA shall include an overall plant water balance, as well as internal water balances, as necessary. This information shall be used to determine any opportunities for water conservation or reuse/recycling and to determine if and where leakages might occur.

b. Material and Risk Assessment

A materials & risk assessment shall be developed and shall include the following:

(1) Identification of the types & quantities of materials used or manufactured (including by-products produced) at the facility;

(2) Identification of the location & types of materials management activities which occur at the facility;

(3) An evaluation of the following aspects of materials compatibility: containment & storage practices for chemicals, container compatibility, chemical mixing procedures; potential mixing or compatibility problems; and specific prohibitions regarding mixing of chemicals;

(4) Technical information on human health and ecological effects of toxic or hazardous chemicals presently used or manufactured (including by-products produced) or planned for future use or production; and

(5) Analyses of chemical use & waste generation, including overall plant material balances and as necessary, internal process balances, for all pollutants. (When actual measurements of the quantity of a chemical entering a wastewater or storm water stream are not readily available, reasonable estimates should be made based on best engineering judgment.) The analyses shall address reasons for using particular chemicals, and measures or estimates of the actual and potential chemical discharges via wastewater, wastewater sludge, storm water, air, solid waste or hazardous waste media.

c. Pollutant Reduction Methods

The WMA shall include, at a minimum, the following means of reducing pollutant discharges in wastewater streams or of otherwise minimizing wastes:

(1) Process related source reduction measures, including any or all of the following, as appropriate:

(a) production process changes;
(b) improved process controls;
(c) reduction of off-spec materials;
(d) reduction in use of toxic or hazardous materials;
(e) chemical modifications and/or material purification;
(f) chemical substitution employing non-toxic or less toxic alternatives; and
(g) equipment upgrades or modifications or changes in equipment use.

(2) housekeeping/operational changes, including waste stream segregation, inventory control, spill & leak prevention, equipment maintenance; and employee training in areas of pollution prevention, good housekeeping, and spill prevention & response;

(3) in-process recycling, on-site recycling and/or off-site recycling of materials;

(4) following all source reduction & recycling practices, wastewater treatment process changes, including the use of new or improved treatment methods, such that treatment by-products are less toxic to aquatic or human life; and

(5) other means as agreed upon by the permit issuing authority and the permittee.

d. Storm Water Evaluation

For storm water discharges and instances where storm water enters the wastewater treatment/disposal system or is otherwise commingled with wastewater, the WMA shall evaluate the following potential sources of storm water contamination, at a minimum:

(1) loading, unloading and transfer areas for dry bulk materials or liquids;

(2) outdoor storage of raw materials or products;

(3) outdoor manufacturing or processing activities;

(4) dust or particulate generating processes; and

(5) on-site waste and/or sludge disposal practices.

The likelihood of storm water contact in these areas and the potential for spills from these areas shall be considered in the evaluation. The history of significant leaks or spills of toxic or hazardous pollutants shall also be considered. Recommendations for changes to current practices which would reduce the potential for storm water contamination from these areas shall be made, as necessary.

E. Specific Conditions Related to Existing Manufacturing, Commercial, Mining, and Silviculture Wastewater Facilities or Activities

1. Existing manufacturing, commercial, mining, and silvicultural wastewater facilities or activities that discharge into surface waters shall notify the Department as soon as they know or have reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels

(1) One hundred micrograms per liter,
(2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony, or
(3) Five times the maximum concentration value reported for that pollutant in the permit application.

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels
(1) Five hundred micrograms per liter,
(2) One milligram per liter for antimony, or

(3) Ten times the maximum concentration value reported for that pollutant in the permit

F. Reopener Clause

1. The permit shall be revised, or alternatively, revoked and reissued in accordance with the provisions contained in Rules 62-620.325 and 62-620.345 F.A.C., if applicable, or to comply with any applicable effluent standard or

limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act (the Act), as amended, if the effluent standards, limitations, or water quality standards so issued or approved:

a. Contains different conditions or is otherwise more stringent than any condition in the permit/or;

b. Controls any pollutant not addressed in the permit.

The permit as revised or reissued under this paragraph shall contain any other requirements then applicable.

2. The permit may be reopened to adjust effluent limitations or monitoring requirements should future Water Quality Based Effluent Limitation determinations, water quality studies, DEP approved changes in water quality standards, or other information show a need for a different limitation or monitoring requirement.

3. The Department may develop a Total Maximum Daily Load (TMDL) during the life of the permit. Once a TMDL has been established and adopted by rule, the Department shall revise this permit to incorporate the final findings of the TMDL.

VIII. General Conditions

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, Florida Statutes. Any permit noncompliance constitutes a violation of Chapter 403, Florida Statutes, and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. *[62-620.610(1), F.A.C]*

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviations from the approved drawings, exhibits, specifications or conditions of this permit constitute grounds for revocation and enforcement action by the Department. *[62-620.610(2), F.A.C.]*

3. As provided in Subsection 403.087(6), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringements of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. *[62-620.610(3), F.A.C.]*

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. *[62-620.610(4), F.A.C.]*

5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[62-620.610(5), F.A.C.]*

6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. *[62-620.610(6), F.A.C.]*

7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. *[62-620.610(7), F.A.C.]*

8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[62-620.610(8), F.A.C.]*

9. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to

   a. Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under the conditions of this permit;

   b. Have access to and copy any records that shall be kept under the conditions of this permit;

   c. Inspect the facilities, equipment, practices, or operations regulated or required under this permit; and

   d. Sample or monitor any substances or parameters at any location necessary to assure compliance with this permit or Department rules.

   [62-620.610(9), F.A.C.]

10. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data, and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except as such use is proscribed by Section 403.111, Florida Statutes, or Rule 62-620.302, F.A.C. Such evidence shall only be used to the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules. [62-*620.610(10), F.A.C.]*

11. When requested by the Department, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also provide to the Department upon request copies of records required by this permit to be kept. If the permittee becomes aware of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be promptly submitted or corrections promptly reported to the Department. *[62-620.610(11), F.A.C.]*

12. Unless specifically stated otherwise in Department rules, the permittee, in accepting this permit, agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard. *[62-620.610(12), F.A.C.]*

13. The permittee, in accepting this permit, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C. *[62-620.610(13), F.A.C.]*

14. This permit is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department. *[62-620.610(14), F.A.C.]*

15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. *[62-620.610(15), F.A.C.]*

16. The permittee shall apply for a revision to the Department permit in accordance with Rules 62-620.300 and the Department of Environmental Protection Guide to Wastewater Permitting at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with Rule 62-620.325(2) for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in Rule 62-620.300, F.A.C. *[62-620.610(16), F.A.C.]*

17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The permittee shall be responsible for any and all damages which may result from the changes and may be subject to enforcement action by the Department for penalties or revocation of this permit. The notice shall include the following information:

    a. A description of the anticipated noncompliance;

    b. The period of the anticipated noncompliance, including dates and times; and

    c. Steps being taken to prevent future occurrence of the noncompliance.

    [62-620.610(17), F.A.C.]

18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246, Chapter 62-160 and 62-601, F.A.C. and 40CFR 136, as appropriate.

    a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10).

    b. If the permittee monitors any contaminant more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

    c. Calculations for all limitations, which require averaging of measurements shall use an arithmetic mean unless otherwise specified in this permit.

    d. Any laboratory test required by this permit shall be performed by a laboratory that has been certified by the Department of Health (DOH) under Chapter 64E-1, F.A.C., where such certification is required by Rule 62-160.300, F.A.C. The laboratory must be certified for any specific method and analyte combination that is used to comply with this permit. For domestic wastewater facilities, the on-site test procedures specified in Rule 62-160.300(4), F.A.C., shall be performed by a laboratory certified test for those parameters or under the direction of an operator certified under Chapter 62-602, F.A.C.

    e. Field activities including on-site tests and sample collection, whether performed by a laboratory or a certified operator, must follow the applicable procedures described in DEP-SOP-001/01 (January 2002). Alternate field procedures and laboratory methods may be used where they have been approved according to the requirements of Rules 62-160.220, 62-160.330, and 62-160.600, F.A.C.

19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this permit shall be submitted no later than 14 days following each schedule date. *[62-620.610(19), F.A.C.]*

20. The permittee shall report to the Department's Southeast District Office any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

    a. The following shall be included as information which must be reported within 24 hours under this condition:

        1. Any unanticipated bypass which causes any reclaimed water or effluent to exceed any permit limitation or results in an unpermitted discharge,

        2. Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,

        3. Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and

        4. Any unauthorized discharge to surface or ground waters.

b. Oral reports as required by this subsection shall be provided as follows:

1. For unauthorized releases or spills of untreated or treated wastewater reported pursuant to subparagraph a.4 that are in excess of 1,000 gallons per incident, or where information indicates that public health or the environment will be endangered, oral reports shall be provided to the Department by calling the STATE WARNING POINT TOLL FREE NUMBER (800) 320-0519, as soon as practical, but no later than 24 hours from the time the permittee becomes aware of the discharge. The permittee, to the extent known, shall provide the following information to the State Warning Point:

   (a) Name, address, and telephone number of person reporting;

   (b) Name, address, and telephone number of permittee or responsible person for the discharge;

   (c) Date and time of the discharge and status of discharge (ongoing or ceased);

   (d) Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater);

   (e) Estimated amount of the discharge;

   (f) Location or address of the discharge;

   (g) Source and cause of the discharge;

   (h) Whether the discharge was contained on-site, and cleanup actions taken to date;

   (i) Description of area affected by the discharge, including name of water body affected, if any; and

   (j) Other persons or agencies contacted.

2. Oral reports, not otherwise required to be provided pursuant to subparagraph b.1 above, shall be provided to Department's Southeast District Office within 24 hours from the time the permittee becomes aware of the circumstances.

c. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department's Southeast District Office shall waive the written report.

[62-620.610(20), F.A.C.]

21. The permittee shall report all instances of noncompliance not reported under Conditions VIII.18 and 19 of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Condition VIII.20 of this permit. *[62-620.610(21), F.A.C.]*

22. Bypass Provisions:

a. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless the permittee affirmatively demonstrates that:

1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and

3. The permittee submitted notices as required under Condition VIII.22.b of this permit.

b. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Condition VIII.20 of this permit. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and

times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.

c. The Department shall approve an anticipated bypass, after considering its adverse effect, if the permittee demonstrates that it will meet the three conditions listed in Condition VIII.22 a.(1) through (3) of this permit.

d. A permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of Condition VIII.22.a through c. of this permit.

[62-620.610(22), F.A.C.]

23. Upset Provisions:

a. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:

1. An upset occurred and that the permittee can identify the cause(s) of the upset;
2. The permitted facility was at the time being properly operated;
3. The permittee submitted notice of the upset as required in Condition VIII.20 of this permit; and
4. The permittee complied with any remedial measures required under Condition VIII.5 of this permit.

b. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

c. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review.

[62-620.610(23), F.A.C.]

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Mimi Drew

Mimi Drew
Director
Division of Water Resource Management

2600 Blair Stone Road
Tallahassee, FL32399-2400
(850) 245-8336

STATE OF FLORIDA FISH AND
WILDLIFE CONSERVATION COMMISSION

SCIENTIFIC COLLECTING/INSTITUTIONAL PERMIT NO. WS07667

PERMIT

Issued Under Authority of the Wildlife Code of the State of Florida
(Title 68A, Florida Administrative Code) by the

STATE OF FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

Division of Habitat and Species Conservation 620 South Meridian Street Mail Station 2A Tallahassee FL 32399-1600 (850) 921-5990 ext 17310

Permit No. WS07667 **Issuance Date** 21 December 2007 **Expiration Date** 31 December 2010
Permit Type Scientific Collecting/Institutional **Specific Rule Authority** 68A-9.002; 68A-25.002; 68A-27.003-.005
Permittee James R. Lindsay **Permitted Facility** Florida Power and Light Company
Phone/FAX no. 561-691-7032 Environmental Services Department
700 Universe Blvd.
June Beach, FL 33408

Signature _____ **Date** 12-31-2007
Not valid until signed

Certification: I hereby state and confirm by signature that I have received, read, understand, and agree to abide by all regulations, guidelines, and provisions regarding the issuance of this permit, and I further certify that the information submitted in this application and supporting documents is complete and accurate to the best of my knowledge and belief I understand that any false statement herein may subject me to criminal penalties I further state that I will abide by all applicable State, Federal, and local laws Finally I hereby confirm by signature that representatives of the Florida Fish and Wildlife Conservation Commission (Commission) have my permission as the applicant and that of the landowner(s) to enter on and inspect the property(ies) described in the application for all reasonable purposes pertaining to applicable Commission rules. Please return a signed copy to this office.

Provisions/Conditions:

1. Carcasses of non-listed wildlife may be salvaged upon encounter and possessed (i.e.- mounted and displayed) at Florida Power & Light Company - Environmental Services Department for scientific/educational purposes. The salvage/possession of species protected by the Migratory Bird Treaty Act (16 U.S.C. 703-712), the Endangered Species Act of 1973 (16 U.S.C. 1531), the Marine Mammal Protection Act (16 U.S.C. 1361-1407) or the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d) must also be federally permitted pursuant to any of those laws, as appropriate. A copy of any such federal permit must be provided this office before collecting/possessing any species so protected. Collections of species designated by the Fish and Wildlife Conservation Commission in Rule 68A-27.003-.005, F.A.C., as endangered, threatened or species of special concern must be reported to this office within 48 hours via fax at (850) 921-1847. Final disposition of those specimens is subject to individual approval by the Commission, via an amendment to this permit.

2. Salvaged specimens may be temporarily transferred to a taxidermist or tanner for mounting or tanning provided a copy of this permit is kept with the carcass or hide at all times.

3. Wildlife specimens possessed under this permit (per Provision/Condition 1 above) may be transported for use in educational programs. This permit must be readily available during transport and/or educational programs.

4. The Permittee may temporarily loan the mounted specimens to other entities, provided they are in possession of a letter of authorization from the Permittee and a copy of this permit. The Permittee must maintain an inventory (i.e., who has possession and at what physical location) of parts possessed independently of these individuals.

5. This permit shall expire and the animal carcasses and other parts shall be returned to the Commission should they no longer be needed for exhibitional and/or educational purposes at Florida Power & Light Company - Environmental Services Department , or upon severance of the affiliation of the Permittee with Florida Power & Light Company - Environmental Services Department .

PERMIT

Permit No: WS07667

Provisions/Conditions Continued:

6. **This permit is in effect an amendment of permit WR04246 which expires December 31, 2007. All amended conditions of the previous permit (changed or new items) are indicated by bold text.** This permit does not authorize access to any public or private properties. Any required permission accordingly must be secured from the appropriate landholders prior to undertaking any work on such properties.

7. The Permittee by signature above confirms that representatives of the Florida Fish and Wildlife Conservation Commission (Commission) have his/her permission as the Permittee, and that of the landowner(s) to enter on and inspect the property(ies) described in the application (herein incorporated by reference) for all reasonable purposes pertaining to applicable Commission rules.

8. This permit is nontransferable, but other qualified personnel may assist in permitted work in the absence of the Permittee's direct supervision, when those assistants are designated via letter from the Permittee to each designee, with this office provided a copy of such letter(s). This permit must be readily available for inspection at all times while engaging in the permitted activities.

9. Formally designated assistants/subpermittees are also to be in possession of your letter of authorization, a copy of this state permit and any required federal authorization/permit when working in your absence.

10. This permit is subject to revocation at any time pursuant to Chapter 120, Florida Statutes.

11. This permit and a copy of any required federal authorization/permits must be readily available for inspection while engaged in collecting and at the repository facility. An annual report detailing the number of specimens collected per species, dates and locations of collections, and final disposition of specimens must be submitted to this office by 1 February of each year. Copies of any other reports or publications, which result from the work, must also be provided upon their availability. Requests for permit renewal should be submitted at least 45 days prior to the time it is needed.

A person whose substantial interests are affected by FWC's action may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. A person seeking a hearing on FWC's action shall file a petition for hearing with the agency within 21 days of receipt of written notice of the decision. The petition must contain the information and otherwise comply with section 120.569, Florida Statutes, and the uniform rules of the Florida Division of Administration, chapter 28-106, Florida Administrative Code. Upon such notification, the Permittee shall cease all work authorized by this permit until the petition is resolved. The enclosed Explanation of Rights statement provides additional information as to the rights of parties whose substantial interests are or may be affected by this action.

Kenneth D. Haddad
Executive Director

By: Bradley J. Gomez
for Elsa Haubold, Ph.D., Leader
Species Conservation Planning Section

ATW/EH/efm
LIC 6-1
WS07667.per

cc: Northwest Region and South Region

STATE OF FLORIDA FISH AND
WILDLIFE CONSERVATION COMMISSION

MIGRATORY BIRD NEST PERMIT NO. WN07311

PERMIT

Issued Under Authority of the Wildlife Code of the State of Florida
(Title 68A, Florida Administrative Code) by the

STATE OF FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

Division of Habitat and Species Conservation, 620 South Meridian Street. Tallahassee, FL 32399-1600, (850) 921-5990, ext 17310

Permit No. WN07311 **Issuance Date** 20 July 2007 **Expiration Date** 31 July 2009

Permit Type Migratory Bird Nest **Specific Rule Authority** 68A-9.002 & 68A-27.005

Permittee James Lindsay **Affiliation** Florida Power and Light Company
Environmental Services
700 University Boulevard
Juno Beach, FL 33408

Phone No. (561) 691-7032/ N/A

Signature _____ **Date** 7-24-2007

Not valid until signed

Certification: I hereby state and confirm by signature that I have received, read, understand, and agree to abide by all regulations, guidelines, and provisions regarding the issuance of this permit, and I further certify that the information submitted in this application and supporting documents is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to criminal penalties I further state that I will abide by all applicable State Federal, and local laws. Finally I hereby confirm by signature that representatives of the Florida Fish and Wildlife Conservation Commission (Commission) have my permission as the applicant and that of the landowner(s) to enter on and inspect the property(ies) described in the application for all reasonable purposes pertaining to applicable Commission rules. Please return a signed copy to this office.

This permit authorizes the above named Permittee to remove and replace **inactive** (i.e., containing no eggs or flightless young) nests of ospreys (*Pandion haliaetus*) and other migratory birds, pursuant to Rules 68A-9.002 and 68A-27.005 (Monroe County only), F.A.C. and the Florida Fish and Wildlife Conservation Commission Osprey Nest Removal Policies, where necessary in the process of routine facility maintenance in Florida, and subject to the following provision/conditions.

Provisions/Conditions

1. The **inactive** osprey nests situated on structures maintained by Florida Power and Light Company may be removed and replaced in association with routine facility maintenance, pursuant to the enclosed Osprey Nest Removal Policies.

2. Replacement of osprey nesting structures of comparable or better quality than the nest support structure removed or destroyed must be erected by the Permittee. The replacement nest structure shall be located in the immediate vicinity of the old nest. **Suggested** guidelines for constructing replacement osprey nest structures are enclosed, but other designs may be used if the Permittee prefers.

3. **Inactive** nests of migratory birds other than osprey may be taken without replacement.

4. This permit does not authorize removal of **active** (i.e., containing eggs or flightless young) nests of osprey or other migratory bird species. The Permittee must obtain state and federal authorization permits prior to disturbing an active nest.

5. This permit does not authorize taking of nests of state-or-federally-listed Endangered or Threatened species (i.e. species or subspecies listed as 68A-27.003, or 68A-27.004 in the Wildlife Code of the State of Florida; or at Title 50, Part 17.11, in the Code of Federal Regulations), or state-listed Species of Special Concern (species or subspecies listed at 68A-27.005 in the Wildlife Code of the State of Florida). Permits for removal of nests of these species must be secured separately. In such cases, contact the Permit Coordinator via fax at [(850) 921-1847].

PERMIT

Permit No. WN07311

Provisions/Conditions Continued:

6 This permit does not authorize Permittee access to any public or private properties. In instances where written or verbal permission for access is required, such permission must be secured from the appropriate landowners or public agencies in advance of undertaking any work on those controlled properties.

7. **This permit is in effect a renewal of permit WN05247, which was issued on June 20, 2005 and supercedes all previous versions.** It is nontransferable and must be readily available for inspection at all times while engaging in the permitted activities. Other qualified personnel may assist in the permitted work in the absence of the Permittee's direct supervision, when those assistants are designated as subpermittees via a letter from the Permittee to each designee, with this office provided a copy of such letter (s).

8. Formally designated assistants/subpermittees are also to be in possession of your letter of authorization, a copy of this state permit and any required federal authorization/permit when working in your absence.

9. The Permittee by signature above confirms that representatives of the Florida Fish and Wildlife Conservation Commission (Commission) have his/her permission as the Permittee, and that of the landowner(s) to enter on and inspect the property(ies) described in the application (herein incorporated by reference) for all reasonable purposes pertaining to applicable Commission rules.

10. An annual report detailing the number of nests taken and dates and locations of such, must be submitted to this office by 30 June of each year. Such annual reports (referencing permit number) should be directed to the Permit Coordinator at the above address. This permit is subject to revocation prior to the expiration date pursuant to Chapter 120, Florida Statutes. Application for renewal should be made at least 45 days in advance of the date it is needed

A person whose substantial interests are affected by FWC's action may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. A person seeking a hearing on FWC's action shall file a petition for hearing with the agency within 21 days of receipt of written notice of the decision. The petition must contain the information and otherwise comply with section 120.569, Florida Statutes, and the uniform rules of the Florida Division of Administration, chapter 28-106, Florida Administrative Code. Upon such notification, the Permittee shall cease all work authorized by this permit until the petition is resolved. The enclosed Explanation of Rights statement provides additional information as to the rights of parties whose substantial interests are or may be affected by this action.

Kenneth D. Haddad
Executive Director

By: Elsa M. Haubold
Elsa Haubold, Ph.D., Leader
Species Conservation Planning Section

ATW/EH/kd
LIC 6-20
WN07311.per
Enclosure

cc: All Regions

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

GENERAL WATER USE PERMIT NO. 50-04187-W

South Florida Water Management District

3301 Gun Club Road, West Palm Beach, Florida 33406 . (561) 686-8800 . FL WATS 1-800-432-2045
TDD (561) 697-2574

CON 24-06

Application No.: 990105-9
General Permit No.: 50-04187-W

February 2. 1999

FLORIDA POWER & LIGHT COMPANY
PO BOX 1400
JUNO BEACH. FL 33408-0420

Dear Permittee:

SUBJECT: General Water Use Permit No.: 50-04187-W
Project: FPL RIVIERA PLANT LANDSCAPING
Location: Palm Beach County, S33/T42S/R43E
Permittee: FLORIDA POWER & LIGHT COMPANY

This letter is to notify you of the District's agency action concerning your Notice of Intent to Use Water. This action is taken pursuant to Rule 40E-20.042, Florida Administrative Code (F.A.C.). Based on the information provided, District rules have been adhered to and a General Water Use Permit is in effect for this project subject to:

1. Not receiving a filed request for a Chapter 120, Florida Statutes, administrative hearing and

2. The attached Limiting Conditions.

General Water Use Permit No. 83-00100-W was originally issued on October 4, 1983 **for the use of 100.000 gallons on a maximum day basis. Groundwater withdrawals** were to be from four 6" Surficial aquifer wells.

This permit renews and supersedes General Water Use Permit No. 83-00100-W. In addition, this permit is modified to reflect the abandonment of Well "A", correction of the irrigated acreage, and the adjustment of the allocation. This permit shares withdrawal facilities with Water Use Permit No. 50-04188-W, which was issued for Industrial water use.

Mailing Address: P.O. Box 24680, West Palm Beach, FL 334164680

STAFF RECOMMENDATIONS

DATE OF ISSUANCE: February 2, 1999
EXPIRATION DATE: February 2, 2019
USE TYPE: Landscape

SURFACE WATER MANAGEMENT STATUS: NOT APPLICABLE.
RIGHT OF WAY STATUS: NOT APPLICABLE.

GROUNDWATER FROM THE SURFICIAL AQUIFER SYSTEM

ALLOCATION :

MAXIMUM MONTHLY ALLOCATION: 807,000 GALLONS

MAXIMUM DAILY WITHDRAWAL: < 100,000 GALLONS

EXISTING WITHDRAWAL FACILITIES - GROUNDWATER:

GW SOURCE: SURFICIAL AQUIFER SYSTEM

1 - 6" X 85' X 225 GPM WELL WITH UNKNOWN CASED DEPTH
1 - 6" X 100' X 225 GPM WELL CASED TO 84 FEET
1 - 6" X 175' X 225 GPM WELL WITH UNKNOWN CASED DEPTH

TOTAL RATED CAPACITY:

		GPM	MGD	MGM	MGY
SURFICIAL AQUIFER SYSTEM	E	675	.9720	29.2	355
TOTALS		675	.9720	29.2	355

Unless otherwise modified or revoked, for each withdrawal authorized herein, the duration of the General Water Use Permit shall not exceed twenty years, pursuant to Rule 40E-20.321, F.A.C.

Should you object to the Limiting Conditions, please refer to the attached Notice of Rights which addresses the procedures to be followed if you desire a public hearing or other review of the proposed agency action. Please contact this office if you have questions concerning this matter. If we do not hear from you prior to the time frame specified in the Notice of Rights, we will assume that you concur with the District's recommendation.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a Notice of Rights has been mailed to the addressee not later than 5:00 p.m. this 2nd day of February, 1999. in accordance with Section 120.60(3), Florida Statutes.

Sincerely,

Rick F. Bower, P.G.
Sr Supv Hydrogeologist
Regulation Department
West Palm Beach Service Center

RFB/kl

CERTIFIED MAIL NO.: Z 146 132 572

Enclosure

c: FDEP
FPL Riviera Plant
Montgomery Watson, Inc.
Palm Beach County Health Dept.

LIMITING CONDITIONS

1. IN THE EVENT OF A DECLARED WATER SHORTAGE, WATER WITHDRAWAL REDUCTIONS WILL BE ORDERED BY THE DISTRICT IN ACCORDANCE WITH THE WATER SHORTAGE PLAN, CHAPTER 40E-21, FLORIDA ADMINISTRATIVE CODE. THE APPLICANT IS ADVISED THAT DURING A WATER SHORTAGE PUMPAGE REPORTS SHALL BE SUBMITTED AS REQUIRED BY CHAPTER 40E-21, FLORIDA ADMINISTRATIVE CODE.

2. SOURCE CLASSIFICATION IS:

   GROUNDWATER FROM THE SURFICIAL AQUIFER SYSTEM

3. PERMITTEE SHALL MITIGATE ANY ADVERSE IMPACT ON EXISTING LEGAL USES CAUSED BY WITHDRAWALS. WHEN ADVERSE IMPACTS OCCUR, OR ARE IMMINENT, THE DISTRICT RESERVES THE RIGHT TO CURTAIL WITHDRAWAL RATES. ADVERSE IMPACTS ARE:

   A) REDUCTION IN WELL WATER LEVELS THAT IMPAIRS THE ABILITY OF AN ADJACENT WELL, INCLUDING A DOMESTIC WELL, LAWN IRRIGATION WELL, OR PUBLIC WATER SUPPLY WELL, TO PRODUCE WATER BY 10% OR GREATER,
   B) SIGNIFICANT REDUCTION IN LEVELS IN AN ADJACENT WATER BODY SUCH AS A LAKE, POND, OR A CANAL SYSTEM THAT IMPAIRS THE ABILITY TO PRODUCE WATER BY 10% OR GREATER,
   C) SALINE WATER INTRUSION OR INDUCED MOVEMENT OF POLLUTANTS INTO THE WATER SUPPLY OF AN ADJACENT WATER USE, RESULTING IN A SIGNIFICANT REDUCTION IN WATER QUALITY, AND
   D) CHANGE IN WATER QUALITY CAUSED BY THE PERMITTEE THAT RESULTS IN SIGNIFICANT IMPAIRMENT OR LOSS OF USE OF A WELL OR WATER BODY.

4. **PERMITTEE SHALL** MITIGATE ANY ADVERSE IMPACT ON EXISTING OFF-SITE LAND USE **AS A CONSEQUENCE OF WITHDRAWALS PERMITTED** HEREIN. IF INCREASED WITHDRAWALS CAUSE AN ADVERSE IMPACT ON EXISTING LAND USE, THE DISTRICT RESERVES THE RIGHT TO CURTAIL FUTURE WITHDRAWAL RATES. ADVERSE IMPACTS ARE:

   A) SIGNIFICANT **REDUCTION** IN **WATER LEVELS** IN AN ADJACENT SURFACE WATER BODY, INCLUDING IMPOUNDMENTS, TO THE EXTENT THAT THE DESIGNED FUNCTION OF THE WATER BODY IS IMPAIRED,
   B) LAND COLLAPSE OR SUBSIDENCE CAUSED BY REDUCTION IN WATER LEVELS; AND
   C) DAMAGE TO CROPS AND OTHER TYPES OF VEGETATION.

5. AUTHORIZED REPRESENTATIVES OF THE DISTRICT SHALL BE PERMITTED TO ENTER, INSPECT, AND OBSERVE THE PERMITTED SYSTEM TO DETERMINE COMPLIANCE WITH SPECIAL CONDITIONS.

6. IF ANY CONDITION OF THE PERMIT IS VIOLATED, THE PERMIT SHALL BE SUBJECT TO REVIEW AND POSSIBLE MODIFICATION, ENFORCEMENT ACTION, OR REVOCATION.

7. APPLICATION FOR A PERMIT MODIFICATION MAY BE MADE AT ANY TIME.

8. WITHDRAWAL FACILITIES ARE:

   GROUNDWATER - EXISTING:

1 - 6" X 85' X 225 GPM WELL WITH UNKNOWN CASED DEPTH
1 - 6" X 100' X 225 GPM WELL CASED TO 84 FEET
1 - 6" X 175' X 225 GPM WELL WITH UNKNOWN CASED DEPTH

9. THIS PERMIT SHALL EXPIRE ON FEBRUARY 02. 2019.

10. MAXIMUM MONTHLY ALLOCATION SHALL NOT EXCEED 807.000 GALLONS.

MAXIMUM DAILY WITHDRAWAL SHALL NOT EXCEED 100,000 GALLONS.

11. USE CLASSIFICATION IS LANDSCAPE IRRIGATION.

12. THE PERMITTEE IS ADVISED THAT THIS PERMIT DOES NOT RELIEVE ANY PERSON FROM THE REQUIREMENT TO OBTAIN ALL NECESSARY FEDERAL, STATE, LOCAL AND SPECIAL DISTRICT AUTHORIZATIONS.

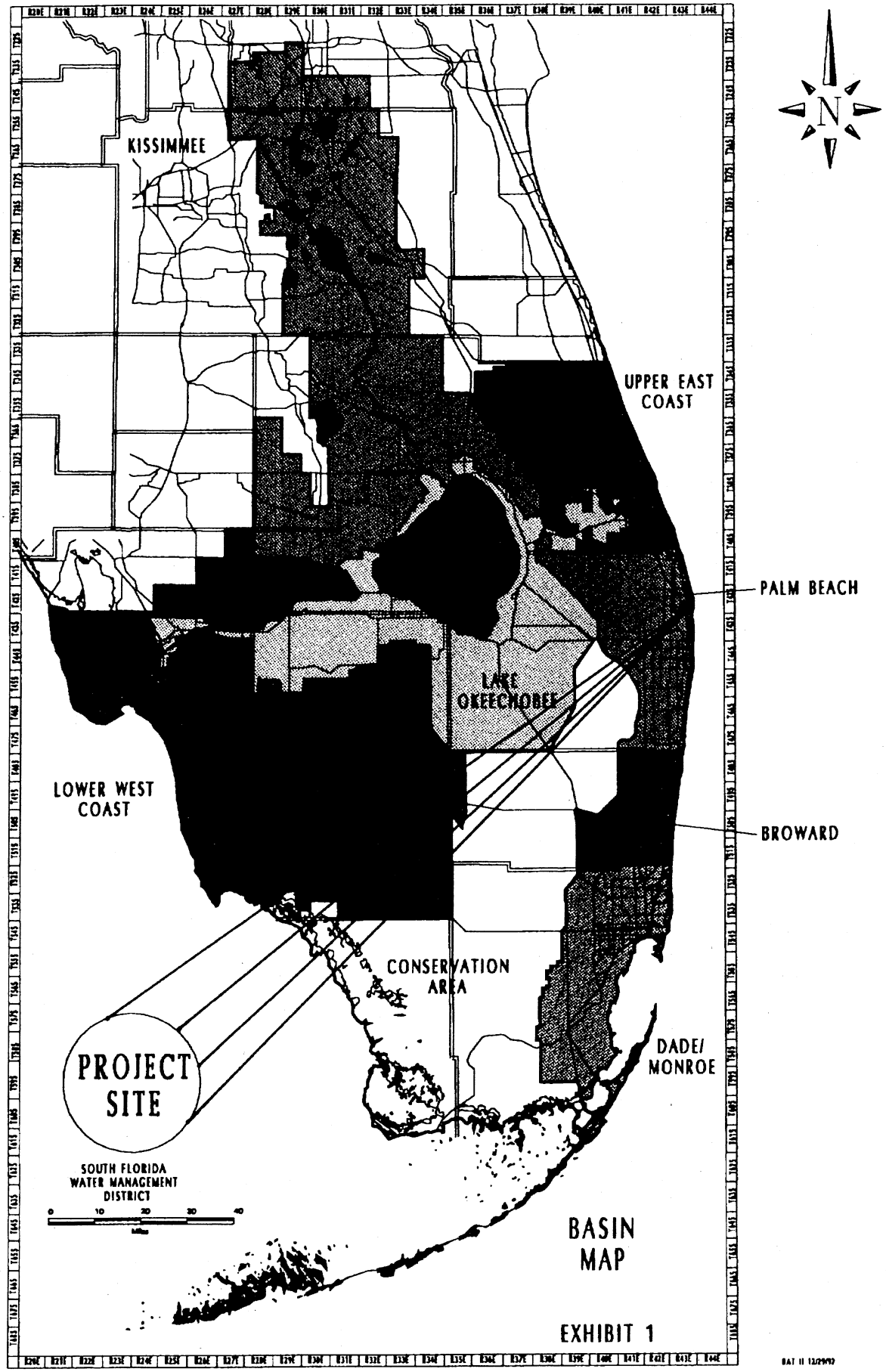
13. THE PERMIT DOES NOT CONVEY ANY PROPERTY RIGHT TO THE PERMITTEE, NOR ANY RIGHTS AND PRIVILEGES OTHER THAN THOSE SPECIFIED IN THE PERMIT AND CHAPTER 40E-2,F.A.C.

14. IF ADVERSE IMPACTS OCCUR TO NATURAL RESOURCES AS A RESULT OF THE PERMITTEE'S WATER WITHDRAWALS, THE PERMITTEE SHALL MITIGATE FOR SUCH IMPACTS. WHEN ADVERSE IMPACTS OCCUR, OR ARE IMMINENT, DISTRICT RESERVES THE RIGHT TO CURTAIL WITHDRAWAL RATES. EXAMPLES OF ADVERSE IMPACTS ARE:

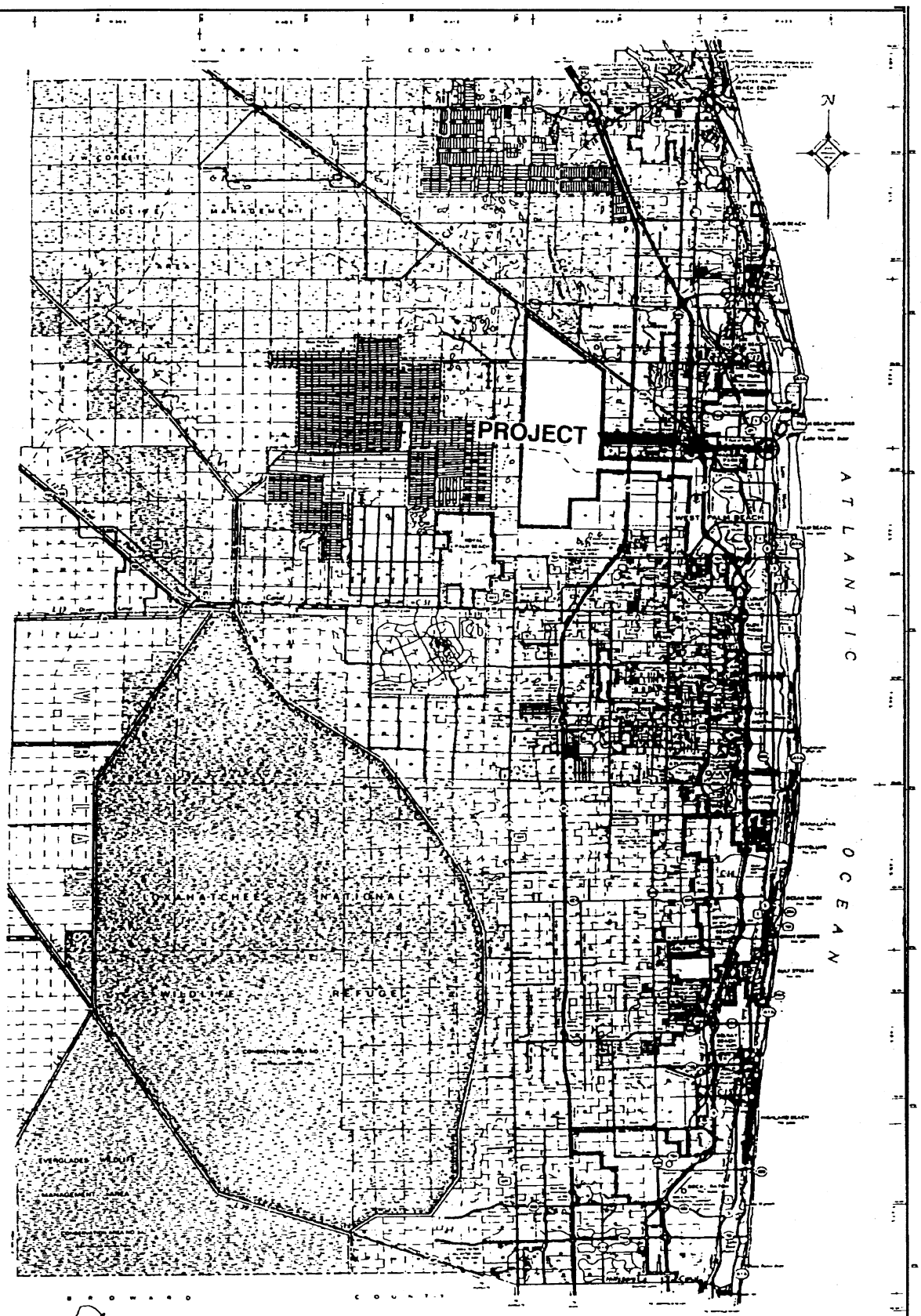
A) REDUCTION IN GROUND WATER LEVELS THAT RESULTS IN SIGNIFICANT LATERAL MOVEMENT OF THE FRESH WATER/SALT WATER INTERFACE,
B) REDUCTION IN WATER LEVELS THAT ADVERSELY IMPACT THE HYDROPERIOD OF PROTECTED WETLAND ENVIRONMENTS,
C) SIGNIFICANT REDUCTION IN WATER LEVELS OR HYDROPERIOD IN A NATURALLY OCCURING WATER BODY SUCH AS A LAKE OR POND,
D) INDUCED MOVEMENT OR INDUCTION OF POLLUTANTS INTO THE WATER SUPPLY RESULTING IN A SIGNIFICANT REDUCTION IN WATER QUALITY, AND
E) SIGNIFICANT HARM **TO THE NATURAL SYSTEM INCLUDING DAMAGE TO HABITAT FOR** RARE OR ENDANGERED SPECIES.

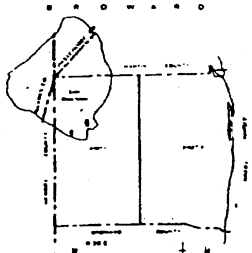
15. PERMIT-TEE SHALL SUBMIT ALL DATA AS REQUIRED BY THE IMPLEMENTATION SCHEDULE FOR EACH OF THE LIMITING CONDITIONS TO: S.F.W.M.D., SUPERVISING PROFESSIONAL - P.P.C., WATER USE DIVISION(4040), P.O. BOX 24680, WEST PALM BEACH, FL 33416-4680.

16. PERMITTEE SHALL SECURE A WELL CONSTRUCTION PERMIT PRIOR TO CONSTRUCTION, REPAIR, OR ABANDONMENT OF ALL WELLS, AS DESCRIBED IN CHAPTERS 40E-3 AND 40E-30,F.A.C.



BAT II 12/29/92



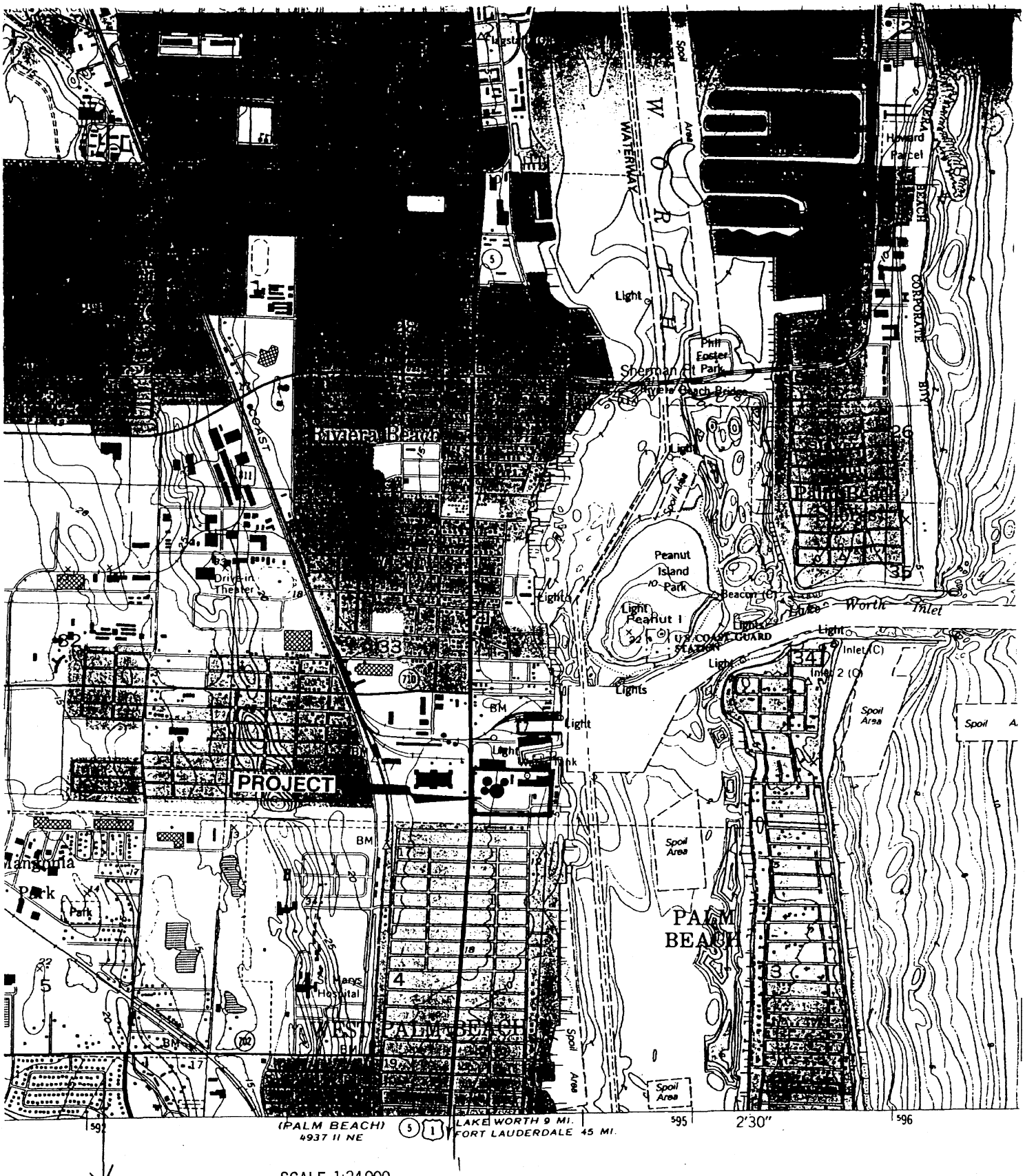


GENERAL HIGHWAY MAP

PALM BEACH COUNTY

FLORIDA

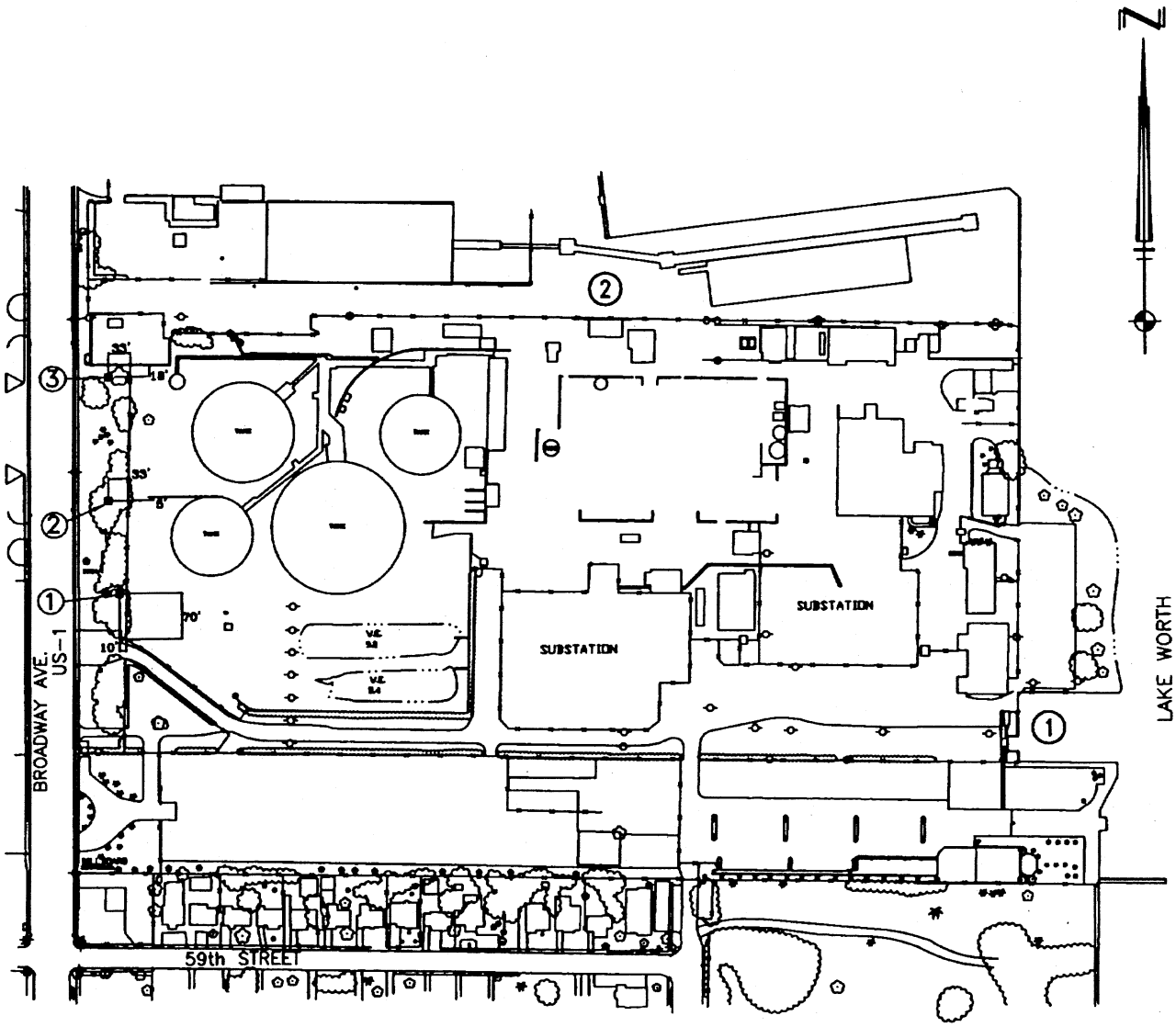
EXHIBIT 2



CONTOUR INTERVAL 5 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

BATHYMETRIC CONTOUR INTERVAL 1 METER WITH SUPPLEMENTARY



LEGEND

① WELL B

② WELL C

③ WELL D

RIVIERA PLANT
SFWMD CONSUMPTIVE USE
Permit # GP-83-100W
ITEM II-1
FIGURE 1

TABLE A
DESCRIPTION OF WELLS

APPLICATION NUMBER: 990105-9

WELL NUMBER	1	2	3
MAP DESIGNATOR	B	C	D
EXISTING/PROPOSED	E	E	E
DIAMETER (INCHES)	6	6	6
TOTAL DEPM (FT)	100	85	175
CASED DEPTH (FT)	84		
SCREENED INTERVAL			
PUMPED/FLOWING	P	P	P
WORKING VALVE	N	N	N
PUMP MANUF			
PUMP TYPE	SUBMERSIBLE	SUBMERSIBLE	SUBMERSIBLE
INTAKE DEPTH (FT. NGVD)		-42	-42
PUMP CAPACITY (GPM)	225	225	225
YEAR DRILLED	1998	1945	1945
PLANAR SOURCE	APPLICANT	APPLICANT	APPLICANT
COORDINATES	808323E 884577N	808305E 884717N	808305E 884902N
ACCOUNTING METHOD			
USE STATUS	PRIMARY	PRIMARY	PRIMARY
WELL CONST PERMIT NO			

CALCULATIONS OF IRRIGATION REQUIREMENTS

APPLICATION NUMBER: 990105-9

STATION: WEST PALM BEACH CROP: TURF

ACREAGE: 4.60 SOIL TYPE: 0.40 SYSTEM: SOLID SET SPRINKLER

EFFICIENCY: 0.80 ALLOCATION COEFFICIENT: 1.25

ANNUAL SUPPLEMENTAL REQUIREMENT: 36.98 INCHES

ANNUAL SUPPLEMENTAL WATER USE:

36.98 IN X 4.6 AC X 1.25 X .02715 MG/AC-IN = 5.77 MG

MAXIMUM MONTHLY SUPPLEMENTAL CROP REQUIREMENT: 5.17 INCHES

MAXIMUM MONTHLY WATER USE:

5.17 IN X 4.6 AC X 1.25 X .02715 MG/AC-IN = .81 MG

TOTAL ANNUAL SUPPLEMENTAL REQUIREMENT: 36.98 INCHES

TOTAL ANNUAL DEMAND: 5.77 MG

TOTAL MAXIMUM MONTHLY SUPPLEMENTAL CROP REQUIREMENT: 5.17 INCHES

TOTAL MAXIMUM MONTHLY DEMAND: .81 MG

NOTICE OF RIGHTS

Section 120.569(1), Fla. Stat. (1997), requires that "each notice shall inform the recipient of any administrative hearing or judicial review that is available under this section, s. 120.57, or s. 120.68; shall indicate the procedure which must be followed to obtain the hearing or judicial review, and shall state the time limits which apply." Please note that this Notice of Rights is not intended to provide legal advice. Not all the legal proceedings detailed below may be an applicable or appropriate remedy. You may wish to consult an attorney regarding your legal rights.

Petition for Administrative Proceedings

1. A person whose substantial interests are affected by the South Florida Water Management District's (SFWMD) action has the right to request an administrative hearing on that action. The affected person may request either a formal or an informal hearing, as set forth below. A point of entry into administrative proceedings is governed by Rules 28-106.111 and 40E-1.511, Fla. Admin. Code, (also published as an exception to the Uniform Rules of Procedure as Rule 40E-0.109), as set forth below. Petitions am deemed filed upon receipt of the original documents by the SFWMD Clerk.

a. Formal Administrative Hearing If a genuine issue(s) of material fact is in dispute, the affected person seeking a formal heating on a SFWMD decision which does or may determine their substantial interests shall file a petition for hearing pursuant to Sections 120.569 and 120.57(1), Fla. Stat. or for mediation pursuant to Section 120.573, Fla. Stat. within 21 days, except as provided in subsections c. and d. below, of either written notice through mail or posting or publication of notice that the SFWMD has or intends to take final agency action. Petitions must substantially comply with the requirements of Rule 28-106.201(2), Fla. Admin. Code, a copy of the which is attached to this Notice of Rights.

b. Informal Administrative Hearing: If there are no issues of material fact in dispute, the affected person seeking an informal hearing on a SFWMD decision which does or may determine their substantial interests shall file a petition for hearing pursuant to Sections 120.569 and 120.57(2), Fla. Stat. or for mediation pursuant to Section 120.573, Fla. Stat. within 21 days, except as provided in subsections c. and d. below, of either written notice through mail or posting or publication of notice that the SFWMD has or intends to take final agency action. Petiiions must substantially comply with the requirements of Rule 28-106.301(2), Fla. Admin. Code, a copy of the which is attached to this Notice of Rights.

c. Administrative Complaint and Order. If a Respondent objects to a SFWMD Administrative Complaint and Order, pursuant to Section 373.119, Fla. Stat. (1997), the person named in the Administrative Complaint and Order may file a petition for a hearing no later than 14 days after the date such order is served. Petitions must substantially comply with the requirements of either subsection a. orb. above.

d. State Lands Environmental Resource Permit: Pursuant to Section 373.427, Fla. Stat., and Rule 40E-1.511(3), Fla. Admin. Code (also published as an exception to the Uniform Rules of Procedure as Rule 40E-0.109(2)(c)), a petition objecting to the SFWMD's agency action regarding consolidated applications for Environmental Resource Permits and Use of Sovereign Submerged Lands (SLERPs), must be tiled within 14 days of the notice of consolidated intent to grant or deny the SLERP. Petitions must substantially comply with the requirements of either subsection a. orb. above.

e. Emergency Authorization and Order: A person whose substantial interests are affected by a SFWMD Emergency Authorization and Order, has a right to file a petition under Sections 120.569, 120.57(1), and 120.57(2), Fla. Stat., as provided in subsections a. and b. above. However, the person, or the agent of the person responsible for causing or contributing to the emergency conditions shall take whatever action necessary to cause immediate compliance with the terms of the Emergency Authorization and Order.

f. Order for Emergency Action: A person whose substantial interests are affected by a SFWMD Order for Emergency Action has a right to file a petition pursuant to Rules 28107.005 and 40E-1.611, Fla. Admin. Code, copies of which are attached to this Notice of Rights, and Section 373.119(3), Fla. Stat, for a hearing on the Order. Any subsequent agency action or proposed agency action to initiate a formal revocation proceeding shall be separately noticed pursuant to section g. below.

g. Permit Suspension. Revocation, Annulment, and Withdrawal: If the SFWMD issues an administrative complaint to suspend, revoke, annul, or withdraw a permit, the permittee may request a hearing to be conducted in accordance with Sections 120.569 and 120.57, Fla. Stat., within 21 days of either written notice through mail or posting or publication of notice that the SFWMD has or intends to take final agency action. Petitions must substantially comply with the requirements of Rule 28-107.004(3), Fla. Admin. Code, a copy of the which is attached to this Notice of Rights.

2. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the SFWMD's final action may be different from the position taken by it previously. Persons whose substantial interests may be affected by

any such final decision of the SFWMD shall have, pursuant to Rule 40E-1.511(2), Fla. Admin. Code (also published as an exception to the Uniform Rules of Procedure as Rule 40E-0.109(2)(c)), an additional 21 days from the date of receipt of notice of said decision to request an administrative hearing. However, the scope of the administrative hearing shall be limited to the substantial deviation.

3. Pursuant to Rule 40E-1.511(4), Fla. Admin. Code, substantially affected persons entitled to a hearing pursuant to Section 120.57(1), Fla. Stat., may waive their right to such a hearing and request an informal hearing before the Governing Board pursuant to Section 120.57(2), Fla. Stat., which may be granted at the option of the Governing Board.

4. Pursuant to Rule 28-106.111(3), Fla. Admin. Code, persons may file with the SFWMD a request for extension of time for filing a petition. The SFWMD, for good cause shown, may grant the extension. The request for extension must contain a certificate that the petitioner has consulted with all other parties, if any, concerning the extension and that the SFWMD and all other parties agree to the extension.

CIRCUIT COURT

5. Pursuant to Section 373.617, Fla. Stat., any substantially affected person who claims that final agency action of the SFWMD relating to permit decisions constitutes an unconstitutional taking of property without just compensation may seek judicial review of the action in circuit court by filing a civil actii in the circuit court in the judiial circuit in which the affected property is located within 90 days of the rendering of the SFWMD's final agency action.

6. Pursuant to Section 403.412, Fla. Stat., any citizen of Florida may bring an action for injunctive relief against the SFWMD to compel the SFWMD to enforce the laws of Chapter 373, Fla. Stat., and Title 40E, Fla. Admin. Code. The complaining party must file with the SFWMD Clerk a verified complaint setting forth the facts upon which the complaint is based and the manner in which the complaining party is affected. If the SFWMD does not take appropriate action on the complaint within 30 days of receipt, the complaining party may then file a civil suit for injunctive relief in the 15th Judicial Circuit in and for Palm Beach County or circuit court in the county where the cause of action allegedly occurred.

7. Pursuant to Section 373.433, Fla. Stat., a private citizen of Florida may file suit in circuit court to require the abatement of any stormwater management system, dam, impoundment, reservoir, appurtenant work or works that violate the provisions of Chapter 373, Fla. Stat.

DISTRICT COURT OF APPEAL

8. Pursuant to Section 120.68, Fla. Stat., a party who is adversely affected by final SFWMD action may seek judicial review of the SFWMD's final decision by filing a notice of appeal pursuant to Florida Rule of Appellate Procedure 9.110 in the Fourth District Court of Appeal or in the appellate district where a party resides and filing a second copy of the notice with the SFWMD Clerk within 30 days of rendering of the final SFWMD action.

LAND AND WATER ADJUDICATORY COMMISSION

9. A patty to a 'proceeding below" may seek review by the Land and Water Adjudicatory Commission (LAWAC) of SFWMD's final agency action to determine if such action is consistent with the provisions and purposes of Chapter 373, Fla. Stat. Pursuant to Section 373.114, Fla. Stat., and Rules 42-2.013 and 42-2.0132, Fla. Admin. Code, a request for review of (a) an order or rule of the SFWMD must be filed with LAWAC within 20 days after rendition of the order or adoption of the rule sought to be reviewed; (b) an order of the Department of Environmental Protection (DEP) requiring amendment or repeal of a SFWMD rule must be filed with LAWAC within 30 days of rendition of the DEP's order, and (c) a SFWMD order entered pursuant to a formal administrative hearing under Section 120.57(1), Fla. Stat., must be filed no later than 20 days after rendition of the SFWMD's final order. Simultaneous with filing, a copy of the request for review must be served on the DEP Secretary, any person named in the SFWMD or DEP final order, and all parties to the proceeding below. A copy of Rule 42-2.013, Fla. Admin. Code is attached to this Notice of Rights.

PRIVATE PROPERTY RIGHTS PROTECTION ACT

10. A property owner who alleges a specific action of the SFWMD has inordinately burdened an existing use of the real property, or a vested right to a specific use of the real property, may file a claim in the circuit court where the real property is located within 1 year of the SFWMD actii pursuant to the procedures set forth in Subsection 70.001(4)(a), Fla. Stat.

LAND USE AND ENVIRONMENTAL DISPUTE RESOLUTION

11. A property owner who alleges that a SFWMD development order (as that term is defined in Section 70.51(2)(a), Fla. Stat. to include permits) or SFWMD enforcement action is unreasonable, or unfairly burdens the use of the real property, may file a request for relief with the SFWMD within 30 days of receipt of the SFWMD's order or notice of agency action pursuant to the procedures set forth in Subsections 70.51(4) and (6), Fla. Stat.

MEDIATION

12. A person whose substantial interests are, or may be, affected by the SFWMD's action may choose mediation as an alternative remedy under Section 120.573, Fla. Stat. Pursuant to Rule 28100.11 1(2), Fla. Admin. Code, the petition for mediation shall be filed within 21 days of either written notice through mail or posting or

publication of notice that the SFWMD has or intends to take final agency action. Choosing mediation will not adversely affect the right to an administrative hearing if mediation does not result in settlement.

Pursuant to Rule 28-106.402, Fla. Admin. Code, the contents of the petition for mediation shall contain the following information:

(1) the name, address, and telephone number of the person requesting mediation and that person's representative, if any;

(2) a statement of the preliminary agency action;

(3) an explanation of how the person's substantial interests will be affected by the agency determination; and

(4) a statement of relief sought.

As provided in Section 120.573, Fla. Stat. (1997), the timely agreement of all the parties to mediate will toll the time limitations imposed by Sedions 120.569 and 120.57, Fla. Stat., for requesting and holding an administrative hearing. Unless otherwise agreed by the parties, the mediation must be concluded within 80 days of the execution of the agreement. If mediation results in settlement of the dispute, the SFWMD must enter a final order incorporating the agreement of the parties. Persons whose substantial interest will be affected by such a modified agency decision have a right to petition for hearing within 21 days of receipt of the final order in accordance with the requirements of Sections 120.569 and 120.57, Fla. Sat., and SFVVMD Rule 28-106.201(2), Fla. Admin. Code. If mediation terminates without settlement of the dispute, the SFWMD shall notify all parties in writing that the administrative hearing process under Sections 120.569 and 120.57, Fla. Stat., remain available for disposition of the dispute, and the notice will specify the deadlines that then will apply for challenging the agency action.

VARIANCES AND WAIVERS

13. A person who is subject to regulation pursuant to a SFWMD rule and believes the application of that rule will create a substantial hardship or will violate principles of fairness (as those terms are defined in Subsection 120.542(2), Fla. Stat.) and can demonstrate that the purpose of the underlying statute will be or has been achieved by other means, may file a petition with the SFWMD Clerk requesting a variance from or waiver of the SFWMD rule. Applying for a variance or waiver does not substitute or extend the time for tiling a petition for an administrative hearing or exercising any other right that a person may have concerning the SFWMD's action. Pursuant to Rule 28-104.002(2), Fla. Admin. Code, the petition must include the following information:

(a) the caption shall read:

Petition for (Variance from) or (Waiver of) Rule (Ciiation)

(b) The name, address, telephone number and any facsimile number of the petitioner;

(c) The name, address telephone number and any facsimile number of the attorney or qualified representative of the petitioner, (if any);

(d) the applicable rule or portion of the rule;

(e) the citation to the statue the rule is implementing;

(f) the type of action requested;

(g) the specific facts that demonstrate a substantial hardship or violation of principals of fairness that would justify a waiver or variance for the petitioner;

(h) the reason why the variance or the waiver requested would serve the purposes of the underlying statute; and

(i) a statement of whether the variance or waiver is permanent or temporary, If the variance or waiver is temporary, the petition shall include the dates indicating the duration of the requested variance or waiver.

A person requesting an emergency variance from or waiver of a SFWMD rule must clearly so state in the caption of the petition. In addition to the requirements of Section 120.542(5), Fla. Stat. pursuant to Rule 28 104.004(2), Fla. Admin. Code, the petition must also include:

a) the specific facts that make the situation an emergency; and

b) the specific facts to show that the petitioner will suffer immediate adverse effect unless the variance or waiver is issued by the SFVVMD more expeditiously than the applicable timeframes set forth in Section 120.542, Fla. stat.

WAIVER OF RIGHTS

14. Failure to observe the relevant time frames prescribed above will constitute a waiver of such right.

28-106.201 INITIATION OF PROCEEDINGS (INVOLVING DISPUTED ISSUES OF MATERIAL FACT)

(2) All petitions filed under these rules shall contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding, and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and

(f) A demand for relief.

28-106.301 **INITIATION** OF PROCEEDINGS
(NOT INVOLVING DISPUTED ISSUES OF MATERIAL FACT)

(2) All petitions filed under these rules shall contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the **petitioner;** the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the **course** of the proceeding, and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and

(e) A demand for relief.

28-107.004 SUSPENSION, REVOCATION, ANNULMENT, OR**WITHDRAWAL**

(3) Requests for hearing filed in accordance with this rule shall include:

(a) The name and address of the party making the request, for purposes of service;

(b) A statement that the party is requesting a hearing invotving disputed issues of material fact, or a hearing not involving disputed issues of material fact; and

(c) A reference to the notice, order to show cause, **administrative** complaint, or other communication that the **party** has received from the agency.

42-2.013 REQUEST FOR **REVIEW** PURSUANT TO **SECTION** 373.114 OR 373.217

(1) In any proceeding arising under Chapter 373, F.S., **review** by the Florida Land and Water Adjudicatory Commission may be initiated by the Department or a party **by filing a request for such review** with the **Secretary of the** Commission and serving **a copy** on any person named in the rule or order, and on all parties to the proceeding which **resulted** in the order sought to be reviewed. A certificate of service showing completion of service as required by this subsection shall be a requirement for a determination of sufficiency under Rule 42-2.0132. Failure to file the request with the Commission within the time period provided in Rule 42-2.0132 shall result in dismissal of the **request** for review.

(2) The request for review shall identify the rule or order requested to be reviewed, the proceeding in which the rule or order was entered and the nature of the rule or order. A **copy** of the rule or order sought to be reviewed shall be attached. The request for review shall state with particularity:

(a) How the order or rule conflicts with the requirements, provisions and purposes of Chapter 373. F.S., or rules duly adopted thereunder;

(b) How the rule or order sought to be reviewed affects the interests of the party seeking review;

(c) The oral or written statement, sworn or unsworn, which was submitted to the agency concerning the matter to be reviewed and the date and location of the statement, if the individual or entity requesting the **review** has not participated in a proceeding previously instituted pursuant to Chapter 120, F.S., on the order for which review is sought;

(d) If review of an order is being sought, whether and how the activity authorized by the order would substantially affect natural resources of statewide or regional significance, or whether the order raises issues of policy, statutory interpretation, or rule interpretation that have regional or statewide significance from a standpoint of agency precedent, and all the factual bases in the **record** which the petitioner claims support such determination(s); and

(e) The action requested to be taken by the Commission as a result of the review, whether to rescind or modify the order, or remand the proceeding to the water management district for further action, or to require the water management district to initiate rulemaking to adopt, amend or repeal a rule.

28-107.005 EMERGENCY ACTION

(1) If the agency finds that immediate serious danger to the public health, safety, or welfare requires emergency action, the agency shall summarily suspend, limit, or restrict a license.

(2) the **14-day** notice requirement of Section **120.569(2)(b),** F. S., does not apply and shall not be construed to prevent a hearing at the earliest time practicable upon request of an aggrieved party.

(3) Unless otherwise provided by law, within 20 days after emergency action taken pursuant to paragraph (1) of this rule, the **agency** shall initiate a fonnal suspension or revocation proceeding in compliance with Sections 120.569, 120.57. **and 120.60,** F.S.

40E-1.611 EMERGENCY ACTION

(1) An emergency exists when immediate action is necessary to protect public **health,** safety or welfare; the health of animals, fish or aquatic life; the works of the District; a public water supply, or recreational, commercial, industrial, **agricultural** or other reasonable uses of land and water resources.

(2) The Executive Director may employ the resources of the District to take whatever remedial action necessary to alleviate the emergency condition without the issuance of an emergency order, or in the event an emergency order has been issued, **after** the expiration of the requisite time for compliance with that order.

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

GENERAL WATER USE PERMIT NO. 50-04188-W

South Florida Water Management District

3301 Gun Club Road, West Palm Beach, Florida 33406 . (561) 686-8800 . FL WATS 1-800-432-2045
TDD (561) 697-2574

CON 24-06

Application No.: 990105-14
General Permit No.: 50-04188-W

February 2, 1999

FLORIDA POWER AND LIGHT COMPANY
PO BOX 1400
JUNO BEACH, FL 33408-0420

Dear Permittee:

SUBJECT: General Water Use Permit No.: 50-04188-W
Project: FPL RIVIERA PLANT WATER PUMP BEARING COOLING
Location: Palm Beach County, S33/T42S/R43E
Permittee: FLORIDA POWER AND LIGHT COMPANY

This letter is to notify you of the District's agency action concerning your Notice of Intent to Use Water. This action is taken pursuant to Rule 40E-20.042, Florida Administrative Code (F.A.C.). Based on the information provided, District rules have been adhered to and a General Water Use Permit is in effect for this project subject to:

1. Not receiving a filed request for a Chapter 120. Florida Statutes, administrative hearing and

2. The attached Limiting Conditions.

General Water Use Permit No. 83-00101-W was originally issued on October 4, 1983 for the use of 100,000 gallons on a maximum day basis. Groundwater withdrawals were to be from four 6" Surficial aquifer wells.

This permit renews and supersedes General Water Use Permit No. 83-00101-W. In addition, this permit is modified to reflect the abandonment of Well "A", correction of the irrigated acreage, and the adjustment of the allocation.

This Industrial permit is issued to supply water for the purpose of cooling the bearings on four circulating water pumps at Units 3 and 4. After use, the water is discharged to the cooling water intake bay in the Intracoastal Waterway. This permit shares withdrawal facilities with Water Use Permit No. 50-04187-W. which was issued for the purpose of landscape irrigation.

Mailing Address: P.O. Box 24680, West Palm Beach, FL 33416-4680

STAFF RECOMMENDATIONS

DATE OF ISSUANCE: February 2. 1999
EXPIRATION DATE: February 2. 2019
USE TYPE: Industrial (Heating/Cooling)

SURFACE WATER MANAGEMENT STATUS: NOT APPLICABLE.
RIGHT OF WAY STATUS: NOT APPLICABLE.

GROUNDWATER FROM THE SURFICIAL AQUIFER SYSTEM

ALLOCATION:

AVERAGE DAILY ALLOCATION: 86.400 GALLONS

MAXIMUM DAILY WITHDRAWAL: < 100.000 GALLONS

EXISTING WITHDRAWAL FACILITIES - **GROUNDWATER:**

GW SOURCE: SURFICIAL AQUIFER SYSTEM

1 - 6" X 85' X 225 GPM WELL WITH UNKNOWN CASED DEPTH
1 - 6" X 100' X 225 GPM WELL CASED TO 84 FEET
1 - 6" X 175' X 225 GPM WELL WITH UNKNOWN CASED DEPTH

TOTAL RATED CAPACITY:

		GPM	MGD	MGM	MGY
SURFICIAL AQUIFER SYSTEM	E	675	.9720	29.2	355
TOTALS		675	.9720	29.2	355

Unless otherwise modified or revoked, for each withdrawal authorized herein, the duration of the General Water Use Permit shall not exceed twenty years, pursuant to Rule 40E-20.321, F.A.C.

Should you object to the Limiting Conditions, please refer to the attached Notice of Rights which addresses the procedures to be followed if you desire a public hearing or other review of the proposed agency action. Please contact this office if you have questions concerning this matter. If we do not hear from you prior to the time frame specified in the Notice of Rights, we will assume that you concur with the District's recommendation.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a Notice of Rights has been mailed to the addressee not later than 5:00 p.m. this 2nd day of February, 1999, in accordance with Section 120.60(3), Florida Statutes.

Sincerely,

Rick F. Bower, P.G.
Sr Supv Hydrogeologist
Regulation Department
West Palm Beach Service Center

RFB/kl

CERTIFIED MAIL NO.: Z 146 132 573

Enclosure

c: FDEP
FPL Riviera Plant
Montgomery Watson, Inc.
Palm Beach County Health Dept.

LIMITING CONDITIONS

1 IN THE EVENT OF A DECLARED WATER SHORTAGE, WATER WITHDRAWAL REDUCTIONS WILL BE ORDERED BY THE DISTRICT IN ACCORDANCE WITH THE WATER SHORTAGE PLAN, CHAPTER 40E-21, FLORIDA ADMINISTRATIVE CODE. THE APPLICANT IS ADVISED THAT DURING A WATER SHORTAGE PUMPAGE REPORTS SHALL BE SUBMITTED AS REQUIRED BY CHAPTER 40E-21, FLORIDA ADMINISTRATIVE CODE.

2 SOURCE CLASSIFICATION IS:

GROUNDWATER FROM THE SURFICIAL AQUIFER SYSTEM

3 PERMITTEE SHALL MITIGATE ANY ADVERSE IMPACT ON EXISTING LEGAL USES CAUSED BY WITHDRAWALS. WHEN ADVERSE IMPACTS OCCUR, OR ARE IMMINENT, THE DISTRICT RESERVES THE RIGHT TO CURTAIL WITHDRAWAL RATES. ADVERSE IMPACTS ARE:

A) REDUCTION IN WELL WATER LEVELS THAT IMPAIRS THE ABILITY OF AN ADJACENT WELL, INCLUDING A DOMESTIC WELL, LAWN IRRIGATION WELL, OR PUBLIC WATER SUPPLY WELL, TO PRODUCE WATER BY 10% OR GREATER,
B) SIGNIFICANT REDUCTION IN LEVELS IN AN ADJACENT WATER BODY SUCH AS A LAKE, POND, OR A CANAL SYSTEM THAT IMPAIRS THE ABILITY TO PRODUCE WATER BY 10% OR GREATER,
C) SALINE WATER INTRUSION OR INDUCED MOVEMENT OF POLLUTANTS INTO THE WATER SUPPLY OF AN ADJACENT WATER USE, RESULTING IN A SIGNIFICANT REDUCTION IN WATER QUALITY, AND
D) CHANGE IN WATER QUALITY CAUSED BY THE PERMITTEE THAT RESULTS IN SIGNIFICANT IMPAIRMENT OR LOSS OF USE OF A WELL OR WATER BODY.

4. PERMITTEE SHALL MITIGATE ANY ADVERSE IMPACT ON EXISTING OFF-SITE LAND USE AS A CONSEQUENCE OF WITHDRAWALS PERMITTED HEREIN. IF INCREASED WITHDRAWALS CAUSE AN ADVERSE IMPACT ON EXISTING LAND USE, THE DISTRICT RESERVES THE RIGHT TO CURTAIL FUTURE WITHDRAWAL RATES. ADVERSE IMPACTS ARE:

A) SIGNIFICANT **REDUCTION** IN **WATER LEVELS** IN AN ADJACENT SURFACE WATER BODY, INCLUDING IMPOUNDMENTS, TO THE EXTENT THAT THE DESIGNED FUNCTION OF THE WATER BODY IS IMPAIRED,
B) LAND COLLAPSE OR SUBSIDENCE CAUSED BY REDUCTION IN WATER LEVELS; AND
C) DAMAGE TO CROPS AND OTHER TYPES OF VEGETATION.

5. AUTHORIZED REPRESENTATIVES OF THE DISTRICT SHALL BE PERMITTED TO ENTER, INSPECT, AND OBSERVE THE PERMITTED SYSTEM TO DETERMINE COMPLIANCE WITH SPECIAL CONDITIONS.

6. IF ANY CONDITION OF THE PERMIT IS VIOLATED, THE PERMIT SHALL BE SUBJECT TO REVIEW AND POSSIBLE MODIFICATION, ENFORCEMENT ACTION, OR REVOCATION.

7. APPLICATION FOR A PERMIT MODIFICATION MAY BE MADE AT ANY TIME.

8. WITHDRAWAL FACILITIES ARE:

GROUNDWATER - EXISTING:

1 - 6" X 85' X 225 GPM WELL WITH UNKNOWN CASED DEPTH
1 - 6" X 100' X 225 GPM WELL CASED TO 84 FEET
1 - 6" X 175' X 225 GPM WELL WITH UNKNOWN CASED DEPTH

9. THIS PERMIT SHALL EXPIRE ON FEBRUARY 02, 2019.

10. AVERAGE DAILY ALLOCATION SHALL NOT EXCEED 86,400 GALLONS.

MAXIMUM DAILY WITHDRAWAL SHALL NOT EXCEED 100,000 GALLONS.

11. USE CLASSIFICATION IS INDUSTRIAL (HEATING/COOLING).

12. THE PERMITTEE IS ADVISED THAT THIS PERMIT DOES NOT RELIEVE ANY PERSON FROM THE REQUIREMENT TO OBTAIN ALL NECESSARY FEDERAL, STATE, LOCAL AND SPECIAL DISTRICT AUTHORIZATIONS.

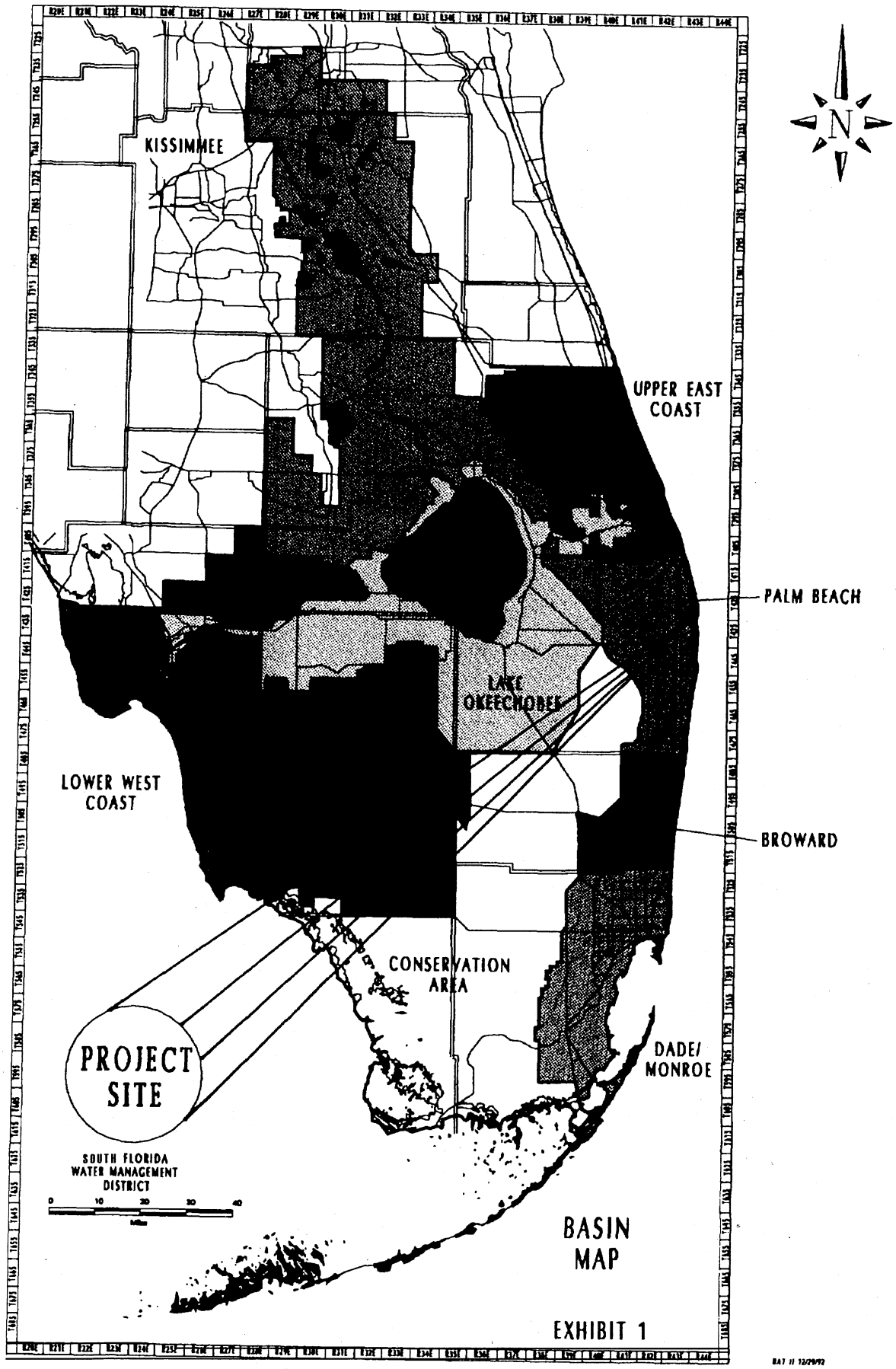
13. THE PERMIT DOES NOT CONVEY ANY PROPERTY RIGHT TO THE PERMITTEE, NOR ANY RIGHTS AND PRIVILEGES OTHER THAN THOSE SPECIFIED IN THE PERMIT AND CHAPTER 40E-2,F.A.C.

14. IF ADVERSE IMPACTS OCCUR TO NATURAL RESOURCES AS A RESULT OF THE PERMITTEE'S WATER WITHDRAWALS, THE PERMIT-TEE SHALL MITIGATE FOR SUCH IMPACTS. WHEN ADVERSE IMPACTS OCCUR, OR ARE IMMINENT, DISTRICT RESERVES THE RIGHT TO CURTAIL WITHDRAWAL RATES. EXAMPLES OF ADVERSE IMPACTS ARE:

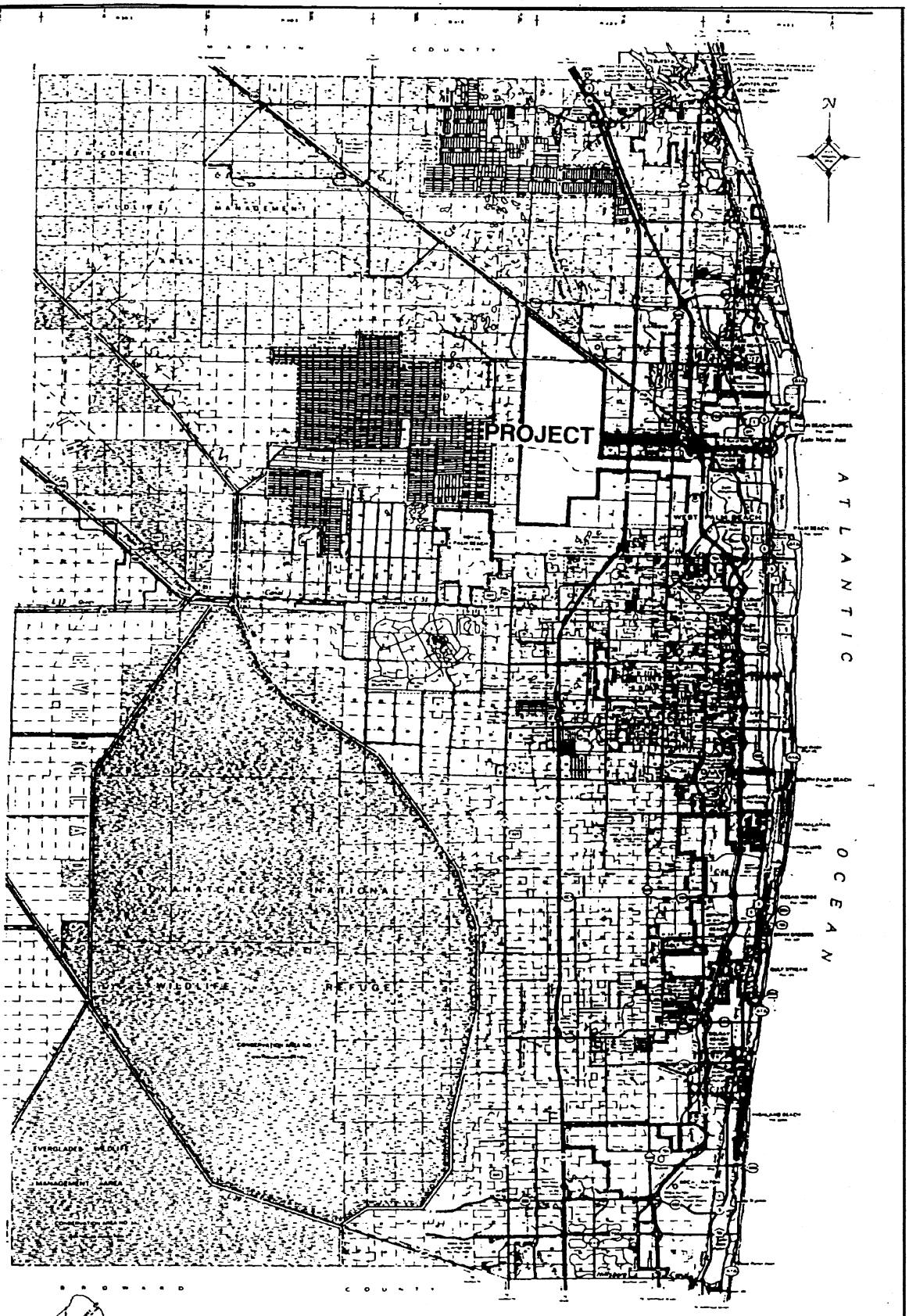
A) REDUCTION IN GROUND WATER LEVELS THAT RESULTS IN SIGNIFICANT LATERAL MOVEMENT OF THE FRESH WATER/SALT WATER INTERFACE,
B) REDUCTION IN WATER LEVELS THAT ADVERSELY IMPACT THE HYDROPERIOD OF PROTECTED WETLAND ENVIRONMENTS,
C) SIGNIFICANT REDUCTION IN WATER LEVELS OR HYDROPERIOD IN A NATURALLY OCCURING WATER BODY SUCH AS A LAKE OR POND,
D) INDUCED MOVEMENT OR INDUCTION OF POLLUTANTS INTO THE WATER SUPPLY RESULTING IN A SIGNIFICANT REDUCTION IN WATER QUALITY, AND
E) SIGNIFICANT HARM TO THE NATURAL SYSTEM INCLUDING DAMAGE TO HABITAT FOR RARE OR ENDANGERED SPECIES.

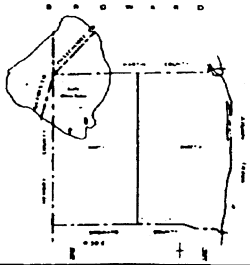
15. PERMITTEE SHALL SUBMIT ALL DATA AS REQUIRED BY THE IMPLEMENTATION SCHEDULE FOR EACH OF THE LIMITING CONDITIONS TO: S.F.W.M.D., SUPERVISING PROFESSIONAL - P.P.C., WATER USE DIVISION(4040), P.O. BOX 24680, WEST PALM BEACH, FL 33416-4680.

16. PERMITTEE SHALL SECURE A WELL CONSTRUCTION PERMIT PRIOR TO CONSTRUCTION, REPAIR, OR ABANDONMENT OF ALL WELLS, AS DESCRIBED IN CHAPTERS 40E-3 AND 40E-30.F.A.C.



BA7 II 12/29/92



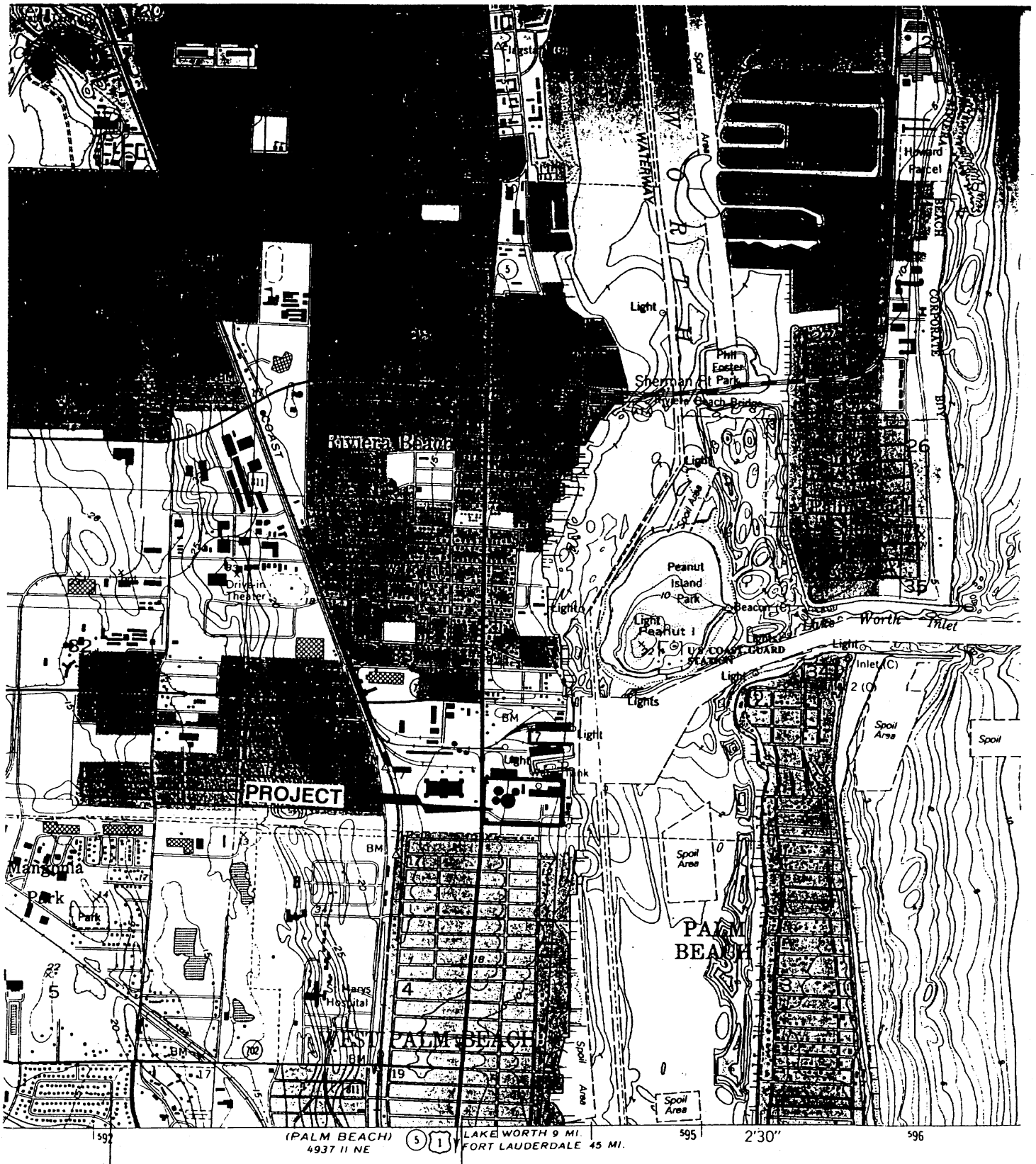


GENERAL HIGHWAY MAP

PALM BEACH COUNTY

FLORIDA

EXHIBIT 2



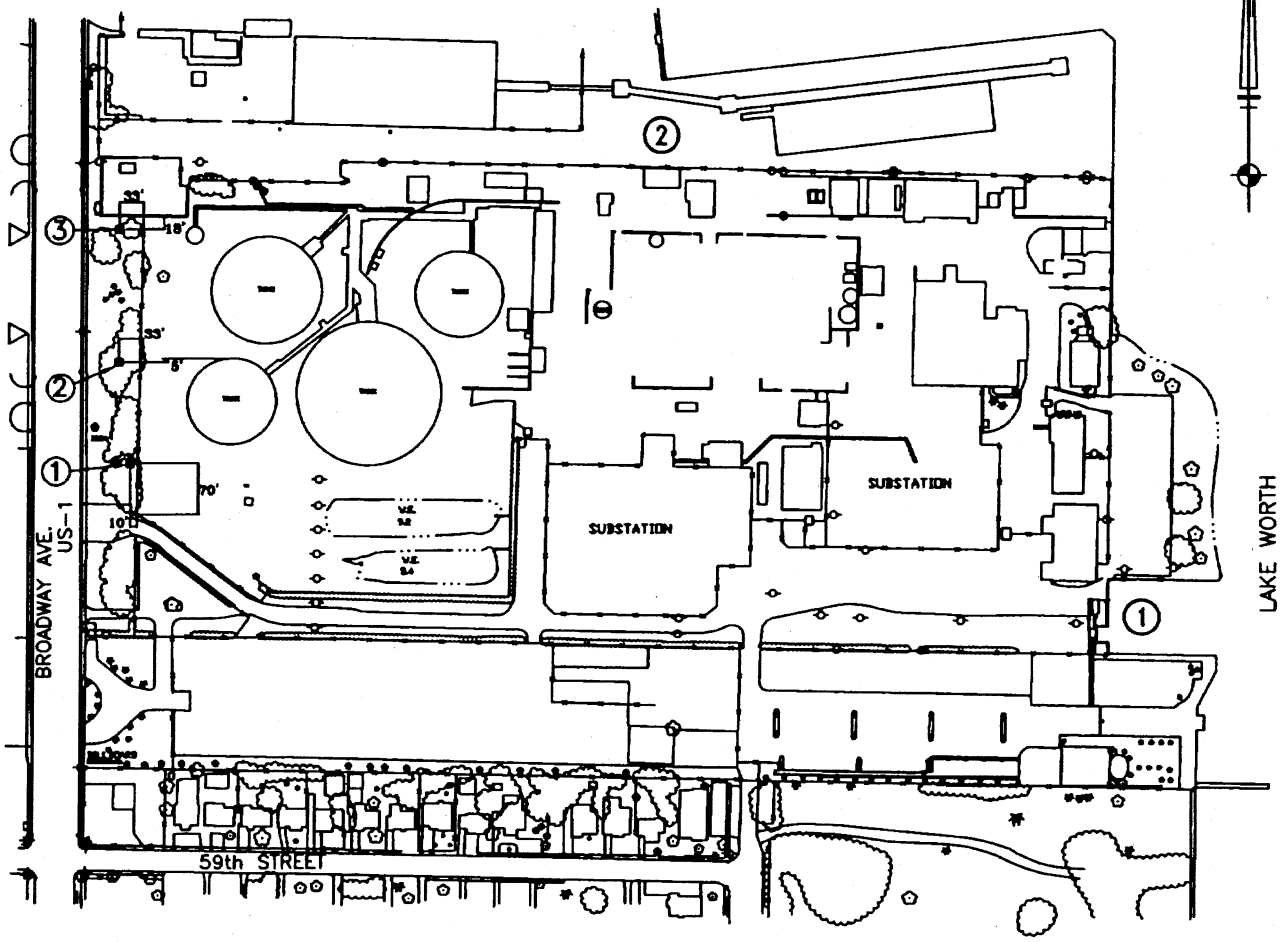
CONTOUR INTERVAL 5 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

ORIGINAL SUBMITTAL

JAN 0 5 1999

WPB



99010514

LEGEND

① WELL B

② WELL C

③ WELL D

RIVIERA PLANT
SFWMD CONSUMPTIVE USE
Permit # GP-83-101W
ITEM II-1
FIGURE 1

TABLE A
DESCRIPTION OF WELLS

APPLICATION NUMBER: 990105-14

WELL NUMBER	1	2	3
MAP DESIGNATOR	B	C	D
EXISTING/PROPOSED	E	E	E
DIAMETER **(INCHES)**	6	6	6
TOTAL DEPTH (FT)	100	85	175
CASED DEPTH (FT)	84		
SCREENED INTERVAL			
PUMPED/FLOWING	P	P	P
WORKING VALVE	N	N	N
PUMP MANUF			
PUMP TYPE	**SUBMERSIBLE**	**SUBMERSIBLE**	**SUBMERSIBLE**
INTAKE DEPTH (FT. NGVD)		-42	-42
PUMP CAPACITY**(GPM)**	225	225	225
YEAR DRILLED	1998	1945	1945
PLANAR SOURCE	**APPLICANT**	**APPLICANT**	**APPLICANT**
COORDINATES	808323E 884577N	808305E 884717N	808305E 884902N
ACCOUNTING METHOD			
USE STATUS	**PRIMARY**	PRIMARY	**PRIMARY**
WELL CONST PERMIT NO			

NOTICE OF RIGHTS

Section **120.569(1),** Fla. Stat. **(1997),** requires that "each notice shall inform the recipient of any administrative hearing or judicial review that is available under this section, s. 120.57, or s. 120.68; shall indicate the procedure which must be followed to obtain the heating or judicial review, and shall state the time limits which apply.' Please note that this Notice of Rights is not intended to provide legal advice. Not all the legal proceedings detailed below may be an applicable or appropriate remedy. You may wish to consult an attorney regarding your legal rights.

Petition for Administrative Proceedings

1. A person whose substantial interests **are** affeded by the South Florida Water Management District's (SFWMD) action has the right to request an administrative **hearing** on that **action.** The affected person may request either a formal or an **informal** hearing, as set forth below. A **point** of entry into **administrative** proceedings is **governed** by Rules **28-106.111** and **40E-1.511,** Fla. Admin. Code, (also published as an exception to the Uniform Rules of Procedure as Rule **40E-0. 109),** as set forth below. **Petitions** are deemed filed upon receipt of the original documents by the **SFWMD** Clerk.

a. Formal Administrative Hearing: If a genuine issue(s) of material fact is in dispute, the affected person seeking a formal hearing on a SFWMD decision which does or may determine their substantial interests shall file a petition for hearing pursuant to Sections 120.569 and **120.57(1),** Fla. Stat. or for mediation pursuant to **Section** 120.573, Fla. Stat. within 21 days, except as **provided** in **subsections** c. and d. below, of either written notice through mail or posting or publication of notice that the SFWMD has or intends to take final agency action. Petitions must substantially comply with the requirements of Rule **28-106.201(2),** Fla. Admin. Code, 'a copy of the which is attached to this Notice of Rights.

b. Informal Administrative Hearing If there are no Issues of material fact in dispute, the affected person seeking an informal hearing on a **SFWMD** decision **which** does or may determine their substantial interests shall file a **petition** for hearing pursuant to Sections 120.599 and **120.57(2), Fla.** Stat. or for mediation pursuant to **Section** 120.573, Fla. Stat. within 21 days, except as **provided** in subsections c. and d. below, of either written notice through mail or posting or publication of notice that the SFWMD has or intends to take final agency action. Petitions must substantially comply **with** the requirements of Rule **28-106.301(2),** Fla. Admin. Code, a copy of the which is attached to this Notice of Rights.

c. Administrative Complaint and Order: If a Respondent objects to a SFWMD Administrative Complaint and Order, pursuant to Section 373.119, Fla. Stat. **(1997),** the person named in the Administrative Complaint and **Order** may file a petition for a hearing no later than 14 days after the date such order is served. Petitions must substantially comply with the requirements of either subsection a. or b. above.

d. State Lands Environmental Resource **Permit:** Pursuant to Section 373.427, Fla. Stat., and Rule **40E-1.51 1(3),** Fla. Admin. Code (also published as an exception to the Uniform Rules of Procedure as Rule **40E-0.109(2)(c)),** a **petition** objecting to the **SFWMD's** agency action regarding **consolidated** applications for Environmental Resource **Permits** and Use of Sovereign Submerged Lands **(SLERPs),** must be filed within 14 days of the notice of consolidated intent to grant or deny the SLERP. Petitions must substantially comply with the requirements of either subsection a. orb. above.

e. Ememencv Authorization and Order: A person whose substantial interests are affected by a **SFWMD** Emergency Authorization and Order, has a right to file a petition under Sections 120.559, **120.57(1),** and **120.57(2),** Fla. Stat., as provided in **subsections** a. and b. above. However, the person, or the agent of the person responsible for causing or contributing to the emergency conditions shall take whatever action necessary to cause immediate compliance **with** the terms of the Emergency Authorization and Order.

f. Order for Ememencv Action: A person whose substantial interests are affected by a **SFWMD** Order for Emergency Action has a right to file a petition pursuant to Rules 28107.005 and **40E-1.611,** Fla. Admin. Code, copies of which are attached to this Notice of Rights, and Section **373.119(3),** Fla. Stat., for a hearing on the Order. Any subsequent agency action or proposed agency **action** to **initiate a** formal revocation proceeding shall be separately **noticed** pursuant to **section** g. below.

g. Permit Suspension. Revocation, Annulment. and Withdrawal: If the **SFWMD** issues an **administrative** complaint to suspend, revoke, annul, or withdraw a permit, the **permittee** may request a hearing to be **conducted** in accordance with Sections 120.569 and 120.57, Fla. Stat., within 21 days of either written **notice** through mail or posting or publication of notice that the **SFWMD** has or intends to take final agency **action.** Petitions must substantially comply with the requirements of Rule **28-107.004(3),** Fla. Admin. Code, a copy of the which is attached to this Notice of **Rights.**

2. Because the administrative hearing process is designed to formulate final agency **action,** the filing Of a petition means that the **SFWMD's** final **action** may be different from the position taken by it previously. Persons whose substantial interests may be affeded by

any such final decision of the SFWMD shall have, pursuant to Rule 40E-1.511(2), Fla. Admin. Code (also published as an exception to the Uniform Rules of Procedure as Rule 40E-0.109(2)(c)), an additional 21 days from the date of receipt of notice of said decision to request an administrative hearing. However, the scope of the administrative hearing shall be limited to the substantial deviation.

3. Pursuant to Rule 40E-1.511(4), Fla. Admin. Code, substantially affected persons entitled to a hearing pursuant to Section 120.57(1), Fla. Stat., may waive their right to such a heating and request an informal heating before the Governing Board pursuant to Section 120.57(2), Fla. Stat., which may be granted at the option of the Governing Board.

4. Pursuant to Rule 28-106.11 1(3), Fla. Admin. Code, persons may file with the SFWMD a request for extension of time for filing a petition, The SFWMD, for good cause shown, may grant the extension. The request for extension must contain a certificate that the petitioner has consulted with all other parties, if any, concerning the extension and that the SFWMD and all other parties agree to the extension.

CIRCUIT COURT

5. Pursuant to Section 373.617, Fla. Stat., any substantially affected person who claims that final agency action of the SFWMD relating to permit decisions constitutes an unconstitutional taking of property without just compensation may seek judicial review of the action in circuit court by filing a civil action in the circuit court in the judicial circuit in which the affected property is located within 90 days of the rendering of the SFWMD's final agency action.

6. Pursuant to Section 483.412, Fla. Stat., any citizen of Florida may bring an action for injunctive relief against the SFWMD to compel the SFWMD to enforce the laws of Chapter 373, Fla. Stat., and Title 40E, Fla. Admin. Code. The complaining party must file with the SFWMD Clerk a verified complaint setting forth the fads upon which the complaint is based and the manner in which the complaining party is affected. If the SFWMD does not take appropriate action on the complaint within 30 days of receipt, the complaining party may then file a civil suit for injunctive relief in the 15th Judicial Circuit in and for Palm Beach County or circuit court in the county where the cause of action allegedly occurred.

7. Pursuant to Section 373.433, Fla. Stat., a private citizen of Florida may file suit in circuit court to require the abatement of any stormwater management system, dam, impoundment, reservoir, appurtenant work or works that violate the provisions of Chapter 373, Fla. Stat.

DISTRICT COURT OF APPEAL

8. Pursuant to Section 120.88, Fla. Stat., a party who is adversely affected by final SFWMD action may seek judicial review of the SFWMD's final decision by filing a notice of appeal pursuant to Florida Rule of Appellate Procedure 9.110 in the Fourth District Court of Appeal or in the appellate district where a party resides and filing a second copy of the notice with the SFWMD Clerk within 30 days of rendering of the final SFWMD action.

LANDANDWATERADJUDICATORYCOMMISSION

9. A party to a 'proceeding below" may seek review by the Land and Water Adjudicatory Commission (LAWAC) of SFWMD's final agency action to determine if such action is consistent with the provisions and purposes of Chapter 373, Fla. Stat. Pursuant to Section 373.114, Fla. Stat., and Rules 42-2.013 and 42-2.0132, Fla. Admin. Code, a request for review of (a) an order or rule of the SFWMD must be filed with LAWAC within 20 days after rendition of the order or adoption of the rule sought to be reviewed; (b) an order of the Department of Environmental Protection (DEP) requiring amendment or repeal of a SFWMD rule must be filed with LAWAC within 30 days of rendition of the DEP's order, and (c) a SFWMD order entered pursuant to a formal administrative hearing under Section 120.57(1), Fla. Stat., must be filed no later than 20 days after rendition of the SFWMD's final order. Simultaneous with filing, a copy of the request for review must be served on the DEP Secretary, any person named in the SFWMD or DEP final order, and all parties to the proceeding below. A copy of Rule 42-2.013, Fla. Admin. Code is attached to thii Notice of Rights.

PRIVATE PROPERTY RIGHTS PROTECTION ACT

10. A property owner who alleges a specific action of the SFWMD has inordinately burdened an existing use of the real property, or a vested right to a specific use of the real property, may file a claim in the circuit court where the real property is located within 1 year of the SFWMD action pursuant to the procedures set forth in Subsection 70.001(4)(a), Fla. Stat.

LAND USE AND ENVIRONMENTAL DISPUTE RESOLUTION

11. A property owner who alleges that a SFWMD development order (as that term is defined in Section 70.51(2)(a), Fla. Stat. to include permits) or SFWMD enforcement action is unreasonable, or unfairly burdens the use of the real property, may file a request for relief with the SFWMD within 30 days of receipt of the SFWMD's order or notice of agency action pursuant to the procedures set forth in Subsections 70.51(4) and (6), Fla. Stat.

MEDIATION

12. A person whose substantial interests are, or may be, affected by the SFWMD's action may choose mediation as an alternative remedy under Section 120.573, Fla. Stat. Pursuant to Rule 28-106.111(2), Fla. Admin. Code, the petition for mediation shall be filed within 21 days of either written notice through mail or posting or

publication of notice that the SFWMD has or intends to take final agency action. Choosing mediation will not adversely affect the right to an administrative hearing if mediation does not result in settlement.

Pursuant to Rule 28-106.402, Fla. Admin. Code, the contents of the petition for mediation shall contain the following information:

(1) the name, address, and telephone number of the person requesting mediation and that person's representative, if any;

(2) a statement of the preliminary agency action;

(3) an explanation of how the person's substantial interests will be affected by the agency determination; and

(4) a statement of relief sought.

As provided in Section 120.573, Fla. Stat. (1997), the timely agreement of all the parties to mediate will toll the time limitations imposed by Sections 120.569 and 120.57, Fla. Stat., for requesting and holding an administrative hearing. Unless otherwise agreed by the parties, the mediation must be concluded within 60 days of the execution of the agreement. If mediation results in settlement of the dispute, the SFWMD must enter a final order incorporating the agreement of the parties. Persons whose substantial interest will be affected by such a modified agency decision have a right to petition for hearing within 21 days of receipt of the final order in accordance with the requirements of Sections 120.589 and 120.57, Fla. Stat., and SFWMD Rule 28-106.201(2), Fla. Admin. Code. If mediation terminates without settlement of the dispute, the SFWMD shall notify all parties in writing that the administrative hearing process under Sections 120.569 and 120.57, Fla. stat., remain available for disposition of the dispute, and the notice will specify the deadlines that then will apply for challenging the agency action.

VARIANCES AND WAIVERS

13. A person who is subject to regulation pursuant to a SFWMD rule and believes the application of that rule will create a substantial hardship or will violate principles of fairness (as those terms are defined in Subsection 120.542(2), Fla. Stat.) and can demonstrate that the purpose of the underlying statute will be or has been achieved by other means, may file a petition with the SFWMD Clerk requesting a variance from or waiver of the SFWMD rule. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have concerning the SFWMD's action. Pursuant to Rule 28-104.002(2), Fla. Admin. Code, the petition must include the following information:

(a) the caption shall read:
Petition for (Variance from) or (Waiver of) Rule (Citation)

(b) The name, address, telephone number and any facsimile number of the petitioner;

(c) The name, address telephone number and any facsimile number of the attorney or qualified representative of the petitioner, (if any);

(d) the applicable rule or portion of the rule;

(e) the citation to the statue the rule is implementing;

(f) the type of action requested;

(g) the specific facts that demonstrate a substantial hardship or violation of principals of fairness that would justify a waiver or variance for the petitioner;

(h) the reason why the variance or the waiver requested would serve the purposes of the underlying statute; and

(i) a statement of whether the variance or waiver is permanent or temporary, If the variance or waiver is temporary, the petition shall include the dates indicating the duration of the requested variance or waiver.

A person requesting an emergency variance from or waiver of a SFWMD rule must clearly so state in the caption of the petition. In addition to the requirements of Sedion 120.542(5), Fla. Stat. pursuant to Rule 28 104.004(2), Fla. Admin. Code, the petition must also include:

a) the specific facts that make the situation an emergency; and

b) the specific facts to show that the petitioner will suffer immediie adverse effect unless the variance or waiver is issued by the SFWMD more expeditiously than the applicable timeframes set forth in Section 120.542, Fla. stat.

WAIVER OF RIGHTS

14. Failure to observe the relevant time frames prescribed above will constitute a waiver of such right.

28-106.201 INITIATION OF PROCEEDINGS (INVOLVING DISPUTED ISSUES OF MATERIAL FACT)

(2) All petitions filed under these rules shall contain:

(a) The name and ~~address of each agency affected~~ and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding, and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency de&ion;

(d) A statement of all died issues of material fact. If there are none, the petition must so indiite;

(e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and

(f) A demand for relief.

28-106.301 INITIATION OF PROCEEDINGS
(NOT INVOLVING DISPUTED ISSUES OF MATERIAL. FACT)

(2) All petitions filed under these rules shall contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding, and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and

(e) A demand for relief.

28-107.004 SUSPENSION, **REVOCATION, ANNULMENT, OR** WITHDRAWAL

(3) Requests for hearing filed in accordance with this rule shall include:

(a) The name and address of the party making the request, for purposes of service;

(b) A statement that the party is requesting a hearing involving disputed issues of material fact, or a hearing not involving disputed issues of material fact; and

(c) A reference to the notice, order to show cause, administrative complaint, or other communication that the party has received from the agency.

42-2.013 **REQUEST FOR REVIEW PURSUANT TO SECTION 373.114 OR 373.217**

(1) In any proceeding arising under Chapter 373, F.S., review by the Florida Land and Water Adjudicatory Commission may be initiated by the Department or a party by filing a request for such review with the Secretary of the Commission and serving a copy on any person named in the rule or order, and on all parties to the proceeding which resulted in the order sought to be reviewed. A certificate of service showing completion of service as required by this subsection shall be a requirement for a determination of sufficiency under Rule 42-2.0132. Failure to file the request with the Commission within the time period provided in Rule 42-2.0132 shall result in dismissal of the request for review.

(2) The request for review shall identify the rule or order requested to be reviewed, the proceeding in which the rule or order was entered and the nature of the rule or order. A copy of the rule or order sought to be reviewed shall be attached. The request for review shall state with particularity:

(a) How the order or rule conflicts with the requirements, provisions and purposes of Chapter 373, F.S., or rules duly adopted thereunder;

(b) How the rule or order sought to be reviewed affects the interests of the party seeking review;

(c) The oral or written statement, sworn or unsworn, which was submitted to the agency concerning the matter to be reviewed and the date and location of the statement, if the individual or entity requesting the review has not participated in a proceeding previously instituted pursuant to Chapter 120, F.S., on the order for which review is sought;

(d) If review of an order is being sought, whether and how the activity authorized by the order would substantially affect natural resources of statewide or regional significance, or whether the order raises issues of policy, statutory interpretation, or rule interpretation that have regional or statewide significance from a standpoint of agency precedent, and all the factual bases in the record which the petitioner claims support such determination(s); and

(e) The action requested to be taken by the Commission as a result of the review, whether to rescind or modify the order, or remand the proceeding to the water management district for further action, or to require the water management district to initiate rulemaking to adopt, amend or repeal a rule.

28-107.005 EMERGENCY ACTION

(1) If the agency finds that immediate serious danger to the public health, safety, or welfare requires emergency action, the agency shall summarily suspend, limit, or restrict a license.

(2) the 14day notice requirement of Section 120569(2)(b), F. S., does not apply and shall not be construed to prevent a hearing at the earliest time practicable upon request of an aggrieved party.

(3) Unless otherwise provided by law, within 20 days after emergency action taken pursuant to paragraph (1) of this rule, the agency shall initiate a formal suspension or revocation proceeding in compliance with Sections 120.569. 120.57. and 120.60, F.S.

40E-1.611 EMERGENCY ACTION

(1) An emergency exists when immediate action is necessary to protect public health, safety or welfare; the health of animals, fish or aquatic life; the works of the District; a public water supply, or recreational, commercial, industrial, agricultural or other reasonable uses of land and water resources.

(2) The Executive Director may employ the resources of the District to take whatever remedial action necessary to alleviate the emergency condition without the issuance of an emergency order, or in the event an emergency order has been issued, after the expiration of the requisite time for compliance with that order.

APPENDIX 10.7

MONITORING PROGRAMS

APPENDIX 10.7.1

ECOLOGY

From: John_Wrublik@fws.gov [mailto:John_Wrublik@fws.gov]
Sent: Thursday, October 16, 2008 9:40 AM
To: Cunningham, Colleen
Subject: Riviera Beach Energy Center

October 16, 2008

Colleen Cunningham
Golder Associates, Incorporated
6241 NW 23rd Street
Suite 500
Gainesville, Florida 32653-1500

Service Federal Activity Code:	41420-2009-FA-0033
Service Consultation Code:	41420-2009-TA-0017
Date Received:	October 3, 2008
Project:	Riviera Beach Energy Center
County:	Palm Beach

Dear Ms. Cunningham:

The Fish and Wildlife Service (Service) has received your letter dated September 26, 2008, for the project referenced above. We offer the following comments.

PROJECT DESCRIPTION

The proposed action consists of converting an existing power plant into a more efficient power production facility through the installation of new technology. The project is located in Riviera Beach, Palm Beach County, Florida.

THREATENED AND ENDANGERED SPECIES

Wood Stork

The project is located within the core foraging area (CFA) (within 18.6 miles) of an active breeding colony of

the endangered wood stork (*Mycteria americana*). The Service believes the loss of wetlands within a CFA may reduce foraging opportunities for wood storks. To minimize adverse effects to the wood stork, the Service's *Draft Supplemental Habitat Management Guidelines for the Wood Stork in the South Florida Ecological Services Consultation Area* (Guidelines)(Service 2002) recommends the applicant replace wetlands lost due to the action. The compensation plan should include a temporal lag factor, if necessary, to ensure wetlands provided as compensation adequately replace the wetland functions lost due to the project. Moreover, wetlands offered as compensation should be of the same hydroperiod, and located within the CFA of the affected wood stork colony. In some cases, the Service accepts wetlands compensation located outside the CFA of the affected wood stork nesting colony. Specifically, wetland credits purchased from a "Service Approved" mitigation bank located outside the CFA would be acceptable to the Service, provided the impacted wetlands occur within the permitted service area of the bank.

For projects that impact five or more acres of wood stork foraging habitat, the Service requires a functional assessment be conducted using our "Wood Stork Foraging Analysis Methodology" (Methodology) on the foraging habitat to be impacted and the foraging habitat provided as mitigation. The Methodology can found in the Service's November 9, 2007, Eastern Indigo Snake and Wood Stork Key (Service Federal Activity Code Number 41420-2007-FA-1494) provided to the U. S. Army Corps of Engineers to guide their effect determinations for these two species (available upon request).

West Indian manatee

The project is located in the geographic range of the endangered West Indian manatee (*Trichechus manatus*). If in-water work is proposed for the project, surveys of the marine bottoms within and near the project footprint should be conducted to determine the status of seagrasses, an important forage item for manatees. To protect manatees during construction of the project, we recommend that Florida Power and Light follow the Service's *Standard Manatee Protection Construction Conditions For Aquatic-Related Activities*.

No other records of federally listed species were not identified on your project site. The Service has not conducted a site inspection to verify species occurrence or validate the GIS results. However, we assume listed species occur in suitable ecological communities and recommend site surveys to determine the presence or absence of listed species. Ecological communities suitable for listed species can be found in the species accounts in the *South Florida Multi-Species Recovery Plan*. This document is available on the web at: http://www.fws.gov/verobeach/index.cfm?Method=programs&NavProgramCategoryID=3&programID=107&ProgramCategoryID=3. We have also provided for your consideration two computer links: (1). http://www.fws.gov/verobeach/ index.cfm?Method=programs&NavProgramCategoryID=3&programID=37&ProgramCategoryID=3st, and (2) http://migratorybirds.fws.gov/. The first link provides links to lists of species protected under the Endangered Species Act of 1973 (as amended, 87 Stat. 884; 16 U.S.C. 1531 *et seq.*) for each county in south Florida. The County lists do not include State-listed species. Please contact the Florida Fish and Wildlife Conservation Commission to identify potential State-listed species occurring in the vicinity of your project. The second link provides information on species the Service is required to protect and conserve under other authorities, such as the Fish and Wildlife Coordination Act of 1958, as amended (48 Stat. 401; 16 U.S.C. 661 *et seq.*) and the Migratory Bird Treaty Act (40 Stat. 755; 16 U.S.C. 701 *et seq.*). A variety of habitats in south Florida occasionally provide resting, feeding, and nesting sites for a variety of migratory bird species. As a public trust resource, migratory birds must be taken into consideration during project planning and design.

Thank you for the opportunity to comment. If you have any questions, please contact me at 772-562-3909, extension 282.

Sincerely yours,

John M. Wrublik
U.S. Fish and Wildlife Service
Vero Beach Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960
Phone: 772-562-3909, x-282
Fax: 772-562-4288

LITERATURE CITED

U.S. Fish and Wildlife Service (Service). 2002. Draft Supplemental Habitat Management Guidelines for the Wood Stork in the South Florida Ecological Services Consultation Area. Fish and Wildlife Service, South Florida Ecological Services Office; Vero Beach, Florida.

FLORIDA
Natural Areas
INVENTORY

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
fax 850-681-9364
www.fnai.org

August 22, 2008

Colleen Cunningham
Golder & Associates
6241 NW 23rd Street, Suite 500
Gainesville, FL 32653

Dear Ms. Cunningham,

Thank you for your request for information from the Florida Natural Areas Inventory (FNAI). We have compiled the following information for your project area.

Project: Riviera Plant

Date Received: August 18, 2008

Location: Palm Beach County

Based on the information available, this site appears to be located on or very near a significant region of scrub habitat, a natural community in decline that provides important habitat for several rare species within a small area. Additional consideration should be given to avoid and/or mitigate impacts to these natural resources, and to design land uses that are compatible with these resources.

Element Occurrences

A search of our maps and database indicates that currently we have several Element Occurrences mapped within the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

The Element Occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, Element Occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant.

Several of the species and natural communities tracked by the Inventory are considered ***data sensitive****. Occurrence records for these elements contain information that we consider sensitive due to collection pressures, extreme rarity, or at the request of the source of the information. The Element Occurrence Record has been labeled "Data Sensitive." We request that you not publish or release specific locational data about these species or communities without consent from the Inventory. If you have any questions concerning this please do not hesitate to call.*

Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity

Florida Resources
and Environmental
Analysis Center

Institute of Science
and Public Affairs

The Florida State University

Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.

FNAI habitat models indicate areas, which based on land cover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the rarest species tracked by the Inventory, including all federally listed species.

FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.

The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.

The Inventory always recommends that professionals familiar with Florida's flora and fauna should conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit www.fnai.org/trackinglist.cfm for county or statewide element occurrence distributions and links to more element information.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. FNAI data may not be resold for profit.

Thank you for your use of FNAI services. If I can be of further assistance, please give me a call at (850) 224-8207.

Sincerely,

Lindsay Horton

Lindsay Horton
Data Services Coordinator

Encl

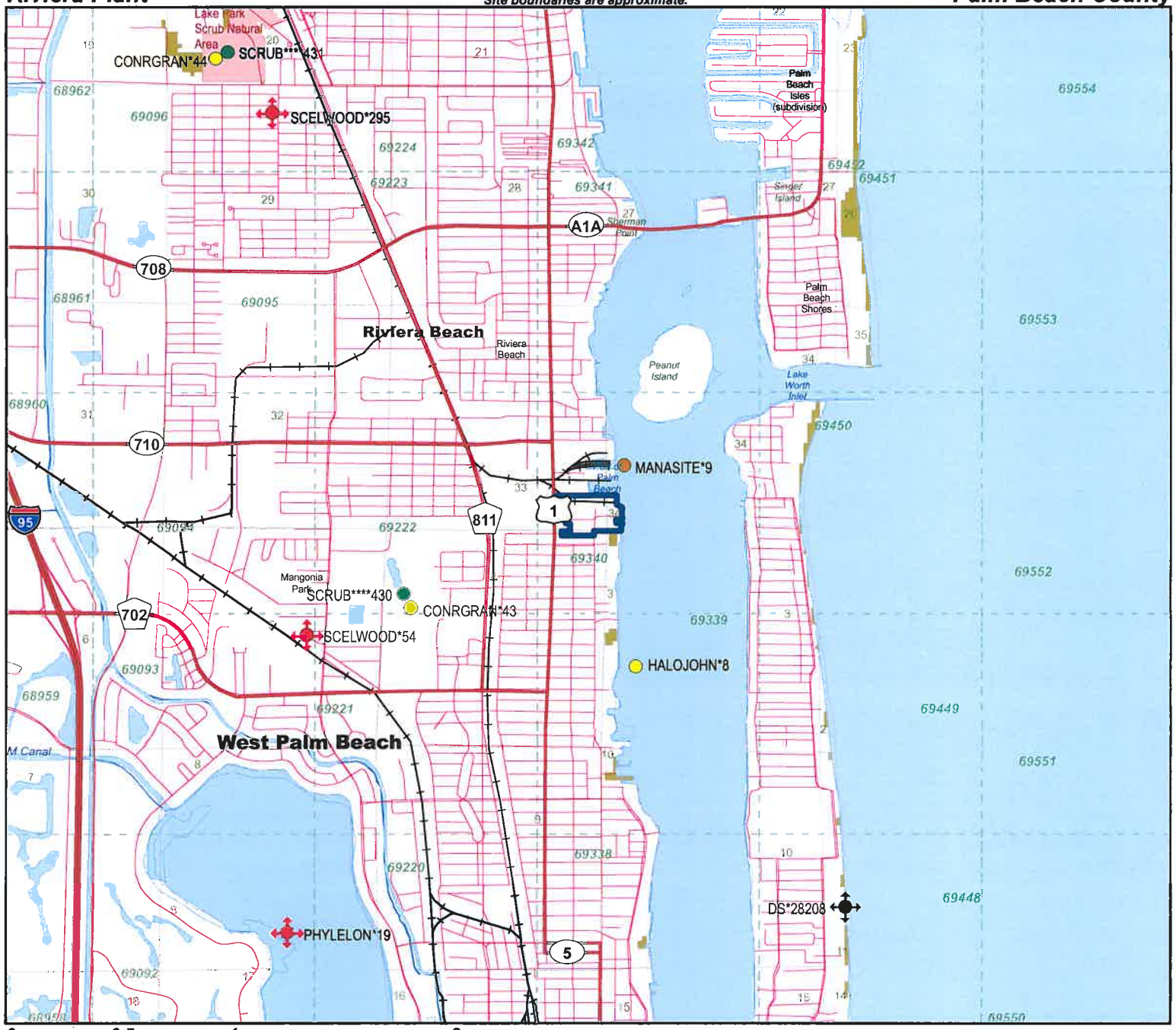
1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax
www.fnai.org

FLORIDA Natural Areas INVENTORY

Riviera Plant

Site boundaries are approximate.

Palm Beach County



Element Occurrences

- Animals
- Plants
- Communities
- Other
- Data Sensitive
- Point Indicates General Vicinity of Element
- U.S. Fish & Wildlife Service Scrub Jay Survey 1992-96

Conservation Lands

- Federal
- State
- Local
- Private
- State Aquatic Preserves

Land Acquisition Projects

- Florida Forever Board of Trustees Projects
- FNAI Rare Species Habitat
- FNAI Biodiversity Matrix Square Mile Units
- County Boundary
- Interstate
- Turnpike
- Major Highway
- Local Road
- Railroad [Inactive railroads shown in Gray]
- Water

N W E S

0 0.5 1 2 Miles

NOTE
Map should not be interpreted without accompanying documents.

Map produced by LHH
Map Date: 22 AUG 2008

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax
www.fnai.org

FLORIDA Natural Areas INVENTORY

Florida Natural Areas Inventory

ELEMENT OCCURRENCES DOCUMENTED ON OR NEAR *PROJECT SITE*

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
DS*28208	Data Sensitive Element	Data Sensitive	G1	S1	LE	LE	1957-08-09	Data Sensitive	Data Sensitive
SCELWOOD*54	Sceloporus woodi	Florida Scrub Lizard	G3	S3	N	N	1956-08-22	No general description given	1956-08-22: KING COLLECTED SPECIMEN HERE.
CONRGRAN*43	Conradina grandiflora	Large-flowered Rosemary	G3	S3	N	LT	1988-06-09	SCRUB DOMINATED BY MATURE SAND PINES AND SCATTEREDSCRUB OAKS. N.W. CORNER OF ST. MARY'S HOSPITAL COMPLEX.	150 PLANTS OVER A LITTLE MORE THAN 3 ACRES. PLANTS FLOWERING. (SEE MAP ATTACHED).
HALOJOHN*8	Halophila johnsonii	Johnson's Seagrass	G2	S2	LT	N	1989-06-16	UNDERWATER LAGOON SEAGRASS BED.	DOMINANT UNDERWATER VEGETATION FOR 200' E OF SEAWALL IS HALOPHILA JOHNSONII. ASSOC. SPP: CAULERPA SERTULARIOIDES, HALODULE WRIGHTII.
SCRUB****431	Scrub		G2	S2	N	N	1999	MATURE SCRUB WITH TOPPLING SAND PINE.	1999: Update to last obs date was based on interpretation of aerial photography (previous value was 1988-06-09) (U05FNA02FLUS). SAND PINE SCRUB WITH OAKS BEGINNING TO REACH TREE SIZE. SOME AREAS HAVE MIXED SCRUB AND FLATWOODS- -WITHISLAND OF SCRUB ON HIGH
SCRUB****430	Scrub		G2	S2	N	N	1999	DISTURBED SCRUB WITH WEEDY HERB LAYER AND SCATTER-ED SAND PINES AND OAKS.	1999: Update to last obs date was based on interpretation of aerial photography (previous value was 1988-06-09) (U05FNA02FLUS). ONLY SMALL PORTION OF SCRUB LEFT INTACT. (SEE MAP ANDSPECIES LIST ATTACHED).
MANASITE*9	Manatee aggregation site		GNR	SNR	N	N	1988	WARM-WATER EFFLUENT INTO W. BANK OF COASTAL "LAKE".	UP TO 272 MANATEES USE THIS SITE DURING THE WINTER.
SCELWOOD*295	Sceloporus woodi	Florida Scrub Lizard	G3	S3	N	N	1986-05-09	Coastal scrub	1986-05-09: K.E. Enge, GFC, observation. See Enge et al (1986; Coop Unit Tech Rep No 26).
CONRGRAN*44	Conradina grandiflora	Large-flowered Rosemary	G3	S3	N	LT	1988-06-09	MATURE SCRUB WITH TOPPLING SAND PINE.	200 SCATTERED PLANTS OVER ABOUT 100 ACRES. PLANTS FLOWERING.
PHYLELON*19	Phyllophaga elongata	Elongate June Beetle	G2G4	S2S4	N	N	1989-Pre	1989-Pre: No description given (B89WOO01FLUS).	1989-Pre: Two specimens were collected (B89WOO01FLUS).

GLOBAL AND STATE RANKS

Florida Natural Areas Inventory (FNAI) defines an **element** as any rare or exemplary component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. FNAI assigns two ranks to each element found in Florida: the **global rank**, which is based on an element's worldwide status, and the **state rank**, which is based on the status of the element within Florida. Element ranks are based on many factors, including estimated number of occurrences, estimated abundance (for species and populations) or area (for natural communities), estimated number of adequately protected occurrences, range, threats, and ecological fragility.

GLOBAL RANK DEFINITIONS

G1	Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
G2	Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
G3	Either very rare and local throughout its range (21-100 occurrences or less than 10,0000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
G4	Apparently secure globally (may be rare in parts of range).
G5	Demonstrably secure globally.
G#?	Tentative rank (e.g., G2?)
G#G#	Range of rank; insufficient data to assign specific global rank (e.g., G2G3)
G#T#	Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)
G#Q	Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)
G#T#Q	Same as above, but validity as subspecies or variety is questioned.
GH	Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
GNA	Ranking is not applicable because element is not a suitable target for conservation (e.g. as for hybrid species)
GNR	Not yet ranked (temporary)
GNRTNR	Neither the full species nor the taxonomic subgroup has yet been ranked (temporary)
GX	Believed to be extinct throughout range
GXC	Extirpated from the wild but still known from captivity/cultivation
GU	Unrankable. Due to lack of information, no rank or range can be assigned (e.g., GUT2).

STATE RANK DEFINITIONS

Definition parallels global element rank: substitute "S" for "G" in above global ranks, and "in Florida" for "globally" in above global rank definitions.

FEDERAL AND STATE LEGAL STATUSES (U.S. Fish and Wildlife Service – USFWS) PROVIDED BY FNAI FOR INFORMATION ONLY.

For official definitions and lists of protected species, consult the relevant state or federal agency.

FEDERAL LEGAL STATUS

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

LE Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species which is in danger of extinction throughout all or a significant portion of its range.

LE,XN A non essential experimental population of a species otherwise Listed as an Endangered Species in the List of Endangered and Threatened Wildlife and Plants. LE,XN for Grus americana (Whooping crane), Federally listed as XN (Non essential experimental population) refers to the Florida experimental population only. Federal listing elsewhere for Grus americana is LE.

PE Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.

LT Listed as Threatened Species, defined as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

LT,PDL Species currently listed Threatened but has been proposed for delisting.

PT Proposed for listing as Threatened Species.

C Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants, Category 1. Federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.

SAT Threatened due to similarity of appearance to a threatened species.

SC Species of Concern, species is not currently listed but is of management concern to USFWS.

N Not currently listed, nor currently being considered for addition to the List of Endangered and Threatened Wildlife and Plants.

FLORIDA LEGAL STATUSES (Florida Fish and Wildlife Conservation Commission – FFWCC/ Florida Department of Agriculture and Consumer Services – FDACS)

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission - FFWCC, 1 August 1997, and subsequent updates.

LE Listed as Endangered Species by the FFWCC. Defined as a species, subspecies, or isolated population which is so rare or depleted in number or so restricted in range of habitat due to any man-made or natural factors that it is in immediate danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.

LT Listed as Threatened Species by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.

LT* Indicates that a species has LT status only in selected portions of its range in Florida. LT* for Ursus americanus floridanus (Florida black bear) indicates that LT status does not apply in Baker and Columbia counties and in the Apalachicola National Forest. LT* for Neovison vison pop. 1 (Southern mink, South Florida population) state listed as Threatened refers to the Everglades population only (Note: species formerly listed as Mustela vison mink pop. 1. Also, priorly listed as Mustela evergladensis).

LS Listed as Species of Special Concern by the FFWCC, defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification,

environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species.

LS* Indicates that a species has LS status only in selected portions of its range in Florida. LS* for Pandion haliaetus (Osprey) state listed as LS (Species of Special Concern) in Monroe County only.

PE Proposed for listing as Endangered.

PT Proposed for listing as Threatened.

PS Proposed for listing as a Species of Special Concern.

N Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or please visit: http://DOACS.State.FL.US/PI/Images/Rule05b.pdf

LE Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended.

PE Proposed by the FDACS for listing as Endangered Plants.

LT Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered. LT* indicates that a species has LT status only in selected portions of its range in Florida.

PT Proposed by the FDACS for listing as Threatened Plants.

N Not currently listed, nor currently being considered for listing.

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax
www.fnai.org

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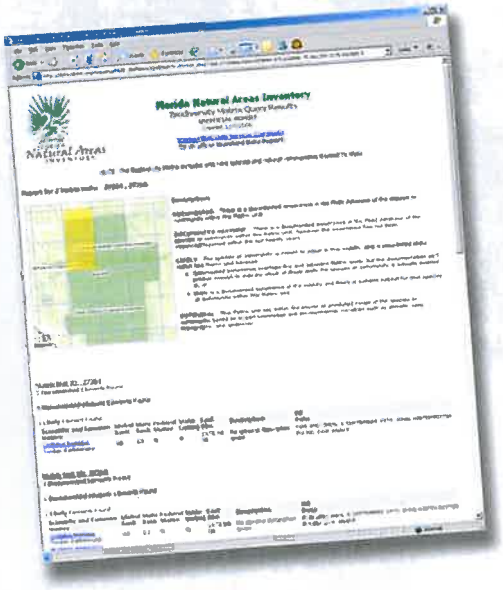

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FLORIDA Natural Areas INVENTORY

Florida Natural Areas Inventory

Biodiversity Matrix Report

Matrix Unit ID: 69340

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Documented					
Manatee aggregation site		GNR	SNR	N	N
Likely					
Phyllophaga elongata	Elongate June Beetle	G2G4	S2S4	N	N
Potential					
Conradina grandiflora	Large-flowered Rosemary	G3	S3	N	LT
Ctenogobius stigmaturus	Spottail Goby	G2	S2	N	N
Dendroica discolor paludicola	Florida Prairie Warbler	G5T3	S3	N	N
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Elytraria caroliniensis var. angustifolia	Narrow-leaved Carolina Scalystem	G4T2	S2	N	N
Encyclia cochleata var. triandra	Clamshell Orchid	G4G5T2	S2	N	LE
Eretmochelys imbricata	Hawksbill	G3	S1	LE	LE
Forestiera segregata var. pinetorum	Florida Pinewood Privet	G4T2	S2	N	N
Glandularia maritima	Coastal Vervain	G3	S3	N	LE
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LT
Halophila johnsonii	Johnson's Seagrass	G2	S2	LT	N
Jacquemontia reclinata	Beach Jacquemontia	G1	S1	LE	LE
Lechea cernua	Nodding Pinweed	G3	S3	N	LT
Linum carteri var. smallii	Small's flax	G2T2	S2	N	LE
Panicum abscissum	Cutthroat Grass	G3	S3	N	LE
Polygala smallii	Tiny Polygala	G1	S1	LE	LE
Rallus longirostris scottii	Florida Clapper Rail	G5T3?	S3?	N	N
Rana capito	Gopher Frog	G3	S3	N	LS
Rivulus marmoratus	Mangrove Rivulus	G3	S3	C	LS
Roystonea elata	Florida Royal Palm	G2G3	S2	N	LE
Sceloporus woodi	Florida Scrub Lizard	G3	S3	N	N
Trichechus manatus	Manatee	G2	S2	LE	LE
Trichomanes punctatum ssp. floridanum	Florida Filmy Fern	G4G5T1	S1	N	LE

Definitions: *Documented - Rare species and natural communities documented on or near this site.*
Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
Potential - This site lies within the known or predicted range of the species listed.

APPENDIX 10.7.2

CULTURAL RESOURCES

1300 N. Westshore Blvd., Suite 100
Tampa, Florida 33607
Phone: (813) 636-8200
Fax: (813) 636-8212

Janus Research

Memo

To: Frederick Gaske, Florida Division of Historical Resources/SHPO
From: Kathleen S. Hoffman, Janus Research
CC: Bob McCann, Golder Associates
Kerri Kitchen, Golder Associates
Jacquelyn Lorne, FPL
Date: 10 /15/2008
Re: Cultural Resource Review for the FPL Riviera Plant

This memo documents the results of a cultural resources review conducted by Janus Research, on behalf of Florida Power & Light Company (FP&L) and in association with Golder Associates, in September of 2008 for the FPL Riviera Plant Conversion. The project area is located within Sections 3 and 4 of Township 43 South, Range 43 East and Sections 33 and 34 of Township 42 South, Range 43 East on the Riviera Beach (1946, PR 1983) USGS Quadrangle map (Attachment A). Representative photographs of the project area are located in Attachment B. The objective was to identify any potential encumbrances to site re-development. A desktop analysis and reconnaissance survey were conducted to assist in identifying any previously recorded cultural resources and areas with the potential for containing unrecorded cultural resources within the FPL Riviera Plant project area in Palm Beach County, Florida.

Project Description

FPL plans to convert (i.e., modernize) the Riviera plant into a modern, highly efficient, Next Generation Energy Center, using the latest combined cycle (CC) technology. The conversions will involve the dismantlement of the existing generation units, while leaving intact, certain components such as the cooling water intake and discharge infrastructure, and then the installation of the new CC generation unit [3x1 CC plant consisting of three 250-MW Mitsubishi Power System (MPS) G-Class advanced combustion turbines or improved technology should such technology become available), resulting in one nominal 1250 MW natural gas CC unit].

The conversion will result in increased power generation without using any additional land, water sources, or transmission rights-of-way. The Riviera plant will be named the Riviera Beach Energy Center (RBEC) and is expected to have an in-service date of June 2014.

FPL will be required to obtain state and local environmental approvals for the conversions. The key environmental approval will be Site Certification under Florida's Power Plant Siting Act (PPSA). The project also requires the issuance of Air Construction Permits and modifications to the existing

Industrial Wastewater (IWW) Facility Permit. Local approvals are currently being obtained for the project.

BACKGROUND RESEARCH

Background research methods included a search of the Florida Master Site File (FMSF) to identify cultural resources that are listed, eligible, or potentially eligible for the National Register of Historic Places (National Register) and resources with potential or confirmed human remains. During this preliminary analysis, Janus Research identified resources within and adjacent to (within 500 ft. of) the project area.

The FMSF serves as an archive and repository of information about Florida's recorded cultural resources. It represents an inventory of resources for which available information exists and describes their condition at a particular point of time. Because the inventory of resources is not all-inclusive on a statewide basis, gaps in data may exist. The FMSF is an important planning tool that assists in identifying potential cultural resources issues and resources that may warrant further investigation and protection. It can be used as guide but should not be used to determine the Division of Historical Resources'/State Historic Preservation Office's (FDHR/SHPO) official position about the significance of a resource.

A review of the USGS Quadrangle maps, General Land Office (GLO) historic plat maps, and historic aerials was also conducted in order to establish the pre-development environment and land use history of the project area, as well as, to identify any potential historic resources within the project area. A search to identify pertinent Certified Local Governments (CLG) located within the boundaries of the project area was also used in order to obtain information regarding local resources which may not be included in the FMSF.

The work of previous investigators was reviewed in order to gather information about the types of pre-Columbian and early historic period sites that could be expected to occur within the project area. An extensive search of pertinent records was conducted to determine the locations of previously recorded National Register–listed, eligible, and potentially eligible resources within the project area, as well as any archaeological and historical assessments of other tracts of land within the project area.

FMSF Search Results

The FMSF search identified 11 previously conducted cultural resource surveys within 500 ft. of the project area (Table 1). These surveys were conducted between 1995 and 2006 and five of these 11 previous surveys (6567, 9310, 10954, 12392, and 14000) were conducted within the boundaries of the project area.

Table 1. Previous Cultural Resource Surveys Conducted within 500 ft. of the Project Area

SV No.	Title, Author(s), and Date of Publication
5072	Cultural Resource Assessment: A Proposed Roadway Resurfacing, Re-striping, and Traffic Signalization to Northwood Road, 24th Street, 25th Street, 58th Street, and 59th Street, from Dixie Highway to SR 5, US 1/Broadway Ave, West Palm Beach, Florida (Group Enterprises, Inc. 1995)
6267	Cultural Resources Remote Sensing Survey of Channel Improvements to the Intracoastal Waterway and Palm Beach Harbor, Palm Beach County, Florida (Mid-Atlantic Technology and Environmental Research, Inc. 1999)
6567	Archeological Diver Identification and Evaluation of Nineteen Potentially Significant Submerged Targets along the Intracoastal Waterway, Palm Beach County, Florida (Mid-Atlantic Technology 2000)
9061	Phase I Cultural Resources Survey and Archaeological Inventory of the Onshore Florida Portion of the Proposed Seafarer U.S. Pipeline System Project in Palm Beach and Martin Counties, Florida (R. Christopher Goodwin & Associates, Inc. 2003b)
9310	Cultural Resources Survey and Inventory of the Seafarer U.S. Pipeline System, Inc.'s Proposed 26-Inch Gas Pipeline, Florida State Waters Boundary to the Florida Mainland (R. Christopher Goodwin & Associates, Inc. 2004)
10794	Cultural Resources Survey and Inventory of the Seafarer U.S. Pipeline System, Inc.'s Proposed 26-Inch Gas Pipeline From the Limits of the Exclusive Economic Zone to Florida State Waters (R. Christopher Goodwin & Associates, Inc. 2003a)
10954	Phase I Cultural Resources Survey and Archeological Inventory of the Onshore Florida Portion of the Proposed Seafarer US Pipeline System Project in Palm Beach County, Florida (R. Christopher Goodwin & Associates, Inc. 2003c)
11231	Town of Palm Beach Historic Sites Survey Grant #F0310 (Research Atlantica, Inc. 2004)
12392	A Cultural Resource Assessment Survey of the Community Redevelopment Area, County: Palm Beach (Janus Research 2003)
14000	Cultural Resources Reconnaissance Study, South Florida East Coast Corridor Transit Analysis, Miami-Dade, Broward and Palm Beach Counties (Janus Research 2006)

The FMSF search identified two historic linear resources (8Pb12192 and 8Pb13559) adjacent to the western boundary of the project area. Linear resource 8Pb12192 (Broadway [US 1] Riviera Beach) is a historic road segment recorded in 2002. This resource was determined to be ineligible for listing in the National Register by FDHR/SHPO in September of 2005. Linear resource 8Pb13559, the FEC Railway Corridor, is a 19th century-American railroad segment recorded in 2005. SHPO has not evaluated this resource regarding eligibility for listing in the National Register. The locations of (8Pb12192 and 8Pb13559) are illustrated in maps in Attachment C.

The FMSF search identified 32 previously recorded historic structures within 500 ft. of the project area (Table 2). Twelve of these structures (8Pb5366, 8Pb5368, 8Pb5372, and 8Pb8116-8Pb8124) are previously recorded as located within the current FPL Riviera Plant Complex boundaries. The reconnaissance survey found that they have been demolished. The portion of the north side of 59th Street on which these resources were located was purchased by FPL in the early 1990s, and the buildings were subsequently demolished (Moncrief 2008). Additionally, two of the 32 previously recorded historic structures (8Pb5359 and 8Pb5360) located within 500 ft. appear to have been demolished since they were initially recorded. Resource 8Pb5359 was previously recorded in 1995

and resource 8Pb5360 was previously recorded in 1990. The locations of the extant previously recorded historic resources are shown in Attachment C.

Table 2. Previously Recorded Historic Structures within 500 ft. of the Project Area

FMSF #	Name / Address	National Register Evaluation [1]
8Pb4462	Knowles, Leonard & Florence House / 5911 North Dixie Highway	Not Evaluated by SHPO
8Pb4463	5915 North Dixie Highway	Insufficient Information
8Pb5351	Campbell Property / 411 58th Street	Insufficient Information
8Pb5352	McCann Property / 412 58th Street	Insufficient Information
8Pb5353	Guy Property 1 / 417 58th Street	Insufficient Information
8Pb5354	Guy Property 2 / 419 58th Street	Insufficient Information
8Pb5355	Feinen Property 1 / 423 58th Street	Insufficient Information
8Pb5356	Feinen Property 2 / 427 58th Street	Insufficient Information
8Pb5357	Connor Property / 431 58th Street	Insufficient Information
8Pb5358	Collins Property / 503 58th Street	Insufficient Information
8Pb5359	Fletcher Estate / 516 58th Street	Insufficient Information; Demolished
8Pb5360	519 58th Street	Not Evaluated by SHPO; Demolished
8Pb5366	Lembric Property / 407 59th Street	Insufficient Information; Demolished
8Pb5367	410 59th Street	Insufficient Information
8Pb5368	Blount Property / 423 59th Street	Insufficient Information; Demolished
8Pb5369	Battle Property / 514 59th Street	Insufficient Information
8Pb5370	Holloway Property / 516 59th Street	Insufficient Information
8Pb5371	Smith Property / 518 59th Street	Insufficient Information
8Pb5372	520 59th Street	Not Evaluated by SHPO; Demolished
8Pb5373	606 59th Street	Not Evaluated by SHPO
8Pb5628	Felder Property / 509 58th Street	Insufficient Information
8Pb8116	Florida Power & Light Property 1 / 425 59th Street	Insufficient Information; Demolished
8Pb8117	Joseph Property / 429 59th Street	Insufficient Information; Demolished
8Pb8118	Florida Power & Light Property 2 / 433 59th Street	Insufficient Information; Demolished
8Pb8119	Williams Property / 437 59th Street	Insufficient Information; Demolished
8Pb8120	Florida Power & Light Property 3 / 441 59th Street	Insufficient Information; Demolished

FMSF #	Name / Address	National Register Evaluation [1]
8Pb8121	Blount Property / 445 59th Street	Insufficient Information; Demolished
8Pb8122	Osborne Property / 511 59th Street	Insufficient Information; Demolished
8Pb8123	Pleasant Property / 513 59th Street	Insufficient Information; Demolished
8Pb8124	Coyle Property / 515 59th Street	Insufficient Information; Demolished
8Pb8126	Goolsby Property / 434 59th Street	Insufficient Information
8Pb8127	Hagley Property / 5901 Broadway Avenue	Insufficient Information

1 As recorded in the FMSF; may require re-evaluation

No previously recorded archaeological sites, historic districts, historic cemeteries, or historic bridges were identified within or adjacent to (within 500 ft. of) the project area during the FMSF search.

One locally designated City of West Palm Beach historic district, the Northwood Harbor Historic District, is partially located within 500 ft. of the FPL Riviera Plant Complex. It is roughly bounded by Flagler Drive, 45th Street, Broadway Avenue, and 59th Street.

USGS Quadrangle Map Review

The preliminary review of the USGS Quadrangle map identified 11 potential historic resources within the southernmost portion of the project area in Section 4 of Township 43 South, Range 43 East on the Rivera Beach (1946 PR 1983) USGS Quadrangle map and one potential historic water tower in Section 33 of Township 42 South, Range 43 East. An additional three potential historic resources are illustrated within 500 ft. of the project area to the southeast and west in Section 33 of Township 43 South, Range 43 East. A review of Palm Beach County Property Appraiser records revealed that there are 30 potentially historic resources located within 500 ft. of the FPL Riviera Plant Complex, which have not been previously recorded. The majority of the resources, which are not previously recorded, date from between 1946 and 1960. Because these resources have not been recorded, an evaluation of National Register-eligibility has not taken place.

Pre-Development Environment and Land Use History

A review of 1859 GLO historic plat maps and surveyors' field notes was conducted to look at the past environmental conditions of the project area. The project area is situated on the western bank of Lake Worth Lagoon and is described as pine and scrub oak vegetation (FDEP 1859a, 1859b, 1859c, 1859d). Archaeological sites often occur in close proximity to freshwater sources.

The historic plat maps were also reviewed for evidence of homesteads or other early settlement. During the nineteenth century (post-1821), historic settlement tended to follow the isolated homestead or farmstead pattern. Individual families or groups of related families often built homesteads on the better-drained, hardwood hammocks. There were usually several miles between these settlements to allow room for farm fields. A review of the historic plat maps shows no indication of military forts,

encampments, battlefields, land grants, homesteads, farmsteads, roads, or historical Native American villages located within the project area.

A review of historic aerials from 1953 and 1968 (State University System of Florida [SUSF] 2004) was conducted to examine land use during the mid-1900s. As shown by the 1953 historic aerial, construction of the plant has already begun in the late 1940s and early 1950s. Units 1 and 2 are present in the north central portion of the project area and several buildings and structures related to the plant including the administration building and water tower are already visible. A trailer park is also visible in the 1953 aerial in the tracts of land immediately to the south of the plant site with residential development visible in the southernmost portion of the project area. In 1953, natural vegetation is hard to discern as the majority of the project area is either industrially developed, commercially developed, or under construction. Minor natural vegetation appears to be remaining in the eastern portion of the project area on the banks of Lake Worth Lagoon.

By the late 1960s, as evidenced by the 1968 aerial, the plant has grown adding Units 3 and 4, as well as, both creating new tanks and moving one of the old tanks to a new location. The southern portions of the project area are fully residentially developed. By 1968, the vegetation on the eastern coast has been cleared and natural vegetation other than grass is largely no longer present. Additionally, the 1968 historic aerials show land modification of the eastern portion of the project area as the coastline has been built up extending further into Lake Worth Lagoon.

By the early 1950s, US 1 is already visible adjacent to the west of the project area and no major modifications are readily apparent in the 1968 historic aerial. By 1968, the area has become largely industrially and residentially developed and the eastern border of the project area has been disturbed through land modification extending the coast further into the Lake Worth Lagoon. The developed and disturbed characteristics of the project area suggested by the historic aerials are supported by the 1978 Palm Beach County soil survey descriptions of the soil types located within the project area (Table 3).

Table 3. Description of Soil Types Located within the Project Area

Drainage Characteristic	Soil Type	Environmental Association
Excessively drained	St. Lucie-Paola-Urban Land Complex	Developed Areas
N/A	Urban Land Complex	Developed Areas

Source: USDA 1978

Archaeological Site Potential Zones

Site potential zones were designated based on their potential for containing archaeological sites. These site potential zones were based on the background research, previous research conducted within the Glades cultural region, and more specifically, Palm Beach County, in conjunction with pertinent environmental variables. Variables used to determine site potential zones include distance to fresh water sources (e.g., lakes, creeks, and wetlands), relative elevation, soil drainage characteristics, and the presence of hardwood vegetation.

Fresh water was an important resource for precontact populations. This variable would have been of greater importance during the Paleoindian and Early Archaic stages (12,000–5000 BC), when the perched water system was more restricted. Access to fresh water during these early periods would have been from sinkholes and aquifer-fed rivers.

The project area is located adjacent to Lake Worth Lagoon; however, the largely developed and urbanized nature of the project area and its surrounding make it difficult to ascertain additional water sources that may have historically been available to pre-Columbian populations.

As the project area is situated adjacent to the Lake Worth Lagoon, higher elevations would have been favorable for archaeological sites in order to avoid seasonal flooding. The USGS Quadrangle map was reviewed to target areas of higher elevation and particular focus was placed on slopes adjacent to fresh water sources. The project area is located in an area of lower elevation adjacent to the lake shore with areas of higher elevation approximately 3000 ft. to the west. These areas of higher elevation to the west would have been more favorable to pre-Columbian populations for settlement. With an abundance of fresh water from Lake Worth Lagoon and relatively low elevation, hardwood vegetation would play an important factor in determining probable archaeological site locations.

The use of hammock vegetation during the precontact and historic periods is well documented. Hammocks are not usually prone to flooding and retard the development and spread of fires (Austin 1992). The thick foliage of hammocks provides shade and moderates temperatures year-round. The thick canopies of hammocks also provide good shelter during periods of heavy weather. Mature hammocks offer enough open space for habitation and activity areas. Finally, many fruits, nuts and tubers are available in hammocks that are important as human food sources as well as for their ability to attract game animals. For these reasons, soil types indicative of hardwood or hammock vegetation are designated as high archaeological site potential zones regardless of drainage characteristics. However, none of the soils within the project area typically support hardwood hammock vegetation, and no hardwood hammock vegetation was visible on the historic aerials as due to the level of development.

Drainage characteristics of soil have been successfully used in the formulation of site location and predictive models. Moderately well drained and excessively well drained soil types, particularly those found in areas of higher elevation, were determined to have high archaeological site potential. Soils with somewhat poorly drained or poorer drainage characteristics not indicative of hammock vegetation were designated as having moderate archaeological site potential. The characteristics of all detailed soil types within the project corridor are described in Table 3. As mentioned previously, the majority of these soils are indicative of development and disturbance.

In Florida, historic period sites frequently co-occur with precontact archaeological sites. This is often the result of environmental conditions found desirable by both groups: better-drained upland knolls near transportation routes (i.e., historic trails and major rivers). Use of the land around the project corridor during the earliest historic periods (First Spanish, English, and Second Spanish) was probably limited; occupations from these periods would have been of such short duration that evidence of parties crossing the project vicinity is almost impossible to detect archaeologically. Furthermore, no such groups are known or suspected of having settled or camped within the project area.

While the project area is situated adjacent to a major water source, the low elevation of the area may have increased the probability of seasonal flooding making the higher elevation to the west more favorable. Additionally, the GLO surveyors' field notes for the project area do not mention any hardwood or hammock vegetation. These factors, coupled with the level of development and land modification within the project area suggest a low potential for finding intact archaeological sites.

CERTIFIED LOCAL GOVERNMENTS AND LOCAL INFORMANTS

Palm Beach County is included on the August 2008 list of CLG posted on the Florida Division of Historical Resources website (FDHR 2008). Before construction begins, coordination with Christian Davenport, the Palm Beach County Archaeologist is recommended regarding potential local archaeological or historical issues not represented within the FMSF. Additional coordination with the Palm Beach County Archaeologist is recommended regarding the Palm Beach County Historic Preservation Ordinance (Unified Land Development Code, Section 4.30), particularly regarding a certificate to dig (CTD).

The City of West Palm Beach is also included on the August 2008 list of CLG posted on the Florida Division of Historical Resources website (FDHR 2008). Coordination is recommended with Friederike H. Mittner, Historic Preservation Planner for the City of West Palm Beach Planning Department, regarding potential impacts to the City of West Palm Beach's locally designated Northwood Harbor Historic District.

Mr. Gary Moncrief, Business Leader of the Power Generation Division for the Riviera Plant, provided information regarding the historic nature of the power plant and stated that to his knowledge, the Riviera Plant did not employ new or innovative technology at the time of its construction. Mr. Moncrief also stated that he did not personally know of any cultural material recovered during the construction of the plant. Mr. Moncrief was instrumental in providing information regarding the locations of areas of man-made land and land modification, general locations of buried utilities, and provided access to the different sections of the project area. Mr. Moncrief also provided historic photos of the Riviera Plant, approximate dates of construction of the buildings, and descriptions of alterations to the buildings and overall site plan.

METHODS

Archaeological Methods

Archaeological field methods included the pedestrian survey of the entire project area with a visual inspection of exposed ground to identify evidence of archaeological sites. Additionally, a careful surface inspection was undertaken when areas of minimal vegetation and/or upturned soil were present and in areas adjacent to past dredging.

No subsurface testing was conducted within the project area based on the low archaeological site potential resulting from the disturbed and developed nature of the project area. The presence of bermed man-made ponds, bermed areas adjacent to road ways and containers, areas containing roadway or concrete/asphalt paving, segments of man-made land, areas of modified land, and the

presence of above ground and buried utilities throughout the project area also limited areas where testing could be conducted.

Historic Field Methods

The historic resources reconnaissance investigation, conducted in September of 2008, included a pedestrian survey of the FPL Riviera Plant Complex and a "windshield" survey of properties within 500 ft. An architectural historian and one technical assistant conducted the historic resources reconnaissance survey in order to ensure that significant historic buildings, structures, objects, and districts built during or before 1960 within the FPL Riviera Plant Complex and within 500 ft. of the complex were identified and properly mapped. Any significant property with features indicative of 1960 or earlier construction materials, building methods, or architectural styles was noted on aerial photographs and a USGS Quadrangle map. Photographs were taken with a high resolution digital camera. A log was kept to record the building's physical location and compass direction of each photograph. For each resource located within the FPL Riviera Plant Complex, built during or before 1960, FMSF forms were filled out with field data including notes from site observations and research findings. The estimated date of construction, distinctive features, and architectural styles were noted. The information contained on any FMSF form completed for this project was recorded in a database at Janus Research. FMSF forms were not completed for potentially significant resources identified within 500 ft. of the complex. Any resource within 500 ft. which appeared to be eligible for listing in the National Register was photographed and noted on aerial photographs and a USGS Quadrangle map. Concentrations of historic resources within the project area were noted in terms of assessing the potential for historic districts. Each resource's present condition, location relative to other resources, and distinguishing neighborhood characteristics were noted and photographed for accurate assessment of National Register historic district eligibility.

As many of the structures in the FPL Riviera Plant Complex date to the 1960s and are not yet fifty years old, research was also conducted to determine whether the complex meets the National Register Criteria Consideration G for properties that have achieved significance within the past fifty years.

RESULTS

Archaeological Survey Results

The pedestrian survey and surface inspection of the project area confirmed the industrial development and man-made nature of the majority of the project area providing support for the low probability of finding intact archaeological sites within the project area boundaries. Additionally, this survey noted the presence of numerous above and below ground utilities. Due to these factors, no subsurface testing was conducted. The current conditions of the project area are illustrated on an aerial field map (Attachment D), as well as, the general locations of utilities, ponds, bermed land, and made land.

The only area feasible for subsurface testing is within the southernmost portion of the project where previously recorded historic structures 8Pb5366, 8Pb5368, 8Pb5372, and 8Pb8116-8Pb8124 were previously located. These resources have since been demolished and the area has been cleared and planted with trees. However, no subsurface testing was conducted as this area was previously

surveyed in 2003 by R. Christopher Goodwin and Associates (2003c) and no cultural material was recovered. The SHPO concurrence letter for this survey is included in Attachment E.

Historic Resources Reconnaissance Survey Results

The historic resources reconnaissance survey resulted in the identification of one resource group (8Pb13944), which is composed of six newly identified historic resources (8Pb13945-8Pb13949, and 8Pb13951) and one individual newly identified resource (8Pb13950). None of these resources are considered eligible for listing in the National Register, either individually or as part of a historic district. The identified historic resources are of common forms found throughout Florida and have undergone alterations to their site plans and context which compromise their historic integrity. The Northwood Harbor Historic District, locally designated by the City of West Palm Beach, and the FEC Railway Corridor (8Pb13559) are partially located within 500 ft. of the FPL Riviera Plant Complex. As only a small portion of each resource was located within the APE for this project, further research is necessary to determine their National Register–eligibility. Table 4 lists the newly identified historic resources and descriptions are included in this results section. Attachment F includes maps showing the locations of the identified historic resources and Attachment G includes photos of the identified historic resources. The FMSF forms for each resource are also included in Attachment H.

Table 4: Newly Identified Historic Resources

FMSF #	Site Name	Style	Date of Construction	National Register Status
8Pb13944	FPL Riviera Plant Complex Resource Group	N/A	c. 1946	Ineligible
8Pb13945	Drum Storage Building	Masonry Vernacular	c. 1946	Ineligible
8Pb13946	Administration Building	Masonry Vernacular	1946	Ineligible
8Pb13947	Chemical House	Industrial Vernacular	c. 1946	Ineligible
8Pb13948	Tank B	Industrial Vernacular	c. 1946	Ineligible
8Pb13949	Tank A	Industrial Vernacular	c. 1946	Ineligible
8Pb13950	FPL Training Center/Pavilion	Masonry Vernacular	c. 1956	Ineligible
8Pb13951	Water Tower	Industrial Vernacular	c. 1946	Ineligible

The FPL Riviera Plant Complex resource group (8Pb13944) is located in Section 4 of Township 43 South, Range 43 East and Sections 33 and 34 of Township 42 South, Range 43 East on the Riviera Beach (1946, PR 1983) USGS Quadrangle map. The resource group consists of three historic buildings (8Pb13945-8Pb13947), two historic fuel oil tanks (8Pb13948-13949), one historic water tower (8Pb13951), and 19 non-historic structures.

The Administration Building (8Pb13946) is located on the northeastern portion of the FPL Riviera Plant Complex. It includes the Unit 1 Turbine Building, Machine Shop, and Service Building. It is L-shaped in form composed of a taller, roughly square mass at the southwest corner (the Unit 1 Turbine Building) with shorter, two-story portions which project to its north and east. The Masonry Vernacular building has a flat roof covered in built up materials and the exterior is clad in stucco. Fenestration consists of glass block and metal single-hung-sash windows. Metal security/hurricane shutters cover some of the windows and some of the original window openings have been filled in. Exterior ornamentation consists of scored stucco, brick facing, and the use of concrete screen block. The main entrance is located on the south side of the building, covered by a simple, masonry portico. During the 1960s, a two-story masonry addition was constructed at the southeast corner of the building, immediately to the east of the main entrance. At this time, brick facing was added to a portion of the façade and east wall.

The Drum Storage Building (8Pb13945) is located to the northeast of the Administration Building. This small, Masonry Vernacular building is rectangular in form. It has a flat roof covered in built-up materials and the exterior is clad in stucco. The building has fixed and awning windows with concrete sills, and small decorative vents. At least one of the original window openings has been filled in.

The Chemical House (8Pb13947) is located to the northwest of the Administration Building. This Industrial Vernacular structure appears to have undergone some façade alterations since its original construction, but retains its basic historic form. It is rectangular in form with varying one-, two-, and three-story portions. The building has a flat roof covered in built-up materials and the exterior is clad in stucco. Metal exterior stairs are located to the west of the building.

Two of the original, c.1946, fuel oil tanks Tank A (8Pb13949) and Tank B (8Pb13948) are still located within the complex, as is the c.1946 water tower (8Pb13951). The Riviera Plant began operating in 1946 with Unit 1, and Unit 2 was added in 1953. Units 1 and 2 have since been retired and removed from the site. The turbines for Unit 1 were originally located within the upper floor of the Administration Building along with the control room. Portions of the controls have been removed as have the turbines. Much new construction occurred within the complex after 1960. Unit 3 went into operation in 1962 and Unit 4 went into operation in 1963. Tank A (8Pb13949) was moved during the construction of Units 3 and 4. A 1953 aerial photograph showing the original locations of the tanks and the other identified historic structures in included in Attachment F. Additional warehouses, tanks, offices, and mechanical buildings were constructed during the 1960s and since that time to support Units 3 and 4, and the complex now includes 19 non-historic buildings and structures.

The FPL Riviera Plant Complex was recorded as a resource group for this project as it consists of a contiguous group of related buildings; however, the majority of the structures are non-historic and the resource group is not eligible for listing in the National Register as a historic district. Today, there are a total of 7 historic and 19 non-historic buildings and structures in the FPL Riviera Plant Complex. Many of the original warehouses, mechanical equipment, and other buildings have been demolished, and much new construction has occurred. The historic site plan and the relationships between the structures and the equipment have been lost. Historically adjacent parcels and structures have been purchased by FPL and are now included within the complex. The original route of intake and outflow into the plant has also been altered. The original power generation units, Units 1 and 2, which were the historic center of focus for the complex and which the other structures were constructed to support,

have been removed. The historic structures which do remain on the property are of common industrial forms found throughout Florida. They are not individually significant architecturally, and the power production equipment with which they were originally associated, Units 1 and 2, has been removed from the facility.

The FPL Riviera Plant Complex buildings are associated with the local community planning and development, in that they supported the rapid expansion which occurred following World War II. However, the large amount of non-historic construction within the complex, the level of alterations to the site plan and relationships between the historic structures, and the removal of Units 1 and 2 from the complex has diminished the integrity of both the complex as a whole, and the individual buildings, to such a degree that they are not eligible for listing in the National Register.

As many of the buildings within the FPL Riviera Plant Complex were constructed within the past fifty years, research was also conducted and the non-historic buildings evaluated to determine whether the complex meets the National Register Criteria Consideration G for properties that have achieved significance within the past fifty years. The buildings and structures constructed within the past fifty years are of common architectural forms and styles, and limited research revealed no significant associations. Units 3 and 4, constructed during the 1960s, did not represent a new or innovative technology at the time of their construction (Moncrief 2008). Any minimal associations that the plant has with the area's community planning and development do not meet the National Register's standard of exceptional importance for properties constructed within the past fifty years.

One historic structure, the c.1956 FPL Training Center/Pavilion (8Pb13950), is now a part of the FPL Riviera Plant Complex but was historically part of the adjacent trailer park. The building originally served as a recreation center for the trailer park and the property was purchased by FPL in the 1980s (Moncrief 2008). Thus, it was recorded individually, but was not included within the resource group as it was not historically related to the other buildings within the complex. The two-story Masonry Vernacular building is rectangular in form. The first story is larger than the second, projecting to the east. The roof of the first story serves as an open porch with access from the second story, and is surrounded by a simple metal rail. The building has a flat roof with wide, overhanging eaves covered in built up materials, and the exterior is clad in stucco. The main entrance is located on the north side of the building and the fenestration is covered by metal security/hurricane shutters. Although the building retains its basic historic form, its historic context has been lost. All of the trailers and structures associated with its use as a recreation center for the trailer park have been removed and it is now within the secure, fenced boundary of the FPL Riviera Plant Complex. The building is of a common form found throughout Florida and limited research revealed no significant historical associations. Thus, it is considered ineligible for listing in the National Register either individually or as a part of a historic district.

A small portion of the Northwood Harbor Historic District, locally designated by the City of West Palm Beach, is located within 500 ft. of the FPL Riviera Plant Complex and was evaluated as part of this study. The boundaries of the local historic district are shown on a map in Attachment F and representative photos of the portion of the historic district located within the APE for the project are located in Attachment G. Common architectural styles found within the historic district include Mission, Frame Vernacular, and Masonry Vernacular. A comprehensive assessment of the entire Northwood Harbor Historic District, evaluation of the historic integrity of its buildings, its history, and

significant associations was outside of the scope of this study. Further research is necessary to determine the National Register–eligibility of the local historic district.

RECOMMENDATIONS

No additional archaeological or historic resources investigations of the project area proper are recommended. It is, however, recommended that FPL initiate coordination with Palm Beach County regarding any county specific cultural resource concerns and to discuss potential impacts to the local historic district as the project proceeds. Initial renderings indicate that the proposed construction and conversion of the FPL Riviera Plant will result in reduced height of the structures, which may result in less visual impacts to the local historic district and surrounding area.

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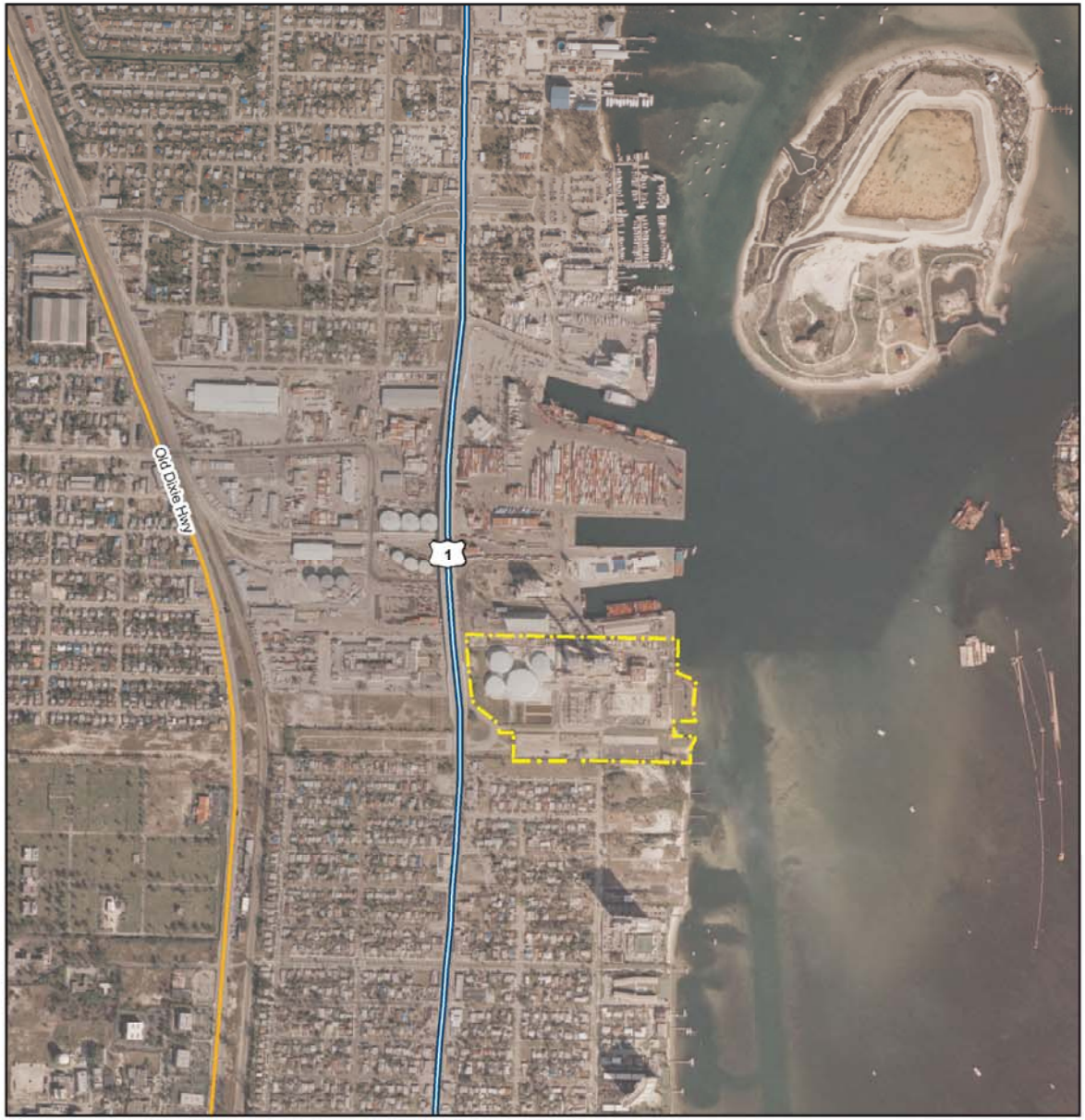
ATTACHMENT A:

PROJECT AREA MAPS



AREA MAP

LEGEND

Riviera Plant

REFERENCE

1. Imagery, Florida Department of Revenue, 2006. 2. Roads, FDOT, 2007.
3. Plant boundary, Palm Beach County, 2007.

0 500 1,000 2,000 Feet

SCALE AS SHOWN

N

PROJECT

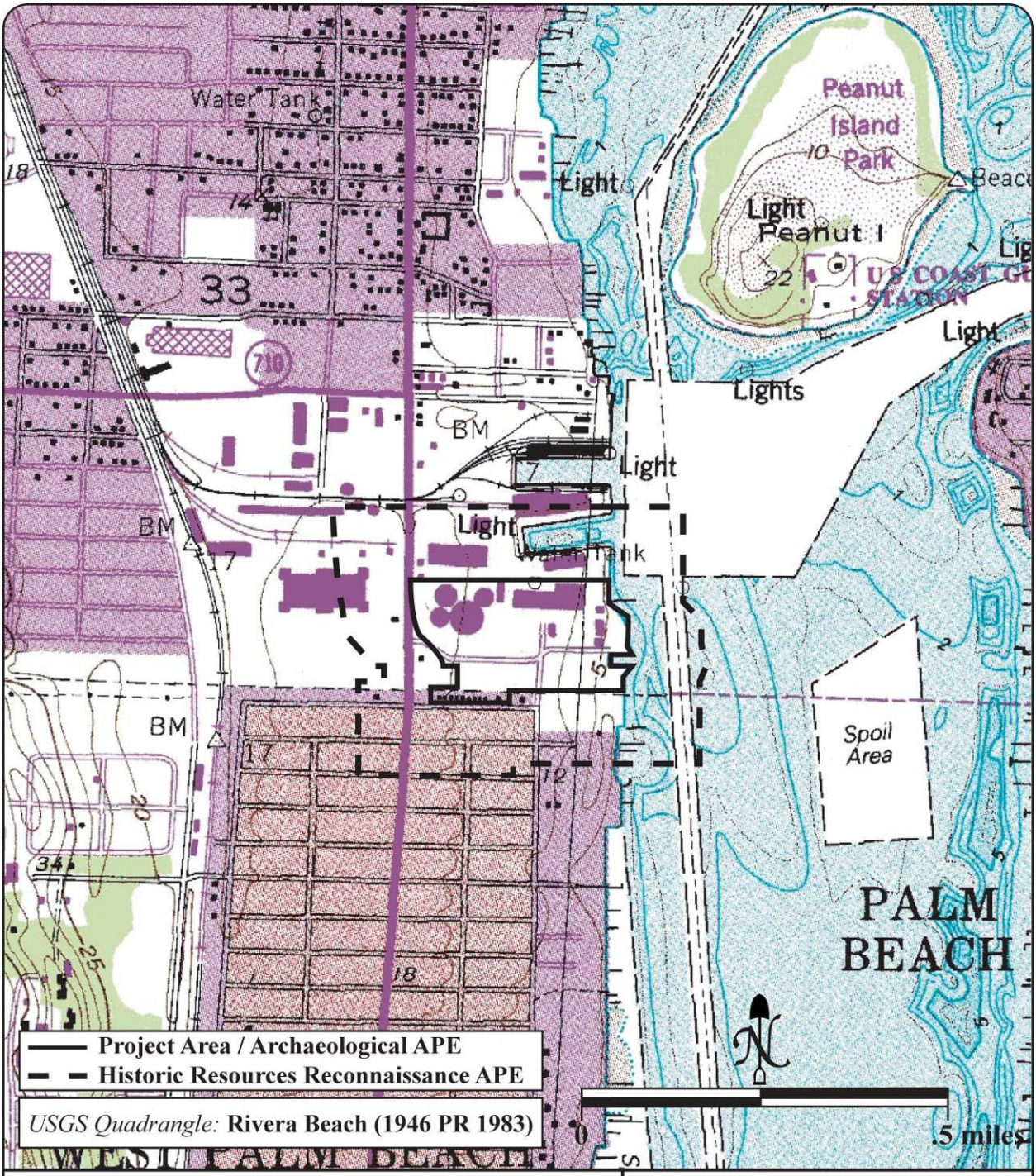
RIVIERA CONVERSION PROJECT

TITLE

RBEC SITE LOCATION

FPL

PROJECT No. 083-87633-2103			RA001	REV. 0
DESIGN	CC	06/01/08		
GIS	RL	06/04/08		
CHECK	CC	06/04/08		
REVIEW				



Project Area Illustrated on USGS Quadrangle

ATTACHMENT B:

REPRESENTATIVE PHOTOGRAPHS OF THE PROJECT AREA

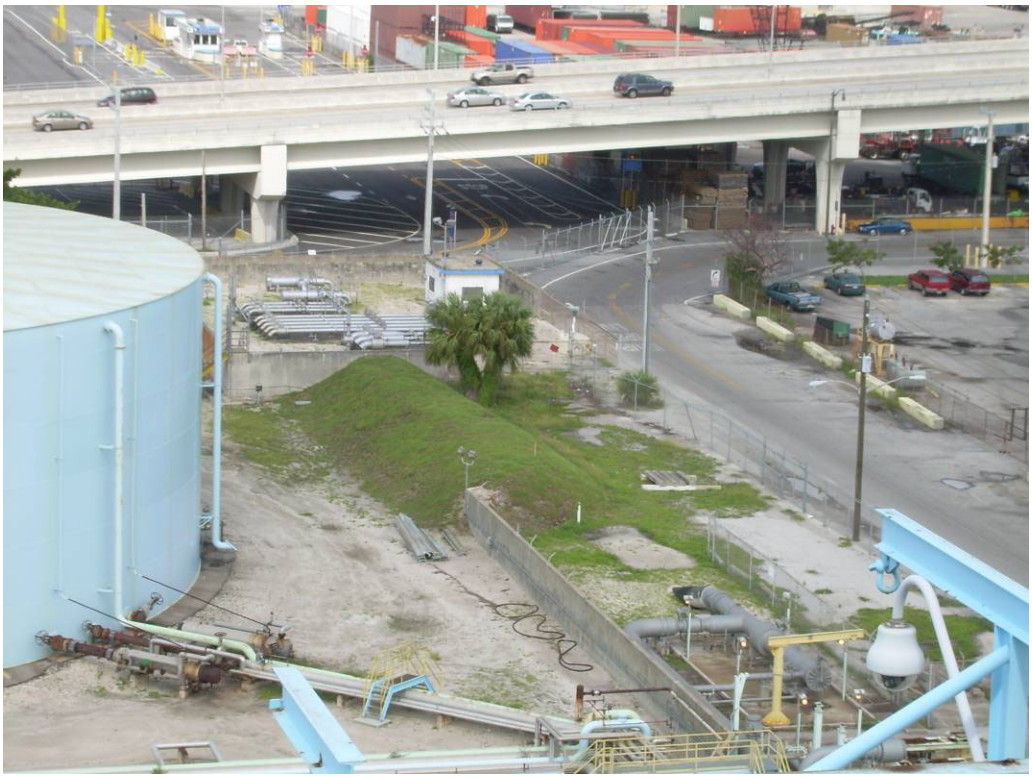
Representative Photograph of Utility Access, Buried Utilities, Paved Areas, and Industrial Development

Representative Photograph of Industrial Development (Container Units) and Bermed Land

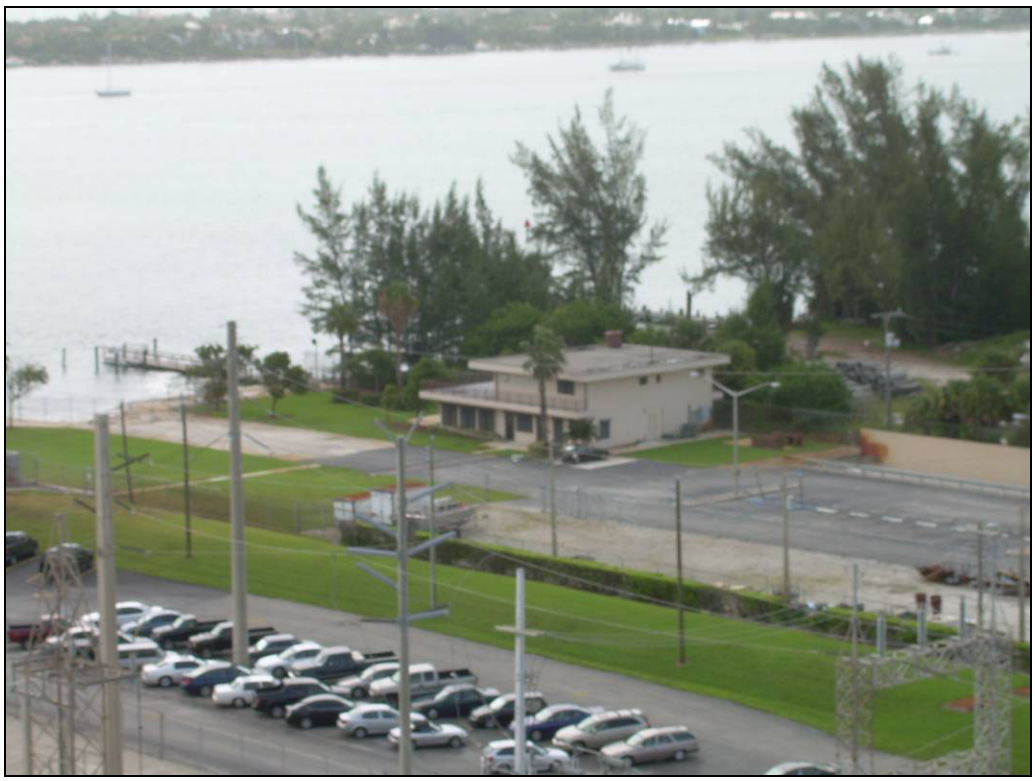
Representative Photograph of Industrial Development and Paved Areas

Representative Photograph of Buried Utilities, Industrial Development, and Paved Area

Representative Photograph of Man-made Ponds, Paved Areas, Utilities, and Bermed Land



Representative Photograph of Berm near Container Units, Utilities, and Paved Areas



Representative Photograph of Berm adjacent to Parking Lot with Utilities and Modified Land along Lake Worth Lagoon

Representative Photograph of Previously Developed and Cleared Area (Previously Surveyed in 2003)

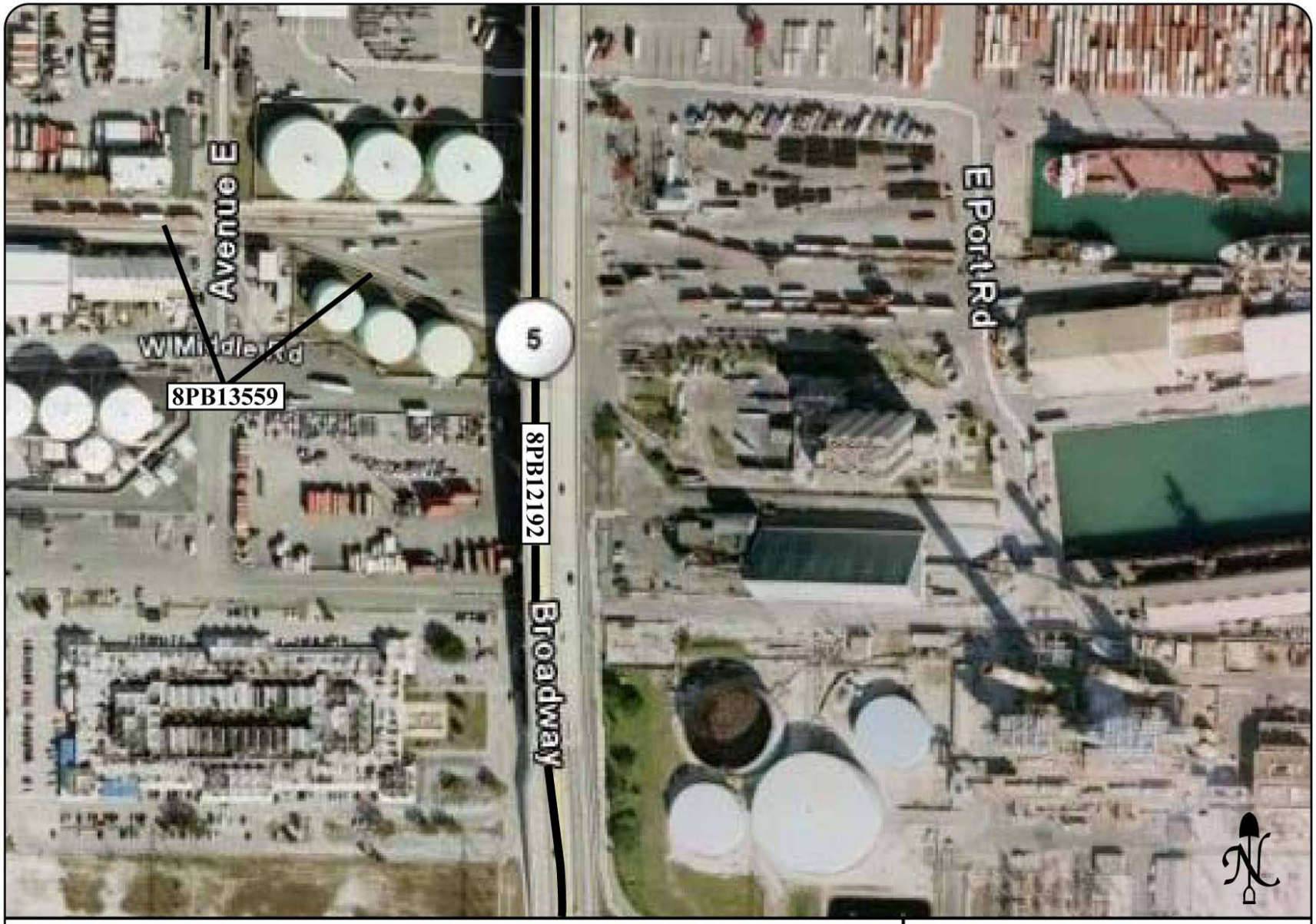
ATTACHMENT C:

PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN 500 FT. OF THE PROJECT AREA

#	Site Number
1	8Pb5371
2	8Pb5370
3	8Pb5369
4	8Pb8126
5	8Pb5367
6	8Pb4463
7	8Pb4462
8	8Pb5351
9	8Pb5353
10	8Pb5354
11	8Pb5355
12	8Pb5356
13	8Pb5357
14	8Pb5358
15	8Pb5628
16	8Pb8127
17	8Pb5373
18	8Pb5352

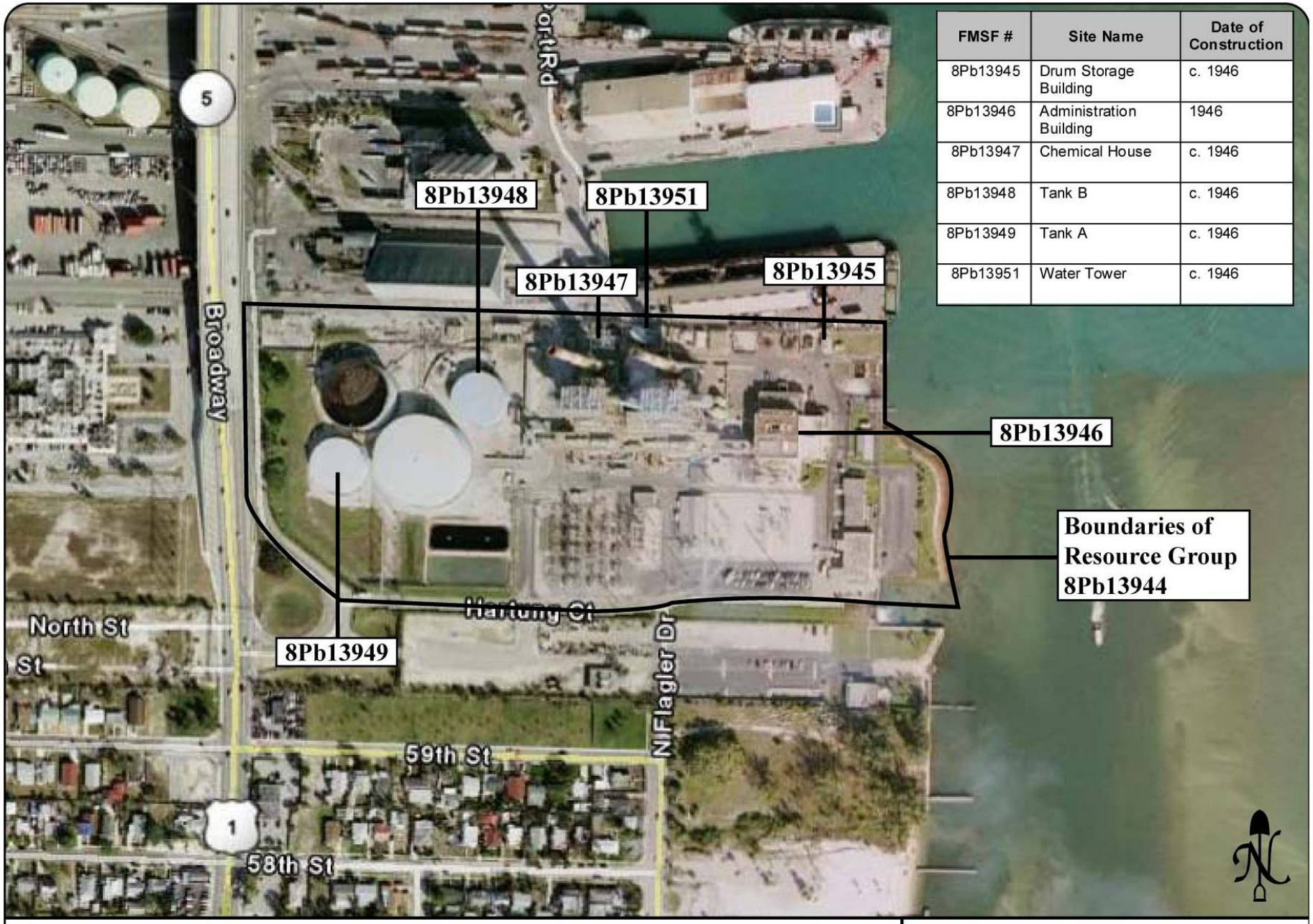
Locations of Extant Previously Recorded Historic Structures within 500 feet of the FPL Riviera Plant Complex

JANUS RESEARCH



Locations of Extant Previously Recorded Historic Structures within 500 feet of the FPL Riviera Plant Complex

JANUS RESEARCH



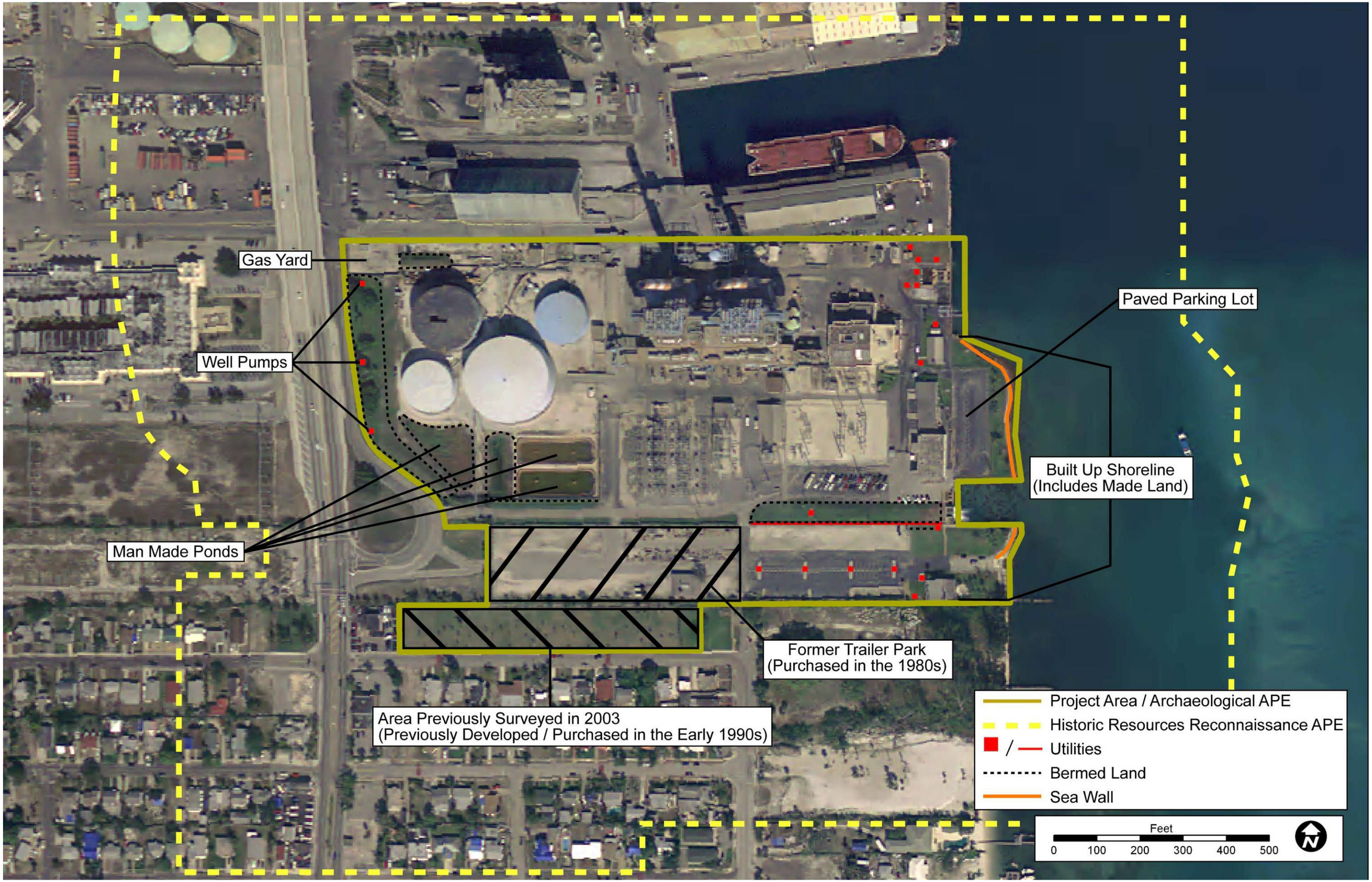
FMSF #	Site Name	Date of Construction
8Pb13945	Drum Storage Building	c. 1946
8Pb13946	Administration Building	1946
8Pb13947	Chemical House	c. 1946
8Pb13948	Tank B	c. 1946
8Pb13949	Tank A	c. 1946
8Pb13951	Water Tower	c. 1946

Locations of Extant Previously Recorded Historic Structures within 500 feet of the FPL Riviera Plant Complex

JANUS RESEARCH

ATTACHMENT D:

FIELD AERIAL MAP


Gas Yard
Well Pumps
Man Made Ponds
Paved Parking Lot
Built Up Shoreline
(Includes Made Land)
Former Trailer Park
(Purchased in the 1980s)
Area Previously Surveyed in 2003
(Previously Developed / Purchased in the Early 1990s)
Project Area / Archaeological APE
Historic Resources Reconnaissance APE
Utilities
Bermed Land
Sea Wall
Feet
0
100
200
300
400
500
N

ATTACHMENT E:

SHPO CONCURRENCE LETTER
FOR 2003 SURVEY (SURVEY NO. 10954)

10054

FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Ms. Heidi R. Post
R. Christopher Goodwin & Associates, Inc.
309 Jefferson Highway
New Orleans, LA 70121

December 8, 2004

Re: DHR Project File No. 2004-11008 (2003-6710)/ Received by DHR: November 8, 2004
Phase I Cultural Resources Survey and Archaeological Inventory of the Onshore Florida Portion of the Proposed Seafarer US Pipeline System Project, Palm Beach County, Florida

Dear Ms. Post:

Our office received and reviewed the above referenced survey report in accordance with Section 106 of the *National Historic Preservation Act of 1966* (Public Law 89-665), as amended in 1992; *36 C.F.R., Part 800: Protection of Historic Properties*; and Chapter 267, *Florida Statutes*, for assessment of possible adverse impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places (NRHP)*.

From February 2002 to February 2003, R. Christopher Goodwin & Associates, Inc. conducted an archaeological and historical survey of the Onshore Florida portion of the proposed Seafarer US pipeline project area on behalf of Seafarer US Pipeline System, Inc. No cultural resources were identified within the project area during the investigation.

It is the opinion of R. Christopher Goodwin & Associates, Inc. that the proposed development will have no effect on cultural resources listed or eligible for listing in the *NRHP*, or otherwise of historical, architectural or archaeological value. R. Christopher Goodwin & Associates, Inc. recommends no further investigation of the subject parcel.

Based on the information provided, our office concurs with these determinations and finds the submitted report complete and sufficient in accordance with Chapter 1A-46, *Florida Administrative Code*.

If you have any questions concerning our comments, please contact Ron Grayson, Historic Sites Specialist, by phone at (850) 245-6333, or by electronic mail at rigrayson@dos.state.fl.us. Your continued interest in protecting Florida's historic properties is appreciated.

Sincerely,

Laura L. Kammerer, Deputy SHPO

for Frederick Gaske, Director, and
State Historic Preservation Officer

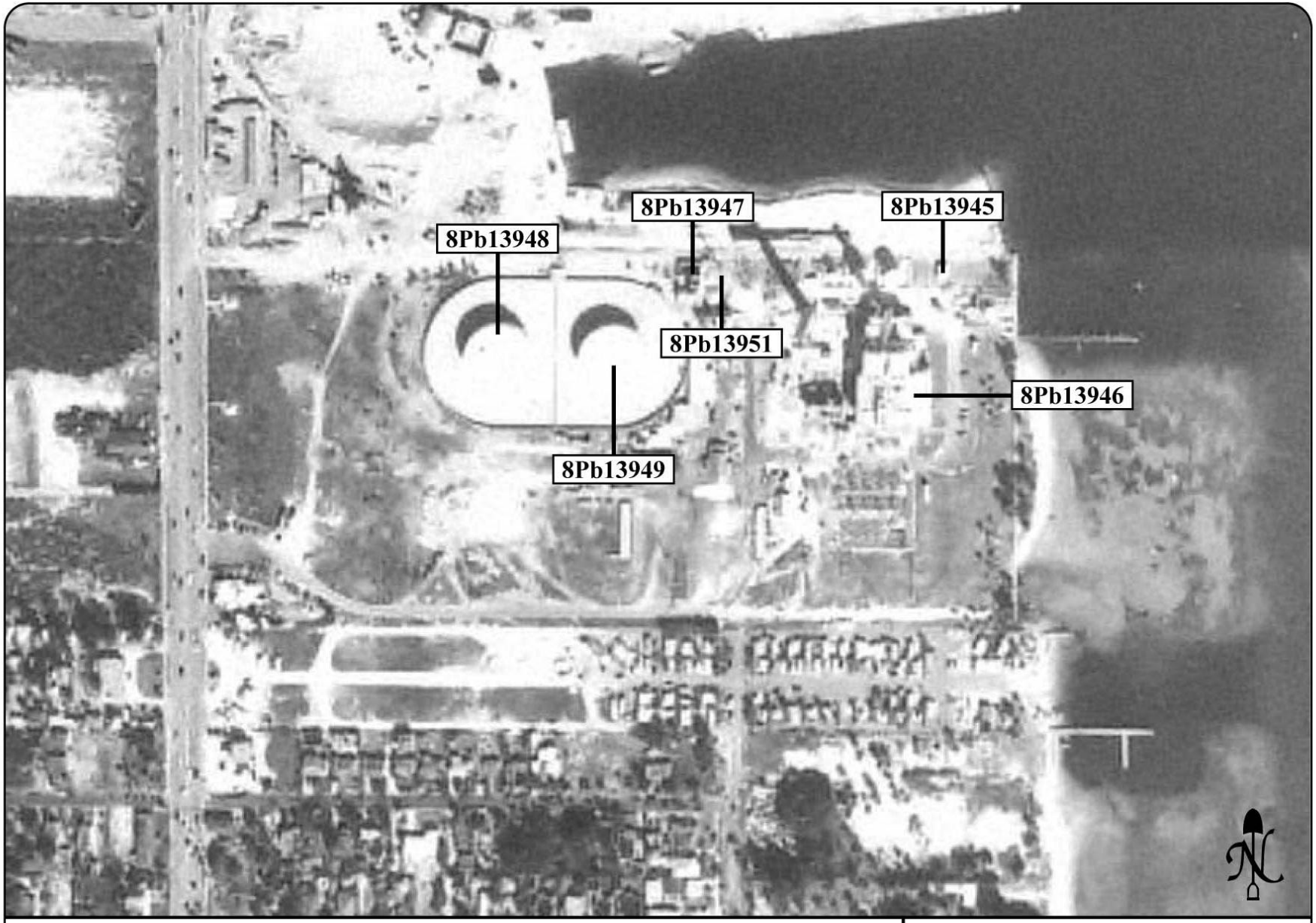
500 S. Bronough Street • Tallahassee, FL 32399-0250 • http://www.flheritage.com

☐ Director's Office (850) 245-6300 • FAX: 245-6435
☐ Archaeological Research (850) 245-6444 • FAX: 245-6436
☑ Historic Preservation (850) 245-6333 • FAX: 245-6437
☐ Historical Museums (850) 245-6400 • FAX: 245-6433
☐ Palm Beach Regional Office (561) 279-1475 • FAX: 279-1476
☐ St. Augustine Regional Office (904) 825-5045 • FAX: 825-5044
☐ Tampa Regional Office (813) 272-3843 • FAX: 272-2340

ATTACHMENT F:

MAPS SHOWING LOCATIONS OF IDENTIFIED HISTORIC RESOURCES

Locations of Historic Resources Identified within the Project Area



1953 Aerial Photograph Showing the Historic Locations of the Identified Historic Resources

JANUS RESEARCH

Location of Northwood Harbor Local Historic District

JANUS RESEARCH

ATTACHMENT G:

PHOTOGRAPHS OF IDENTIFIED HISTORIC RESOURCES

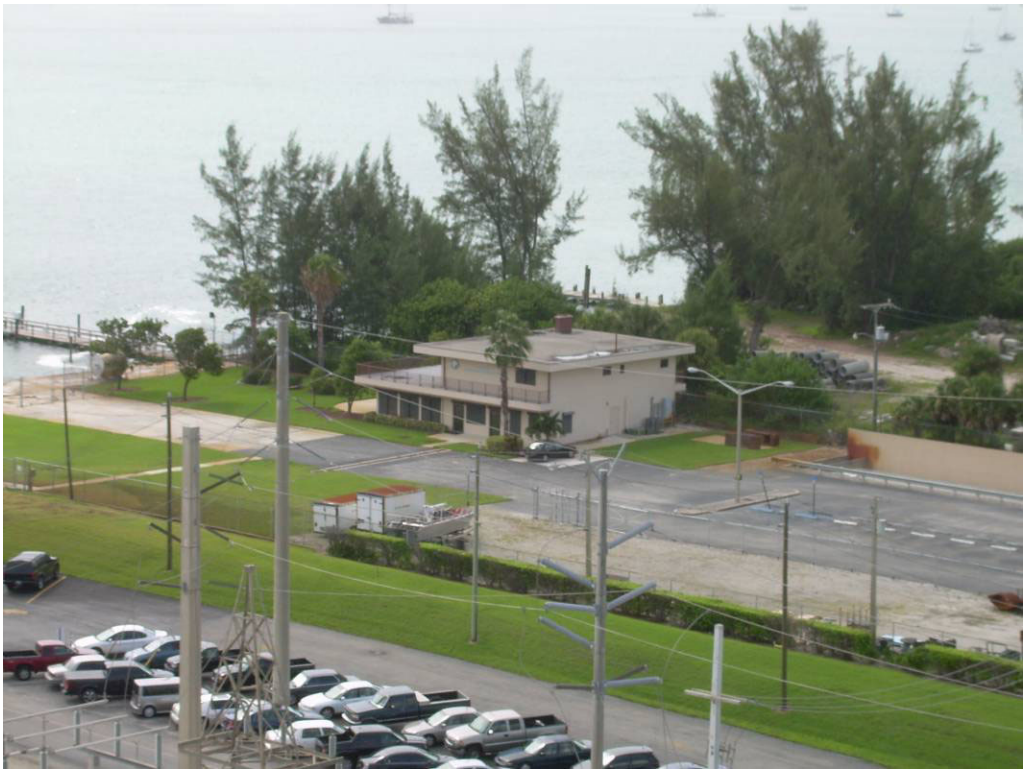
Photograph of Administration Building (8Pb13946), facing northwest

Photograph of Drum Storage Building (8Pb13945), facing northwest

Photograph of the Chemical House (8Pb13947), facing northwest

Photograph of Fuel Oil Tank A (8Pb13949) and Tank B (8Pb13948), facing west

Representative Photo of Non-historic Industrial buildings within the FPL Riviera Plant Complex, facing southeast



Photograph of FPL Training Center/Pavilion (8Pb13950), facing southeast

View of Northwood Harbor Historic District from FPL Riviera Plant, facing south

Representative Photo of Historic Resources within the Northwood Harbor Historic District, facing northeast

ATTACHMENT H:

FLORIDA MASTER SITE FILE FORMS

☑ Original
☐ Update

RESOURCE GROUP FORM
FLORIDA MASTER SITE FILE
Version 4.0 1/07

Site #8 PB13944
Recorder# _____
Field Date 9 / 3 / 08
Form Date 9 / 9 / 08

NOTE: Use this form to document districts, landscapes and building complexes as described in the box below. Cultural resources contributing to the Resource Group should also be documented individually at the Site File. **Do not use this form for National Register multiple property submissions** (MPSs). National Register MPSs are treated as Site File manuscripts and are associated to the individual resources included under the MPS cover using the Site File manuscript number.

Check ONE box that best describes the Resource Group:

- ☐ **Historic district** (NR category "district"): buildings and NR structures only: NO archaeological sites
- ☐ **Archaeological district** (NR category "district"): archaeological sites only: NO buildings or NR structures
- ☐ **Mixed district** (NR category "district"): includes more than one type of cultural resource (example: archaeological sites and buildings)
- ☑ **FMSF building complex** (NR category usually "building(s)"): multiple buildings in close spatial and functional association
- ☐ **Designed historic landscape** (NR category usually "district" or "site"): can include multiple resources (see *National Register Bulletin #18*, page 2 for more detailed definition and examples: e.g. parks, golf courses, campuses, resorts, etc.)
- ☐ **Rural historic landscape** (NR category usually "district" or "site"): can include multiple resources and resources not formally designed (see *National Register Bulletin #30, Guidelines for Evaluating and Documenting Rural Historic Landscapes* for more detailed definition and examples: e.g. farmsteads, fish camps, lumber camps, traditional ceremonial sites, etc.)
- ☐ **Linear resource** (NR category usually "structure"): Linear resources are a special type of rural historic landscape and can include canals, railways, roads, etc.

Resource Group Name FPL Riviera Plant Complex Multiple Listing [DHR only] _____
Project Name Cultural Resource Review for the FPL Riviera Plant FMSF Survey # _____
National Register Category (please check one): ☑ building(s) ☑ structure ☐ district ☐ site ☐ object
Linear Resource Type (if applicable): ☐ canal ☐ railway ☐ road ☐ other (describe): _____
Ownership: ☑private-profit ☐private-nonprofit ☐private-individual ☐private-nonspecific ☐city ☐county ☐state ☐federal ☐Native American ☐foreign ☐unknown

LOCATION & MAPPING

Address (if applicable, include N,S,E,W; #; St., Ave., etc.) 100-300 Broadway
City/Town (within 3 miles) Riviera Beach In Current City Limits? ☑yes ☐no ☐unknown
County or Counties (do not abbreviate) Palm Beach
Name of Public Tract (e.g., park) _____
1) Township 43S Range 43E Section 4 ¼ section: ☐NW ☐SW ☐SE ☐NE ☐Irregular-name: _____
2) Township 42S Range 43E Section 33 ¼ section: ☐NW ☐SW ☐SE ☐NE ☐Irregular-name: _____
3) Township 42S Range 43E Section 34 ¼ section: ☐NW ☐SW ☐SE ☐NE ☐Irregular-name: _____
4) Township _____ Range _____ Section _____ ¼ section: ☐NW ☐SW ☐SE ☐NE ☐Irregular-name: _____
USGS 7.5' Map Name(s) & Date(s) (boundaries must be plotted on attached photocopy of map; label with map name and publication date) _____
Riviera Beach 1946, PR 1983
Plat, Aerial, or Other Map (map's name, originating office with location) _____
Landgrant _____
Verbal Description of Boundaries (description does not replace required map) _____
Roughly bounded by Lake Worth, Hartung Court, Broadway, and the Port of Palm Beach

DHR USE ONLY	OFFICIAL EVALUATION	DHR USE ONLY
NR List Date ___/___/_____ ☐ Owner Objection	SHPO – Appears to meet criteria for NR listing: ☐yes ☐no ☐insufficient info KEEPER – Determined eligible: ☐yes ☐no NR Criteria for Evaluation: ☐a ☐b ☐c ☐d (see *National Register Bulletin 15*, p. 2)	Date ___/___/_____ Init._____ Date ___/___/_____

RESOURCE GROUP FORM

Site #8 PB13944

HISTORY & DESCRIPTION

Construction date: Exactly_____(year) Approximately 1946 (year) Earlier than_____(year) Later than_____(year)

Architect/Designer(last name first): Unknown Builder(last name first): _____

Total number of individual resources included in this Resource Group: # of contributing 6 # of non-contributing 19

Time period(s) of significance (for prehistoric districts, use archaeological phase name and approximate dates; for historical districts, use date range(s), e.g. *1895-1925)*

1946-1956

Narrative Description (*National Register Bulletin 16A* pp. 33-34; fit a summary into 3 lines or attach supplementary sheets if needed)

See Continuation Sheet

RESEARCH METHODS (check all that apply)

- ☑ FMSF record search (sites/surveys)
- ☐ FL State Archives/photo collection
- ☑ property appraiser / tax records
- ☑ cultural resource survey
- ☐ library research
- ☐ city directory
- ☐ newspaper files
- ☑ historic photos
- ☐ building permits
- ☑ occupant/owner interview
- ☐ neighbor interview
- ☑ interior inspection
- ☑ Sanborn maps
- ☐ plat maps
- ☐ Public Lands Survey (DEP)
- ☐ HABS/HAER record search
- ☐ other methods (specify) _____

Bibliographic References (use Continuation Sheet, give FMSF Manuscript # if relevant) _____

OPINION OF RESOURCE SIGNIFICANCE

Potentially eligible individually for National Register of Historic Places? ☐yes ☐no ☐insufficient information

Potentially eligible as contributor to a National Register district? ☐yes ☐no ☐insufficient information

Explanation of Evaluation (required, see *National Register Bulletin 16A* p. 48-49. Attach longer statement, if needed, on separate sheet.)

See Continuation Sheet

Area(s) of Historical Significance (see *National Register Bulletin 15*, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)

Community Planning and Development

DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field & analysis notes, photos, plans, other important documents that are permanently accessible: For each separately maintained collection, describe (1) document type(s),* (2) maintaining organization,* (3) file or accession nos., and (4) descriptive information.

Field notes on file at Janus Research, Tampa, Florida

RECORDER INFORMATION

Recorder Name Janus Research

Recorder Contact Information (Address / Phone / Fax / Email) 1300 North Westshore Boulevard, Suite 100, Tampa, FL, 33607/ (813) 636-8200 / (813)636-8212/ janus@janus-research.com

Recorder Affiliation Janus Research

Required Attachments

❶ **PHOTOCOPY OF USGS 7.5' MAP WITH DISTRICT BOUNDARY CLEARLY MARKED**

❷ **LARGE SCALE STREET, PLAT OR PARCEL MAP WITH RESOURCES MAPPED & LABELED**

❸ **TABULATION OF ALL INLCUDED RESOURCES** (name, FMSF #, contributing? Y/N, resource category, street address or township-range-section if no address)

❹ **PHOTOS OF GENERAL STREETSCAPE OR VIEWS (Optional: aerial photos, views of typical resources)** Photos may be archival B&W prints OR digital image files. If submitting digital image files, they must be included on disk or CD AND in hard copy format (plain paper is acceptable). Digital images must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

SITE NAME: FPL Riviera Plant Complex Resource Group

A. NARRATIVE DESCRIPTION

The FPL Riviera Plant Complex resource group (8Pb13944) is located in Section 4 of Township 43 South, Range 43 East and Sections 33 and 34 of Township 42 South, Range 43 East on the Riviera Beach (1946, PR 1983) USGS Quadrangle map. The resource group consists of three historic buildings (8Pb13945-8Pb13947), two historic fuel oil tanks (8Pb13948-13949), one historic water tower (8Pb13951), and 19 non-historic structures. The complex is roughly bounded by Lake Worth, the Port of Palm Beach, Broadway/US 1, and Hartung Court.

The Administration Building (8Pb13946) is located on the northeastern portion of the FPL Riviera Plant Complex. It includes the Unit 1 Turbine Building, Machine Shop, and Service Building. It is L-shaped in form composed of a taller, roughly square mass at the southwest corner (the Unit 1 Turbine Building) with shorter, two-story portions which project to its north and east. The Masonry Vernacular building has a flat roof covered in built-up materials and the exterior is clad in stucco. Fenestration consists of glass block and metal single-hung-sash windows. Metal security/hurricane shutters cover some of the windows and some of the original window openings have been filled in. Exterior ornamentation consists of scored stucco, brick facing, and the use of concrete screen block. The main entrance is located on the south side of the building, covered by a simple, masonry portico. During the 1960s, a two-story masonry addition was constructed at the southeast corner of the building, immediately to the east of the main entrance. At this time, brick facing was added to a portion of the façade and east wall.

The Drum Storage Building (8Pb13945) is located to the northeast of the Administration Building. This small, Masonry Vernacular building is rectangular in form. It has a flat roof covered in built-up materials and the exterior is clad in stucco. The building has fixed and awning windows with concrete sills, and small decorative vents. At least one of the original window openings has been filled in.

The Chemical House (8Pb13947) is located to the northwest of the Administration Building. This Industrial Vernacular structure appears to have undergone some façade alterations since its original construction, but retains its basic historic form. It is rectangular in form with varying one-, two-, and three-story portions. The building has a flat roof covered in built-up materials and the exterior is clad in stucco. Metal exterior stairs are located to the west of the building.

Two of the original, c.1946, fuel oil tanks Tank A (8Pb13949) and Tank B (8Pb13948) are still located within the complex, as is the c.1946 water tower (8Pb13951). The Riviera Plant began operating in 1946 with Unit 1, and Unit 2 was added in 1953. Units 1 and 2 have since been retired and removed from the site. The turbines for Unit 1 were originally located within the upper floor of the Administration Building along with the control room. Portions of the controls have been removed as have the turbines. Much new construction occurred within the complex after 1960. Unit 3 went into operation in 1962

and Unit 4 went into operation in 1963. Tank A (8Pb13949) was moved during the construction of Units 3 and 4. Additional warehouses, tanks, offices, and mechanical buildings were constructed during the 1960s and since that time to support Units 3 and 4, and the complex now includes 19 non-historic buildings and structures.

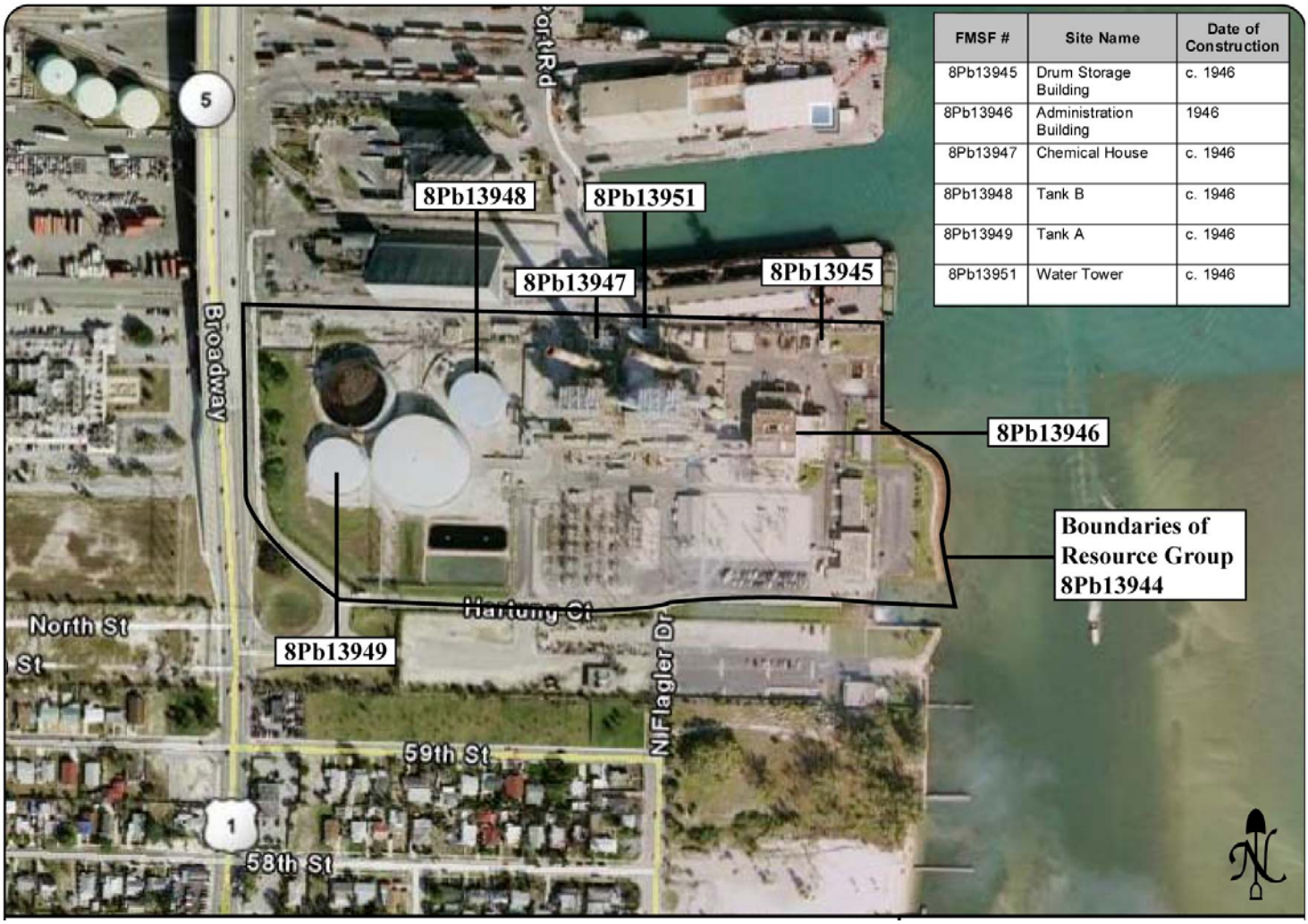
B. SUMMARY OF SIGNIFICANCE

The FPL Riviera Plant complex was recorded as a resource group for this project as it consists of a contiguous group of related buildings; however, the majority of the structures are non-historic and the resource group is not eligible for listing in the National Register as a historic district. Today, there are a total of 7 historic and 19 non-historic buildings and structures in the FPL Riviera Plant complex. Many of the original warehouses, mechanical equipment, and other buildings have been demolished, and much new construction has occurred. The historic site plan and the relationships between the structures and the equipment has been lost. Historically adjacent parcels and structures have been purchased by FPL and are now included within the complex. The original route of intake and outflow into the plant has also been altered. The original power generation units, Units 1 and 2, which were the historic center of focus for the complex and which the other structures were constructed to support, have been removed. The historic structures which do remain on the property are of common industrial forms found throughout Florida. They are not individually significant architecturally, and the power production equipment with which they were originally associated, Units 1 and 2, has been removed from the facility.

The FPL Riviera Plant Complex buildings are associated with the local community planning and development, in that they supported the rapid expansion which occurred following World War II. However, the large amount of non-historic construction within the complex, the level of alterations to the site plan and relationships between the historic structures, and the removal of Units 1 and 2 from the complex has diminished the integrity of both the complex as a whole, and the individual buildings, to such a degree that they are not eligible for listing in the National Register.

SITE NAME: FPL Riviera Plant Complex Resource Group

C. TABLE AND FIGURES

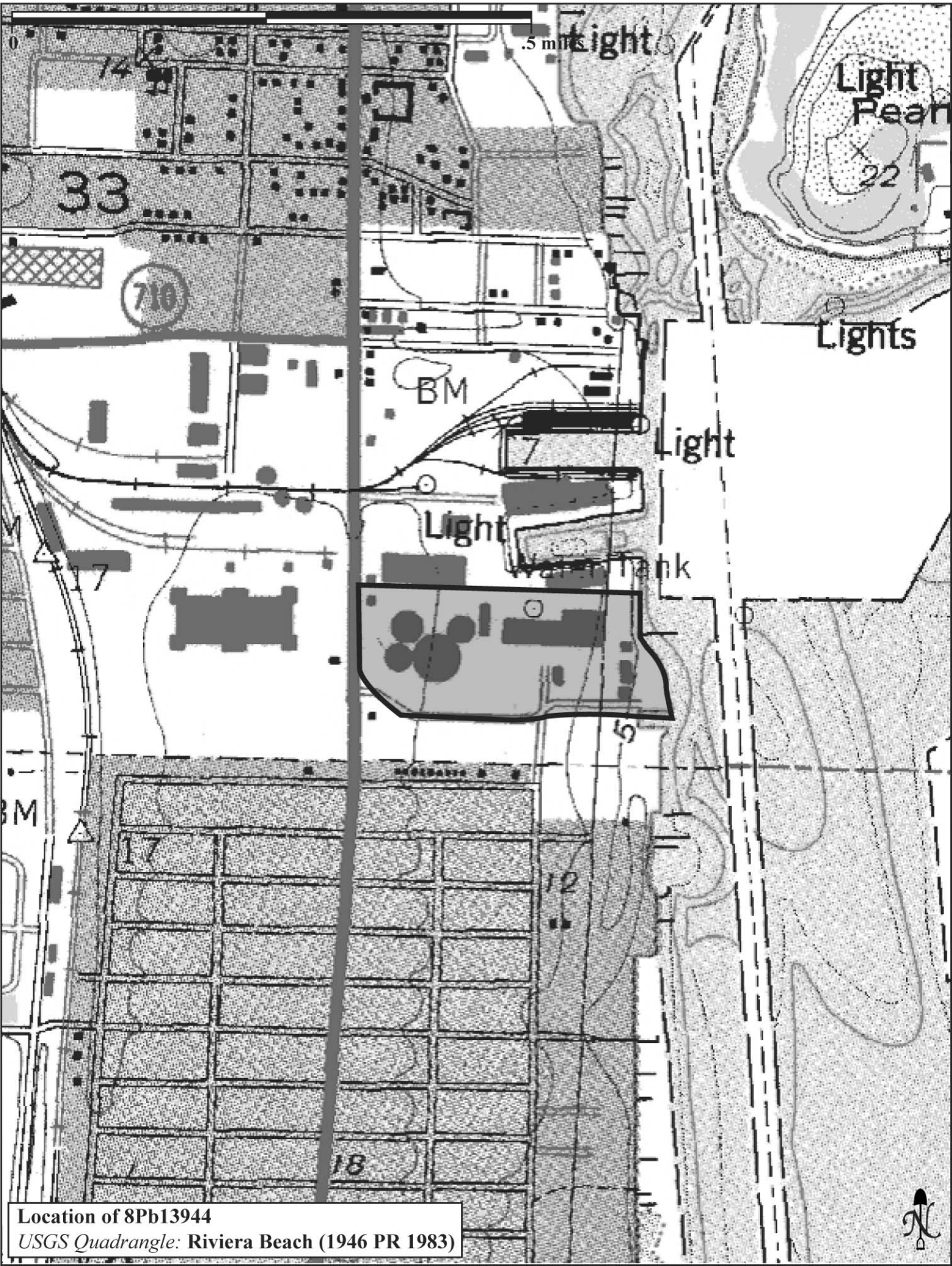


FMSF #	Site Name	Date of Construction
8Pb13945	Drum Storage Building	c. 1946
8Pb13946	Administration Building	1946
8Pb13947	Chemical House	c. 1946
8Pb13948	Tank B	c. 1946
8Pb13949	Tank A	c. 1946
8Pb13951	Water Tower	c. 1946

PHOTOGRAPH

SKETCH MAP

USGS QUADRANGLE MAP



Location of 8Pb13944
USGS Quadrangle: **Riviera Beach (1946 PR 1983)**

Original ☑
Update ☐

HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8PB13945
Recorder # 1
Recorder Date 9/3/08

Site Name Drum Storage Building **Other Names**
Project Name Cultural Resource Review for the FPL Riviera Plant
Historic Contexts WWII and Aftermath **National Register Category** Building

LOCATION and IDENTIFICATION

Address 300 Broadway
Vicinity of East Side of Broadway between Hartung Court and E Port Road
City Riviera Beach **County** Palm Beach
Ownership Private **Subdivision** **Block #** **Lot #**

MAPPING

USGS Map RIVIERA BEACH **Township** 42S **Range** 43E **Section** 33
Quarter **Qtr Qtr** **Irregular Section** ☐ **UTM Zone** 17
Easting 594312 **Northing** 2960843 **Land Grant**
Latitude **Longitude** **Plat or Other Map** Aerial Photographs

HISTORY

Architect/Builder Unknown **Construction Date** 1946 **Circa** ☑
Alterations ☑ **Date** c. 1965 **Type/Location** Window replaced and window filled in
Additions ☐ **Date** **Type/Location**
Moved ☐ **Original Location**
Use Original Storage building **Use Present** Storage building

DESCRIPTION

Style Masonry Vernacular **Exterior Plan** Rectangular **Interior Plan** **Stories** 1
Structural System Concrete block **Exterior Fabric** Stucco
Foundation Slab **Foundation Materials** Concrete **Foundation Infill**
No. of Porches **Locations/Features**
Main Entrance (stylistic details): W/Metal doors
Outbldgs. ☐ **Number** **Nature/Location (Describe below)**

Roof Type Flat **Roofing Materials** Built-up roof
Secondary Structures ☐ **Comments** **Location**
Chimneys ☐ **Number** **Orientation** **Location** **Material**
Wood Windows ☐ **Type** **Light #**
Metal Windows ☑ **Type** Awning, Fixed **Light #** 3, 1
Exterior Ornament Vents, Concrete Sills
Condition Good **Surroundings** Industrial

Narrative (general, interior, landscape, context; 3 lines only)

This Masonry Vernacular storage building has a rectangular form. It is located on the northeastern portion of the FPL Riviera Plant complex. The building has little detailing or distinguishing architectural features.

Archaeological Remains Present ☐ **FMSF Archaeological Site Form Completed (if yes, attach)** ☐

HISTORICAL STRUCTURE FORM

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8PB13945

RECORDER'S EVALUATION OF SITE

Individually Eligible for National Register? Yes ☐ No ☑ Likely, Need Information ☐ Insufficient Information ☐

Potential Contributor to Nat. Reg. District? Yes ☐ No ☑ Likely, Need Information ☐ Insufficient Information ☐

Areas of Significance

Community planning & development

Summary of Significance

This building is of a common, utilitarian design type found throughout Florida, has undergone alterations, and limited research revealed no significant historical associations. Therefore, it is considered ineligible for listing in the National Register, either individually or as part of a historic district.

DHR USE ONLY	OFFICIAL EVALUATIONS	DHR USE ONLY
NR DATE	*KEEPER-NR ELIGIBILITY* ☐ *yes* ☐ *no*	*Date* ___/___/____
___/___/____	*SHPO-NR ELIGIBILITY:* ☐ *yes* ☐ *no* ☐ *potentially elig.* ☐ *insufficient info*	*Date* ___/___/____
DELIST DATE	*LOCAL DESIGNATION:* _____	*Date* ___/___/____
___/___/____	*Local office* _____	
National Register Criteria for Evaluation	☐ *a* ☐ *b* ☐ *c* ☐ *d* (See *National Register Bulletin 15*, p. 2)	

DOCUMENTATION

Research Methods Florida Site File for past architectural surveys; Tax records; Occupant or owner interviewed; Pedestrian; Florida Site File search

Bibliographic References

Location of Negatives Janus Research **Negative Numbers** Roll 2865, #10, Facing NW

RECORDER INFORMATION

Recorder Name Janus Research

Recorder Affiliation JANUS RESEARCH, 1300 N. Westshore Blvd., Suite 100, Florida 33607 Telephone 813-636-8200

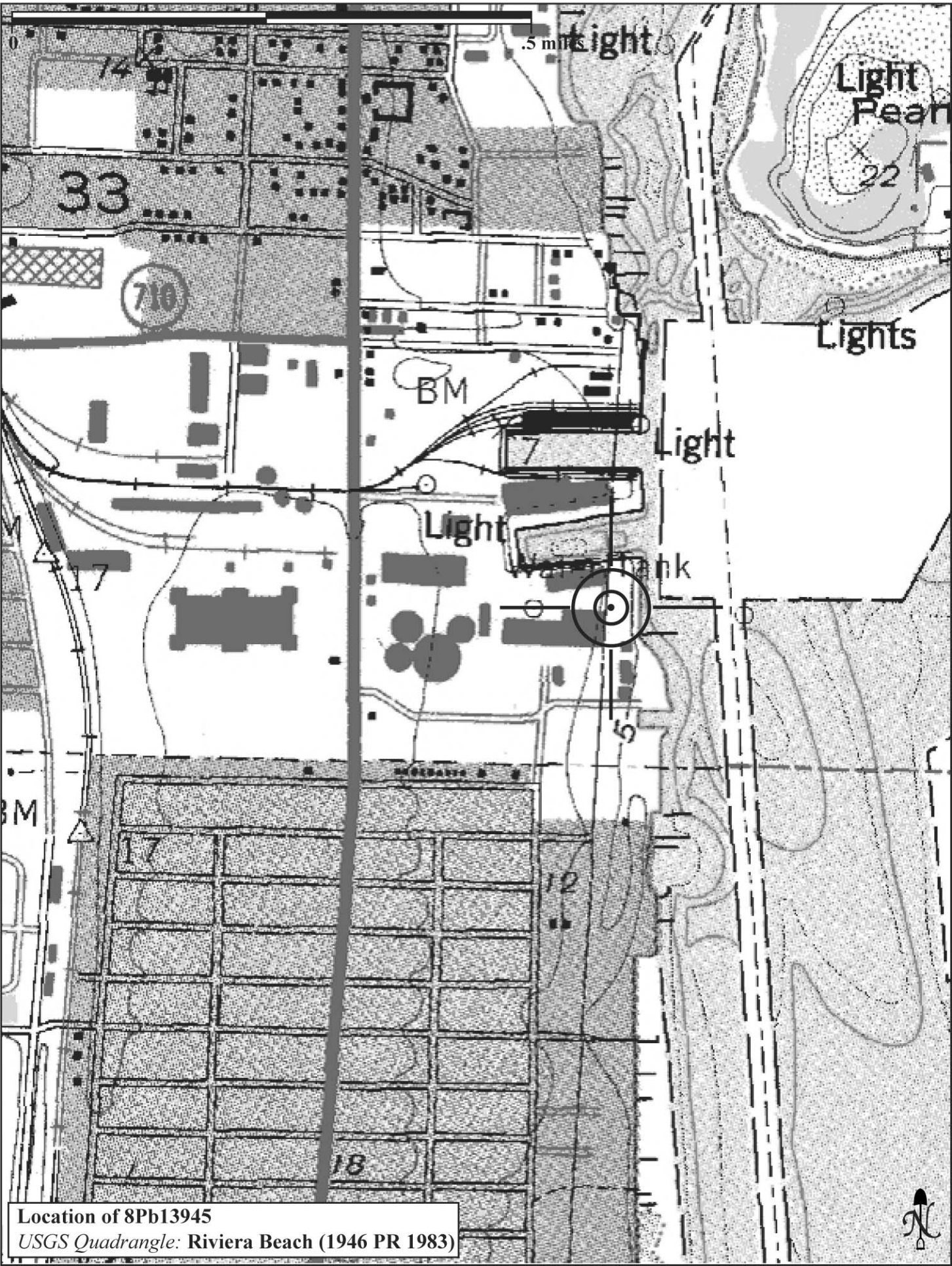
REQUIRED:

1. **USGS 7.5' MAP WITH STRUCTURES PINPOINTED IN RED**
2. **LARGE SCALE STREET OR PLAT MAP**
3. **PHOTO OF MAIN FACADE, PREFERABLY B&W, AT LEAST 3x5**

PHOTOGRAPH

SKETCH MAP

USGS QUADRANGLE MAP



Location of 8Pb13945
USGS Quadrangle: **Riviera Beach (1946 PR 1983)**

Original ☑
Update ☐

HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8PB13946
Recorder # 2
Recorder Date 9/3/08

Site Name Administration Building; Unit 1 Turbine Building **Other Names** Service Building; Machine Shop
Project Name Cultural Resource Review for the FPL Riviera Plant
Historic Contexts WWII and Aftermath **National Register Category** Building

LOCATION and IDENTIFICATION

Address 300 Broadway
Vicinity of East Side of Broadway between Hartung Court and E Port Road
City Riviera Beach **County** Palm Beach
Ownership Private **Subdivision** **Block #** **Lot #**

MAPPING

USGS Map RIVIERA BEACH **Township** 42S **Range** 43E **Section** 33
Quarter **Qtr Qtr** **Irregular Section** ☐ **UTM Zone** 17
Easting 594287 **Northing** 2960765 **Land Grant**
Latitude **Longitude** **Plat or Other Map** Aerial Photographs

HISTORY

Architect/Builder Unknown **Construction Date** 1946 **Circa** ☐
Alterations ☑ **Date** c.1965 **Type/Location** Some window openings filled in; Brick facing added to exterior
Additions ☑ **Date** c. 1965 **Type/Location** E/Two-story masonry flat roof addition constructed
Moved ☐ **Original Location**
Use Original Unit 1 Turbine Building/Control Room **Use Present** Office/Machine Shop

DESCRIPTION

Style Masonry Vernacular **Exterior Plan** L-shaped **Interior Plan** **Stories** 2
Structural System Concrete block **Exterior Fabric** Stucco; Brick; Concrete block
Foundation Slab **Foundation Materials** Concrete **Foundation Infill**
No. of Porches 1 **Locations/Features** S/Small masonry covered entry supported by brick piers
Main Entrance (stylistic details): S/Metal and glass door off-center to east
Outbldgs. ☐ **Number** **Nature/Location (Describe below)**

Roof Type Flat **Roofing Materials** Built-up roof
Secondary Structures ☐ **Comments** **Location**
Chimneys ☐ **Number** **Orientation** **Location** **Material**
Wood Windows ☐ **Type** **Light #**
Metal Windows ☑ **Type** Glass Block; SHS **Light #** 4
Exterior Ornament Scored stucco; Brick facing;
Condition Good **Surroundings** Industrial

Narrative (general, interior, landscape, context; 3 lines only)

This Masonry Vernacular building is L-shaped in form. The southwest corner of the buiilding, which originally served as the Unit 1 Turbine Building, is taller than the rest of the structure. The building has a flat roof covered in built-up materials and the exterior is clad in stucco and brick. It has a two-story masonry addition on its east side.

Archaeological Remains Present ☐ **FMSF Archaeological Site Form Completed (if yes, attach)** ☐

HISTORICAL STRUCTURE FORM

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8PB13946

RECORDER'S EVALUATION OF SITE

Individually Eligible for National Register? Yes ☐ No ☑ Likely, Need Information ☐ Insufficient Information ☐

Potential Contributor to Nat. Reg. District? Yes ☐ No ☑ Likely, Need Information ☐ Insufficient Information ☐

Areas of Significance

Community planning & development

Summary of Significance

This building is of a common design type found throughout Florida, has undergone alterations, and limited research revealed no significant historical associations. Therefore, it is considered ineligible for listing in the National Register, either individually or as part of a historic district.

DHR USE ONLY	OFFICIAL EVALUATIONS	DHR USE ONLY
NR DATE	*KEEPER-NR ELIGIBILITY* ☐ *yes* ☐ *no*	*Date* ___/___/____
___/___/____	*SHPO-NR ELIGIBILITY:* ☐ *yes* ☐ *no* ☐ *potentially elig.* ☐ *insufficient info*	*Date* ___/___/____
DELIST DATE	*LOCAL DESIGNATION:* _____	*Date* ___/___/____
___/___/____	*Local office* _____	
National Register Criteria for Evaluation	☐ *a* ☐ *b* ☐ *c* ☐ *d* (See *National Register Bulletin 15*, p. 2)	

DOCUMENTATION

Research Methods Florida Site File for past architectural surveys; Tax records; Occupant or owner interviewed; Pedestrian; Florida Site File search

Bibliographic References

Location of Negatives Janus Research **Negative Numbers** Roll 2865, #2, Facing NW

RECORDER INFORMATION

Recorder Name Janus Research

Recorder Affiliation JANUS RESEARCH, 1300 N. Westshore Blvd., Suite 100, Florida 33607 Telephone 813-636-8200

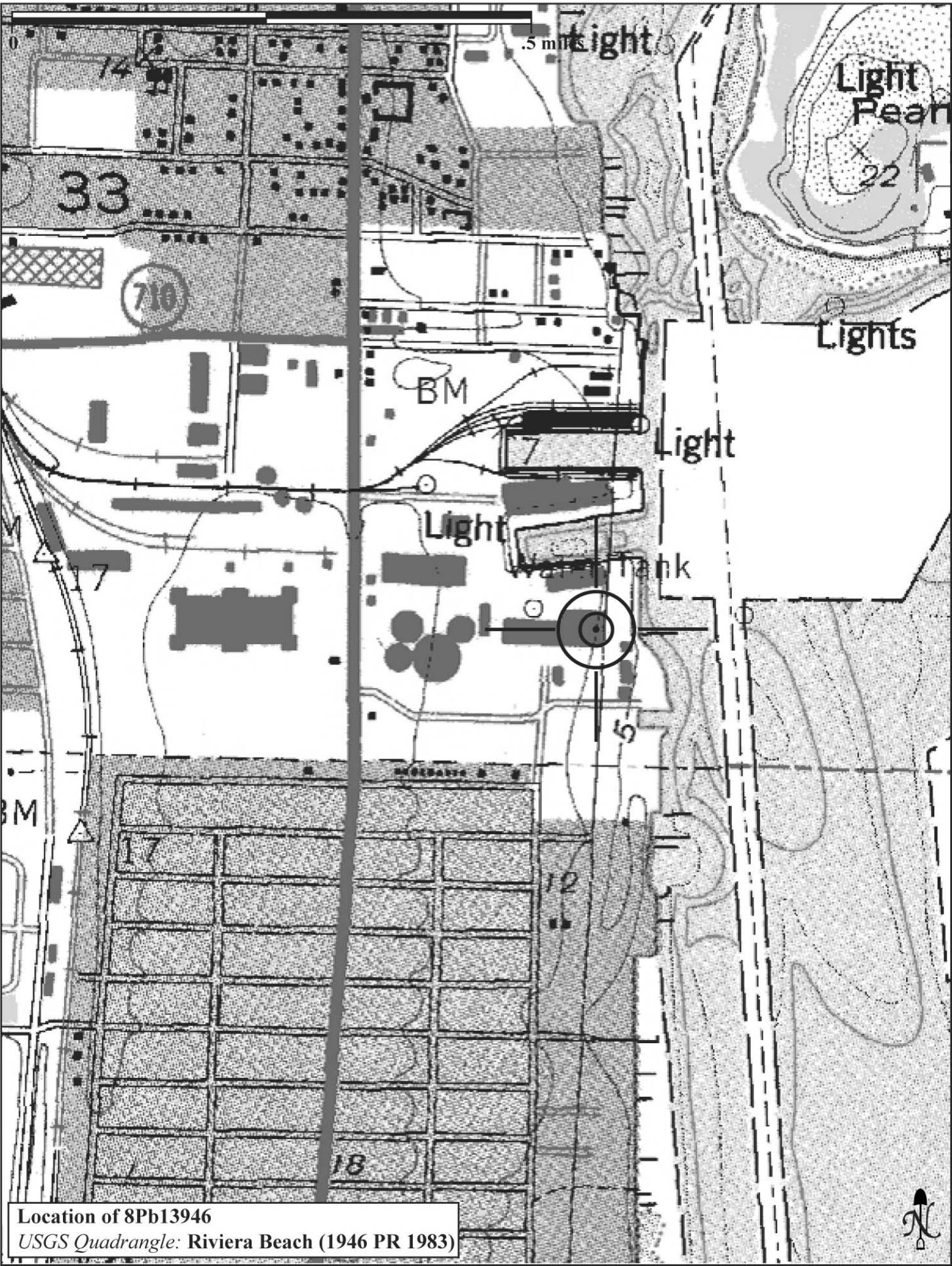
REQUIRED:

1. **USGS 7.5' MAP WITH STRUCTURES PINPOINTED IN RED**
2. **LARGE SCALE STREET OR PLAT MAP**
3. **PHOTO OF MAIN FACADE, PREFERABLY B&W, AT LEAST 3x5**

PHOTOGRAPH

SKETCH MAP

USGS QUADRANGLE MAP



Location of 8Pb13946
USGS Quadrangle: **Riviera Beach (1946 PR 1983)**

Original ☑
Update ☐

HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8PB13947
Recorder # 3
Recorder Date 9/3/08

Site Name Chemical House **Other Names**
Project Name Cultural Resource Review for the FPL Riviera Plant
Historic Contexts WWII and Aftermath **National Register Category** Building

LOCATION and IDENTIFICATION

Address 300 Broadway
Vicinity of East Side of Broadway between Hartung Court and E Port Road
City Riviera Beach **County** Palm Beach
Ownership Private **Subdivision** **Block #** **Lot #**

MAPPING

USGS Map RIVIERA BEACH **Township** 42S **Range** 43E **Section** 33
Quarter **Qtr Qtr** **Irregular Section** ☐ **UTM Zone** 17
Easting 594150 **Northing** 2960830 **Land Grant**
Latitude **Longitude** **Plat or Other Map** Aerial Photographs

HISTORY

Architect/Builder Unknown **Construction Date** 1946 **Circa** ☑
Alterations ☑ **Date** c. 1965 **Type/Location** Openings on the façade appear to have been altered
Additions ☐ **Date** **Type/Location**
Moved ☐ **Original Location**
Use Original Unknown **Use Present** Chemical House

DESCRIPTION

Style Industrial Vernacular **Exterior Plan** Rectangular **Interior Plan** **Stories** 3
Structural System Concrete block **Exterior Fabric** Stucco
Foundation Slab **Foundation Materials** Concrete **Foundation Infill**
No. of Porches **Locations/Features**
Main Entrance (stylistic details): S/Metal door
Outbldgs. ☐ **Number** **Nature/Location (Describe below)**

Roof Type Flat **Roofing Materials** Built-up roof
Secondary Structures ☐ **Comments** **Location**
Chimneys ☐ **Number** **Orientation** **Location** **Material**
Wood Windows ☐ **Type** **Light #**
Metal Windows ☑ **Type** Awning, Fixed **Light #** 1
Exterior Ornament
Condition Good **Surroundings** Industrial

Narrative (general, interior, landscape, context; 3 lines only)

This Industrial Vernacular structure appears to have undergone some façade alterations since its original construction, but retains its basic historic form. It is rectangular in form with varying one-, two-, and three-story roof lines. The building has a flat roof covered in built-up materials and the exterior is clad in stucco. Metal exterior stairs are located to the west of the building.

Archaeological Remains Present ☐ **FMSF Archaeological Site Form Completed (if yes, attach)** ☐

HISTORICAL STRUCTURE FORM

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8PB13947

RECORDER'S EVALUATION OF SITE

Individually Eligible for National Register? Yes ☐ No ☑ Likely, Need Information ☐ Insufficient Information ☐

Potential Contributor to Nat. Reg. District? Yes ☐ No ☑ Likely, Need Information ☐ Insufficient Information ☐

Areas of Significance

Community planning & development

Summary of Significance

This building is of a common, utilitarian design type found throughout Florida, has undergone alterations, and limited research revealed no significant historical associations. Therefore, it is considered ineligible for listing in the National Register, either individually or as part of a historic district.

DHR USE ONLY	OFFICIAL EVALUATIONS	DHR USE ONLY
NR DATE	*KEEPER-NR ELIGIBILITY* ☐ *yes* ☐ *no*	*Date* ___/___/____
___/___/____	*SHPO-NR ELIGIBILITY:* ☐ *yes* ☐ *no* ☐ *potentially elig.* ☐ *insufficient info*	*Date* ___/___/____
DELIST DATE	*LOCAL DESIGNATION:* _____	*Date* ___/___/____
___/___/____	*Local office* _____	
National Register Criteria for Evaluation	☐ *a* ☐ *b* ☐ *c* ☐ *d* (See *National Register Bulletin 15*, p. 2)	

DOCUMENTATION

Research Methods Florida Site File for past architectural surveys; Tax records; Occupant or owner interviewed; Pedestrian; Florida Site File search

Bibliographic References

Location of Negatives Janus Research **Negative Numbers** Roll 2865, #12, Facing NW

RECORDER INFORMATION

Recorder Name Janus Research

Recorder Affiliation JANUS RESEARCH, 1300 N. Westshore Blvd., Suite 100, Florida 33607 Telephone 813-636-8200

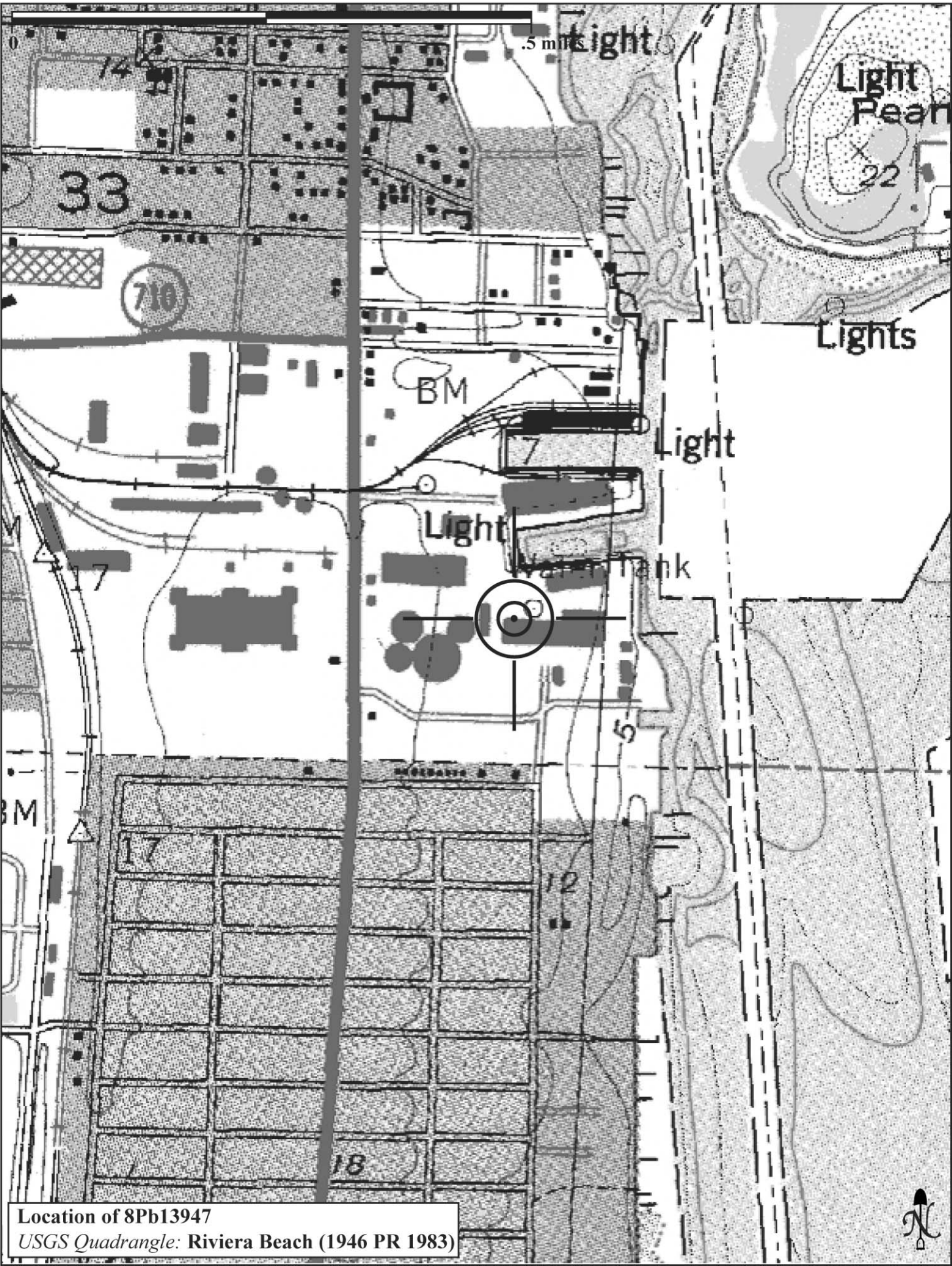
REQUIRED:

1. **USGS 7.5' MAP WITH STRUCTURES PINPOINTED IN RED**
2. **LARGE SCALE STREET OR PLAT MAP**
3. **PHOTO OF MAIN FACADE, PREFERABLY B&W, AT LEAST 3x5**

PHOTOGRAPH

SKETCH MAP

USGS QUADRANGLE MAP



Location of 8Pb13947
USGS Quadrangle: **Riviera Beach (1946 PR 1983)**

Original ☑
Update ☐

HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8PB13948
Recorder # 4
Recorder Date 9/3/08

Site Name Tank B **Other Names**
Project Name Cultural Resource Review for the FPL Riviera Plant
Historic Contexts WWII and Aftermath **National Register Category** Structure

LOCATION and IDENTIFICATION

Address 300 Broadway
Vicinity of East Side of Broadway between Hartung Court and E Port Road
City Riviera Beach **County** Palm Beach
Ownership Private **Subdivision** **Block #** **Lot #**

MAPPING

USGS Map RIVIERA BEACH **Township** 42S **Range** 43E **Section** 33
Quarter **Qtr Qtr** **Irregular Section** ☐ **UTM Zone** 17
Easting 594104 **Northing** 2960783 **Land Grant**
Latitude **Longitude** **Plat or Other Map** Aerial Photographs

HISTORY

Architect/Builder Unknown **Construction Date** 1946 **Circa** ☑
Alterations ☐ **Date** **Type/Location**
Additions ☐ **Date** **Type/Location**
Moved ☐ **Original Location**
Use Original Fuel Oil Tank **Use Present** Fuel Oil Tank

DESCRIPTION

Style Industrial Vernacular **Exterior Plan** Round **Interior Plan** Unknown **Stories** 1
Structural System Unknown **Exterior Fabric** Metal
Foundation Unknown **Foundation Materials** Unknown **Foundation Infill** N/A
No. of Porches **Locations/Features** N/A
Main Entrance (stylistic details): N/A
Outbldgs. ☐ **Number** **Nature/Location (Describe below)**

Roof Type N/A **Roofing Materials** N/A
Secondary Structures ☐ **Comments** Not applicable **Location**
Chimneys ☐ **Number** 0 **Orientation** N/A **Location** N/A **Material** Not applicable
Wood Windows ☐ **Type** **Light #**
Metal Windows ☐ **Type** N/A **Light #**
Exterior Ornament N/A
Condition Good **Surroundings** Industrial

Narrative (general, interior, landscape, context; 3 lines only)

This Industrial Vernacular metal fuel oil tank retains its basic historic form and function. It is located within the FPL Riviera Plant complex.

Archaeological Remains Present ☐ **FMSF Archaeological Site Form Completed (if yes, attach)** ☐

HISTORICAL STRUCTURE FORM

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8PB13948

RECORDER'S EVALUATION OF SITE

Individually Eligible for National Register? Yes ☐ No ☑ Likely, Need Information ☐ Insufficient Information ☐

Potential Contributor to Nat. Reg. District? Yes ☐ No ☑ Likely, Need Information ☐ Insufficient Information ☐

Areas of Significance

Community planning & development

Summary of Significance

This structure is of a common, utilitarian design type found throughout Florida, and limited research revealed no significant historical associations. Therefore, it is considered ineligible for listing in the National Register, either individually or as part of a historic district.

DHR USE ONLY	OFFICIAL EVALUATIONS	DHR USE ONLY
NR DATE ___/___/____	*KEEPER-NR ELIGIBILITY* ☐ *yes* ☐ *no*	*Date* ___/___/____
	SHPO-NR ELIGIBILITY: ☐ *yes* ☐ *no* ☐ *potentially elig.* ☐ *insufficient info*	*Date* ___/___/____
DELIST DATE ___/___/____	*LOCAL DESIGNATION:* _____	*Date* ___/___/____
	Local office _____	
National Register Criteria for Evaluation	☐ *a* ☐ *b* ☐ *c* ☐ *d* (See *National Register Bulletin 15*, p. 2)	

DOCUMENTATION

Research Methods Florida Site File for past architectural surveys; Tax records; Occupant or owner interviewed; Pedestrian; Florida Site File search

Bibliographic References

Location of Negatives Janus Research **Negative Numbers** Roll 2865, #19, Facing W

RECORDER INFORMATION

Recorder Name Janus Research

Recorder Affiliation JANUS RESEARCH, 2935 First Avenue North, St. Petersburg, Florida 33713 Telephone 727-821-7600

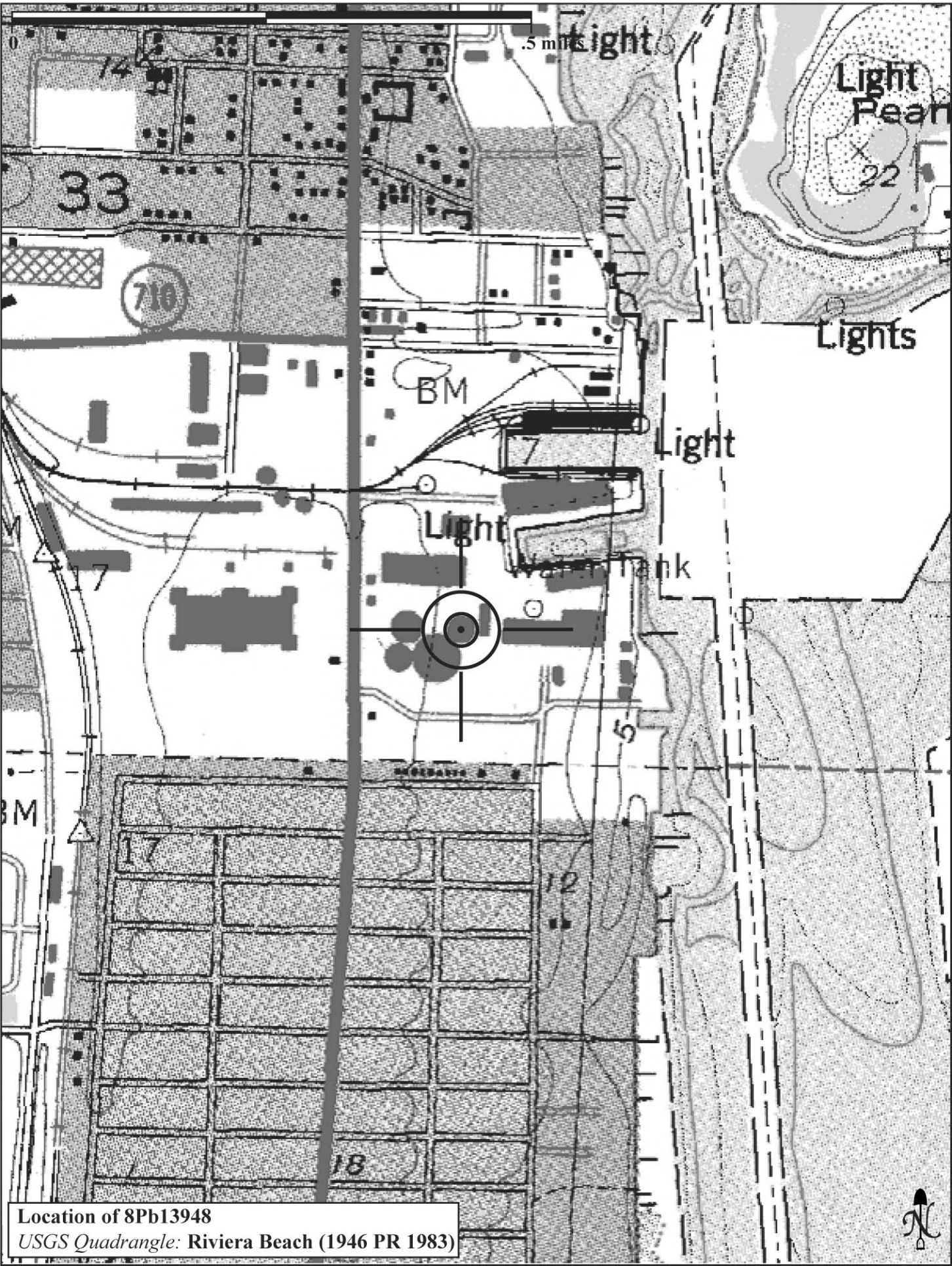
REQUIRED:

1. **USGS 7.5' MAP WITH STRUCTURES PINPOINTED IN RED**
2. **LARGE SCALE STREET OR PLAT MAP**
3. **PHOTO OF MAIN FACADE, PREFERABLY B&W, AT LEAST 3x5**

PHOTOGRAPH

SKETCH MAP

USGS QUADRANGLE MAP



Location of 8Pb13948
USGS Quadrangle: **Riviera Beach (1946 PR 1983)**

Original ☑
Update ☐

HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8PB13949
Recorder # 5
Recorder Date 9/3/08

Site Name Tank A **Other Names**
Project Name Cultural Resource Review for the FPL Riviera Plant
Historic Contexts WWII and Aftermath **National Register Category** Structure

LOCATION and IDENTIFICATION

Address 300 Broadway
Vicinity of East Side of Broadway between Hartung Court and E Port Road
City Riviera Beach **County** Palm Beach
Ownership Private **Subdivision** **Block #** **Lot #**

MAPPING

USGS Map RIVIERA BEACH **Township** 42S **Range** 43E **Section** 33
Quarter **Qtr Qtr** **Irregular Section** ☐ **UTM Zone** 17
Easting 594003 **Northing** 2960734 **Land Grant**
Latitude **Longitude** **Plat or Other Map** Aerial Photographs

HISTORY

Architect/Builder Unknown **Construction Date** 1946 **Circa** ☑
Alterations ☐ **Date** **Type/Location**
Additions ☐ **Date** **Type/Location**
Moved ☑ **Original Location** On same property to the east of Tank B
Use Original Fuel Oil Tank **Use Present** Fuel Oil Tank

DESCRIPTION

Style Industrial Vernacular **Exterior Plan** Round **Interior Plan** Unknown **Stories** 1
Structural System Not applicable **Exterior Fabric** Metal
Foundation Unknown **Foundation Materials** Unknown **Foundation Infill** N/A
No. of Porches **Locations/Features** N/A
Main Entrance (stylistic details): N/A
Outbldgs. ☐ **Number** **Nature/Location (Describe below)**

Roof Type N/A **Roofing Materials** N/A
Secondary Structures ☐ **Comments** Not applicable **Location**
Chimneys ☐ **Number** 0 **Orientation** N/A **Location** N/A **Material** Not applicable
Wood Windows ☐ **Type** **Light #**
Metal Windows ☐ **Type** N/A **Light #**
Exterior Ornament N/A
Condition Good **Surroundings** Industrial

Narrative (general, interior, landscape, context; 3 lines only)

This Industrial Vernacular metal fuel oil tank retains its basic historic form and function. It is located within the FPL Riviera Plant complex. It was moved from its original location within the FPL Riviera Complex during the 1960s, to accommodate the construction of Units 3 and 4.

Archaeological Remains Present ☐ **FMSF Archaeological Site Form Completed (if yes, attach)** ☐

HISTORICAL STRUCTURE FORM

Site # 8PB13949

Consult Guide To Historical Structure Forms for detailed instructions

RECORDER'S EVALUATION OF SITE

Individually Eligible for National Register? Yes ☐ No ☑ Likely, Need Information ☐ Insufficient Information ☐

Potential Contributor to Nat. Reg. District? Yes ☐ No ☑ Likely, Need Information ☐ Insufficient Information ☐

Areas of Significance

Community planning & development

Summary of Significance

This structure is of a common, utilitarian design type found throughout Florida, and limited research revealed no significant historical associations. Therefore, it is considered ineligible for listing in the National Register, either individually or as part of a historic district.

DHR USE ONLY	OFFICIAL EVALUATIONS	DHR USE ONLY
NR DATE ___/___/____	*KEEPER-NR ELIGIBILITY* ☐ *yes* ☐ *no*	*Date* ___/___/____
	SHPO-NR ELIGIBILITY: ☐ *yes* ☐ *no* ☐ *potentially elig.* ☐ *insufficient info*	*Date* ___/___/____
DELIST DATE ___/___/____	*LOCAL DESIGNATION:* _____	*Date* ___/___/____
	Local office _____	
National Register Criteria for Evaluation	☐ *a* ☐ *b* ☐ *c* ☐ *d* (See *National Register Bulletin 15*, p. 2)	

DOCUMENTATION

Research Methods Florida Site File for past architectural surveys; Tax records; Occupant or owner interviewed; Pedestrian; Florida Site File search

Bibliographic References

Location of Negatives Janus Research **Negative Numbers** Roll 2865, #19, Facing W

RECORDER INFORMATION

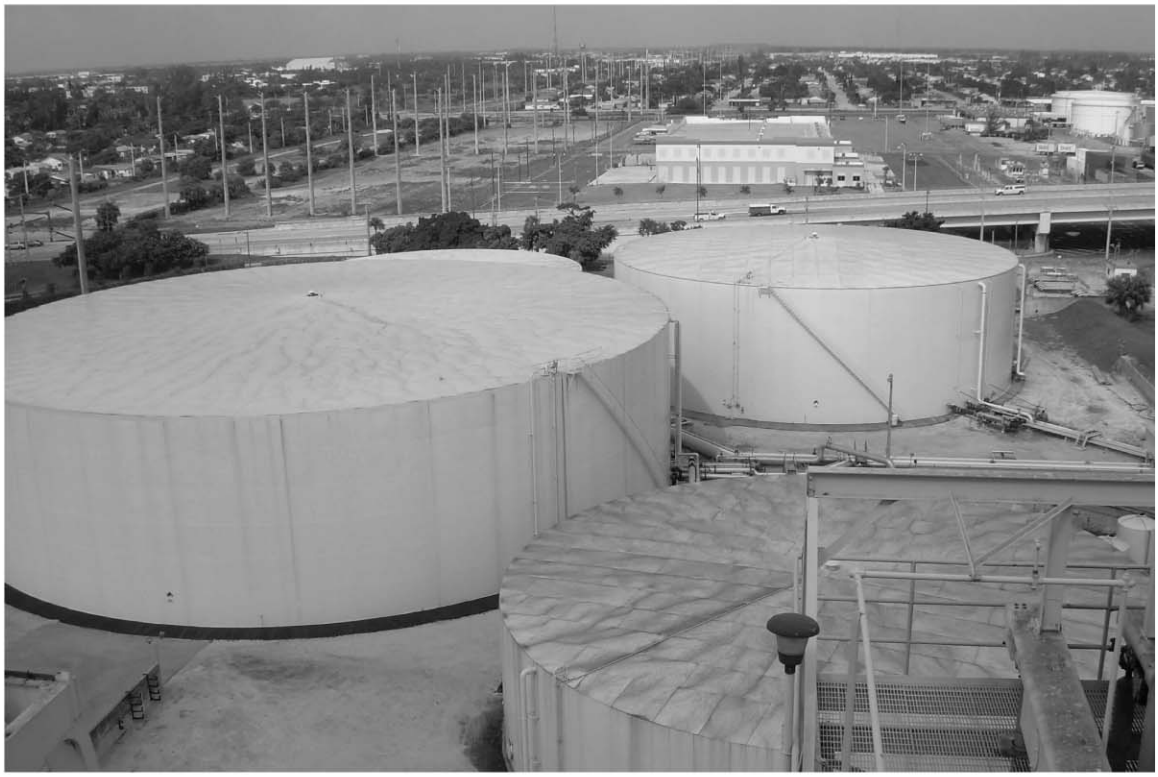
Recorder Name Janus Research

Recorder Affiliation JANUS RESEARCH, 2935 First Avenue North, St. Petersburg, Florida 33713 Telephone 727-821-7600

REQUIRED:

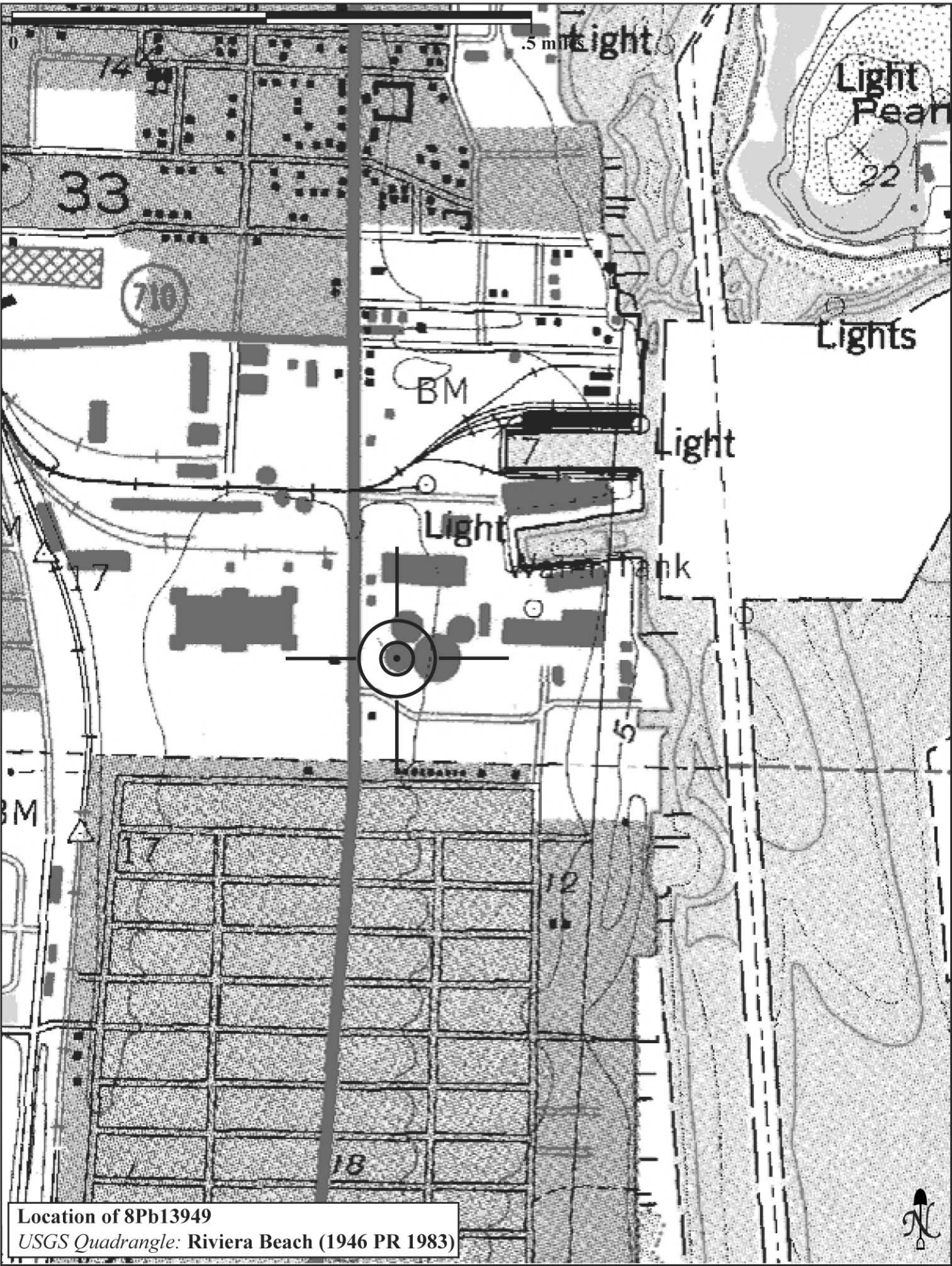
1. **USGS 7.5' MAP WITH STRUCTURES PINPOINTED IN RED**
2. **LARGE SCALE STREET OR PLAT MAP**
3. **PHOTO OF MAIN FACADE, PREFERABLY B&W, AT LEAST 3x5**

PHOTOGRAPH



SKETCH MAP

USGS QUADRANGLE MAP



Location of 8Pb13949
USGS Quadrangle: **Riviera Beach (1946 PR 1983)**

Original ☑
Update ☐

HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8PB13950
Recorder # 6
Recorder Date 9/3/08

Site Name FPL Training Center/Pavilion **Other Names**
Project Name Cultural Resource Review for the FPL Riviera Plant
Historic Contexts Modern **National Register Category** Building

LOCATION and IDENTIFICATION

Address 100 Broadway
Vicinity of East Side of Broadway between Hartung Court and 59th Street
City Riviera Beach **County** Palm Beach
Ownership Private **Subdivision** **Block #** **Lot #**

MAPPING

USGS Map RIVIERA BEACH **Township** 42S **Range** 43E **Section** 34
Quarter **Qtr Qtr** **Irregular Section** ☐ **UTM Zone** 17
Easting 594353 **Northing** 2960587 **Land Grant**
Latitude **Longitude** **Plat or Other Map** Aerial Photographs

HISTORY

Architect/Builder Unknown **Construction Date** 1956 **Circa** ☑
Alterations ☐ **Date** **Type/Location**
Additions ☐ **Date** **Type/Location**
Moved ☐ **Original Location**
Use Original Recreation--building **Use Present** Training Center

DESCRIPTION

Style Masonry Vernacular **Exterior Plan** Rectangular **Interior Plan** Unknown **Stories** 2
Structural System Concrete block **Exterior Fabric** Stucco
Foundation Slab **Foundation Materials** Concrete **Foundation Infill** N/A
No. of Porches 0 **Locations/Features** 2-story/Open porch on roof of first floor surrounded by metal rail
Main Entrance (stylistic details): N/Metal door
Outbldgs. ☐ **Number** **Nature/Location (Describe below)**

Roof Type Flat **Roofing Materials** Built-up roof
Secondary Structures ☐ **Comments** Not applicable **Location**
Chimneys ☑ **Number** 1 **Orientation** Southeast **Location** Interior **Material** Unknown
Wood Windows ☐ **Type** **Light #**
Metal Windows ☐ **Type** Covered from view **Light #**
Exterior Ornament
Condition Good **Surroundings** Industrial

Narrative (general, interior, landscape, context; 3 lines only)

This two-story Masonry Vernacular building is rectangular in form. The first story is larger than the second, projecting to the east. The roof of the first story serves as an open porch with access from the second story, and is surrounded by a simple metal rail. The building has a flat roof with wide, overhanging eaves covered in built up materials, and the exterior is clad in stucco.

Archaeological Remains Present ☐ **FMSF Archaeological Site Form Completed (if yes, attach)** ☐

HISTORICAL STRUCTURE FORM

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8PB13950

RECORDER'S EVALUATION OF SITE

Individually Eligible for National Register? Yes ☐ No ☑ Likely, Need Information ☐ Insufficient Information ☐

Potential Contributor to Nat. Reg. District? Yes ☐ No ☑ Likely, Need Information ☐ Insufficient Information ☐

Areas of Significance

Community planning & development

Summary of Significance

This building is of a common design type found throughout Florida, has undergone alterations, and limited research revealed no significant historical associations. Therefore, it is considered ineligible for listing in the National Register, either individually or as part of a historic district.

DHR USE ONLY	OFFICIAL EVALUATIONS	DHR USE ONLY
NR DATE	*KEEPER-NR ELIGIBILITY* ☐ *yes* ☐ *no*	*Date* ___/___/____
___/___/____	*SHPO-NR ELIGIBILITY:* ☐ *yes* ☐ *no* ☐ *potentially elig.* ☐ *insufficient info*	*Date* ___/___/____
DELIST DATE	*LOCAL DESIGNATION:* _____	*Date* ___/___/____
___/___/____	*Local office* _____	
National Register Criteria for Evaluation	☐ *a* ☐ *b* ☐ *c* ☐ *d* (See *National Register Bulletin 15*, p. 2)	

DOCUMENTATION

Research Methods Florida Site File for past architectural surveys; Tax records; Occupant or owner interviewed; Pedestrian; Florida Site File search

Bibliographic References

Location of Negatives Janus Research **Negative Numbers** Roll 2865, #24, Facing NE

RECORDER INFORMATION

Recorder Name Janus Research

Recorder Affiliation JANUS RESEARCH, 2935 First Avenue North, St. Petersburg, Florida 33713 Telephone 727-821-7600

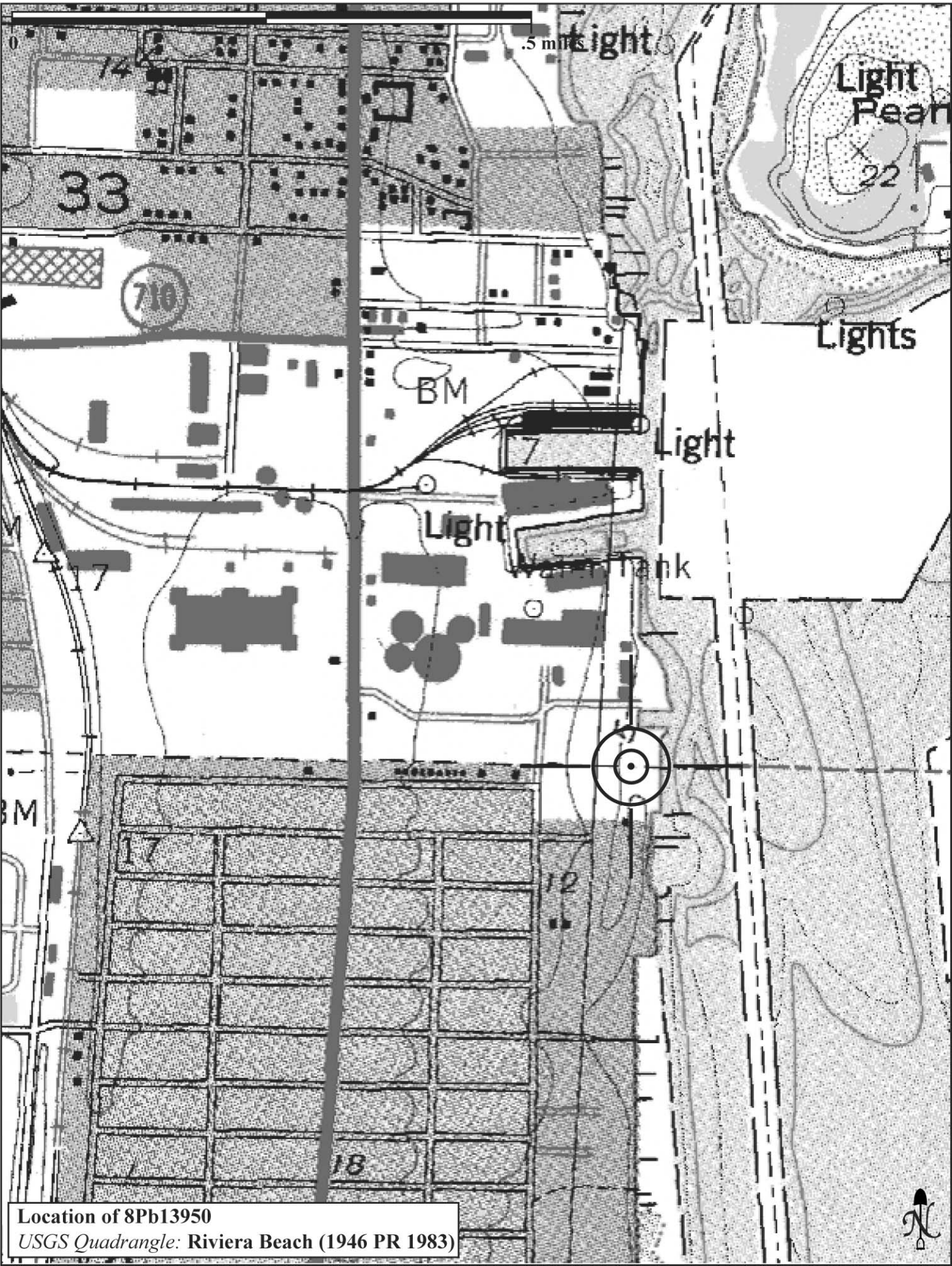
REQUIRED:

1. **USGS 7.5' MAP WITH STRUCTURES PINPOINTED IN RED**
2. **LARGE SCALE STREET OR PLAT MAP**
3. **PHOTO OF MAIN FACADE, PREFERABLY B&W, AT LEAST 3x5**

PHOTOGRAPH

SKETCH MAP

USGS QUADRANGLE MAP



Location of 8Pb13950
USGS Quadrangle: **Riviera Beach (1946 PR 1983)**

Original ☑
Update ☐

HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8PB13951
Recorder # 7
Recorder Date 9/3/08

Site Name FPL Riviera Plant Water Tower **Other Names**
Project Name Cultural Resource Review for the FPL Riviera Plant
Historic Contexts WWII and Aftermath **National Register Category** Structure

LOCATION and IDENTIFICATION

Address 300 Broadway
Vicinity of East Side of Broadway between Hartung Court and E Port Road
City Riviera Beach **County** Palm Beach
Ownership Private **Subdivision** **Block #** **Lot #**

MAPPING

USGS Map RIVIERA BEACH **Township** 42S **Range** 43E **Section** 33
Quarter **Qtr Qtr** **Irregular Section** ☐ **UTM Zone** 17
Easting 594160 **Northing** 2960826 **Land Grant** Unknown
Latitude **Longitude** **Plat or Other Map** Aerial Photographs

HISTORY

Architect/Builder Unknown **Construction Date** 1946 **Circa** ☑
Alterations ☐ **Date** **Type/Location**
Additions ☐ **Date** **Type/Location**
Moved ☐ **Original Location**
Use Original Water Tower **Use Present** Water Tower

DESCRIPTION

Style Industrial Vernacular **Exterior Plan** N/A **Interior Plan** Unknown **Stories**
Structural System Metal **Exterior Fabric** Metal
Foundation Unknown **Foundation Materials** Unknown **Foundation Infill** N/A
No. of Porches 0 **Locations/Features** N/A
Main Entrance (stylistic details): N/A
Outbldgs. ☐ **Number** **Nature/Location (Describe below)**

Roof Type N/A **Roofing Materials** N/A
Secondary Structures ☐ **Comments** Not applicable **Location**
Chimneys ☐ **Number** 0 **Orientation** N/A **Location** N/A **Material** Not applicable
Wood Windows ☐ **Type** **Light #**
Metal Windows ☐ **Type** N/A **Light #**
Exterior Ornament N/A
Condition Good **Surroundings** Industrial
Narrative (general, interior, landscape, context; 3 lines only)

This water tower retains its historic form and is located on its original site at the FPL Riviera Plant.

Archaeological Remains Present ☐ **FMSF Archaeological Site Form Completed (if yes, attach)** ☐

HISTORICAL STRUCTURE FORM

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8PB13951

RECORDER'S EVALUATION OF SITE

Individually Eligible for National Register? Yes ☐ No ☑ Likely, Need Information ☐ Insufficient Information ☐

Potential Contributor to Nat. Reg. District? Yes ☐ No ☑ Likely, Need Information ☐ Insufficient Information ☐

Areas of Significance

Community planning & development

Summary of Significance

This structure is of a common, utilitarian design type found throughout Florida, and limited research revealed no significant historical associations. Therefore, it is considered ineligible for listing in the National Register, either individually or as part of a historic district.

DHR USE ONLY	OFFICIAL EVALUATIONS	DHR USE ONLY
NR DATE ___/___/____	*KEEPER-NR ELIGIBILITY* ☐ *yes* ☐ *no*	*Date* ___/___/____
	SHPO-NR ELIGIBILITY: ☐ *yes* ☐ *no* ☐ *potentially elig.* ☐ *insufficient info*	*Date* ___/___/____
DELIST DATE ___/___/____	*LOCAL DESIGNATION:* _____	*Date* ___/___/____
	Local office _____	
National Register Criteria for Evaluation	☐ *a* ☐ *b* ☐ *c* ☐ *d* (See *National Register Bulletin 15*, p. 2)	

DOCUMENTATION

Research Methods Florida Site File for past architectural surveys; Tax records; Occupant or owner interviewed; Pedestrian; Florida Site File search

Bibliographic References

Location of Negatives Janus Research **Negative Numbers** Roll No photo

RECORDER INFORMATION

Recorder Name Janus Research

Recorder Affiliation JANUS RESEARCH, 2935 First Avenue North, St. Petersburg, Florida 33713 Telephone 727-821-7600

REQUIRED:

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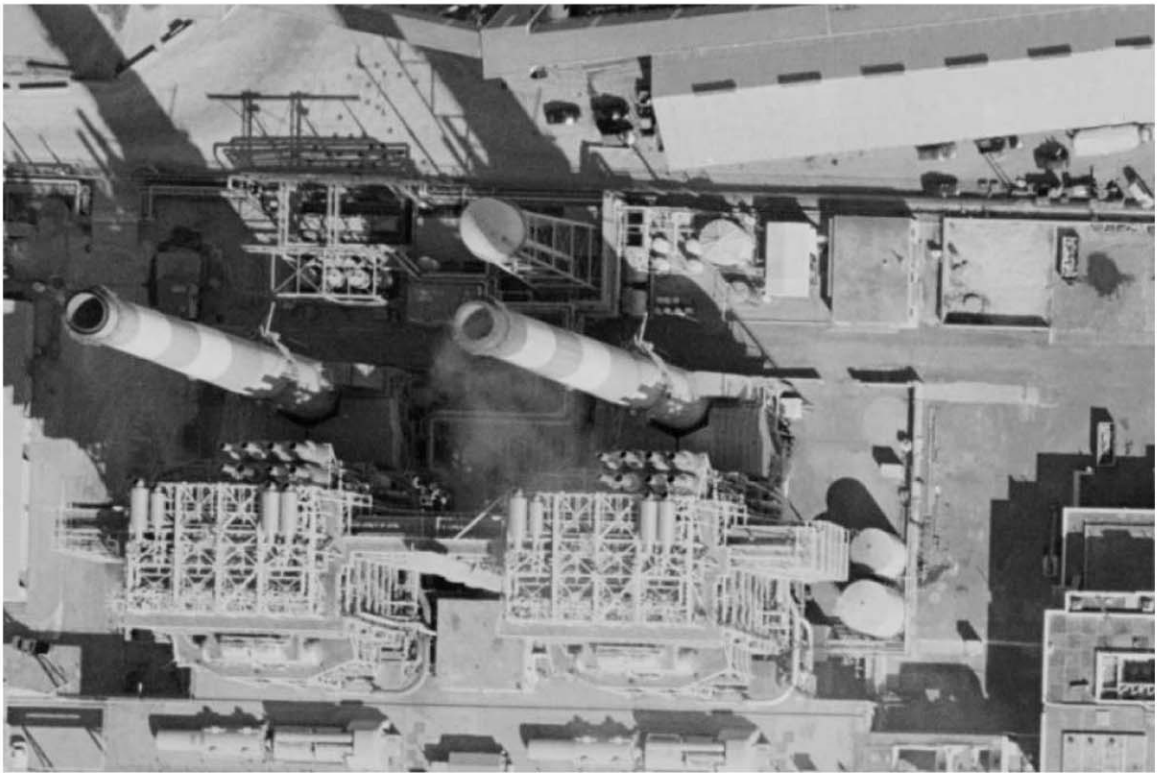
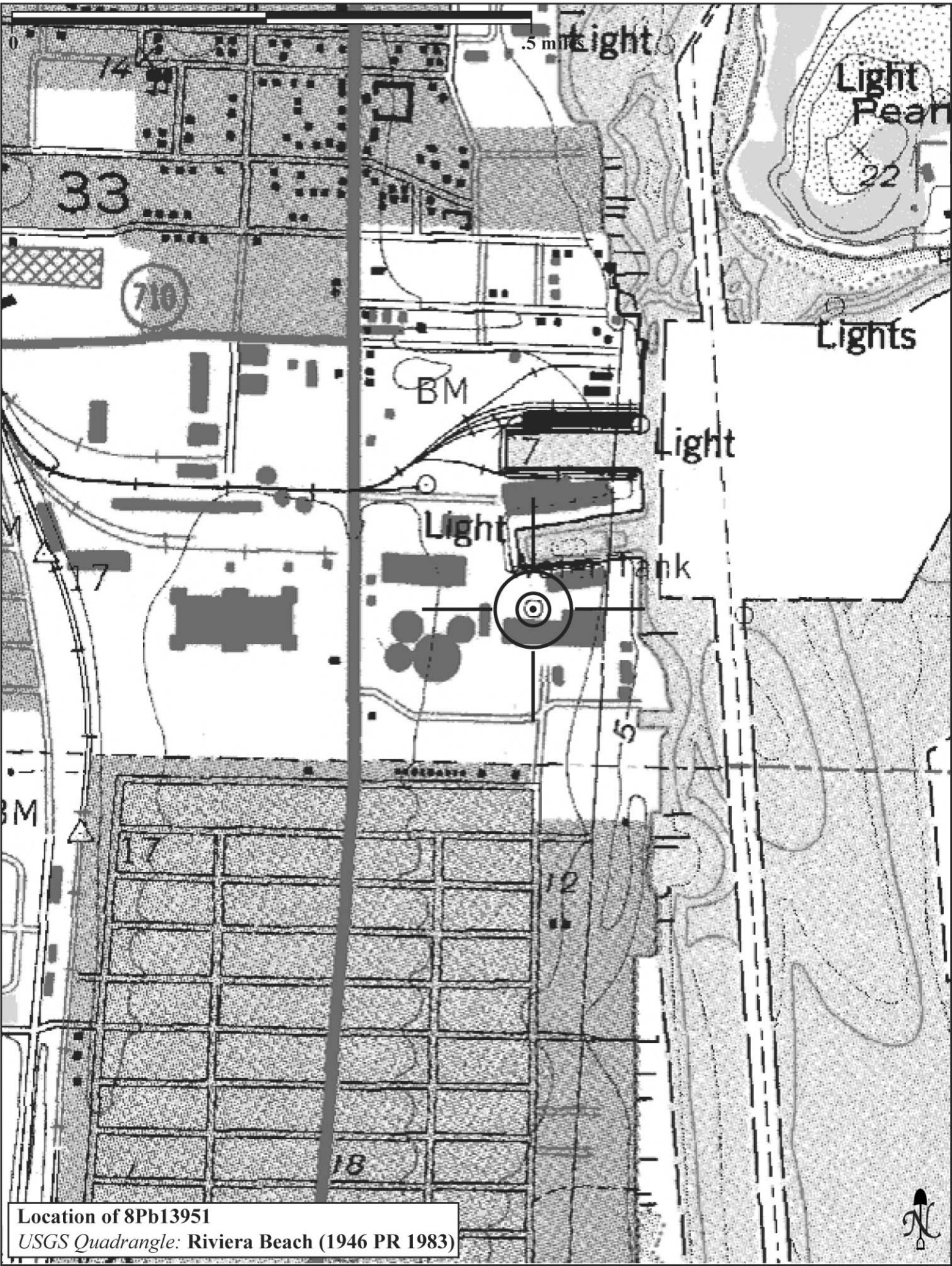
3. **PHOTO OF MAIN FACADE, PREFERABLY B&W, AT LEAST 3x5**

PHOTOGRAPH



SKETCH MAP

USGS QUADRANGLE MAP



Location of 8Pb13951
USGS Quadrangle: **Riviera Beach (1946 PR 1983)**

FLORIDA DEPARTMENT OF STATE
Kurt S. Browning
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Ms. Kathleen Hoffman, Ph.D.
Janus Research
1300 N. Westshore Blvd., Suite 100
Tampa, Florida 33607

November 21, 2008

Re: DHR Project File No.: 2008-06617
Received by DHR: October 20, 2008
Cultural Resource Review for the FPL Riviera Plant

Dear Dr. Hoffman:

Our office received and reviewed the above referenced survey report in accordance with Chapters 267, 373, and 403 of the *Florida Statutes*, as well as pertinent local ordinances, for possible adverse impact to cultural resources (any prehistoric or historic district, site, building, structure, or object) listed, or eligible for listing, in the National Register of Historic Places (NRHP).

In September 2008, Janus Research conducted an archaeological and historical survey of the proposed FPL Riviera Plant Conversion project area on behalf of Florida Power & Light Company and Golder Associates. Janus Research identified seven previously unrecorded historic structures, six of which constitute a historic resource group, within the project area during the investigation.

Janus Research determined that the FPL Riveira Plant Complex Resource Group (8PB13944) does not appear to be eligible for listing on the NRHP based on lack of distinctive architecture, extensive alterations to historic structures, and a large number of non-historic buildings within the district.

Furthermore, Janus Research determined that the three historic buildings (8PB13945 – 8PB13947), two historic fuel oil tanks (8PB13948 – 8PB13949), and one historic water tower (8PB13951) that make up the resource group do not appear to be individually eligible for listing on the NRHP. One additional historic building (8PB1350) appears to be ineligible for listing on the NRHP based on its common form and lack of significant historic associations.

Janus Research determined that the proposed development will have no effect on cultural resources listed, or eligible for listing, in the NRHP, or otherwise of historical, archaeological, or architectural value. Janus Research recommends no further investigation of the subject parcel.

Based on the information provided, our office concurs with these determinations and finds the submitted report complete and sufficient in accordance with Chapter 1A-46, *Florida Administrative Code.*

For any questions concerning our comments, please contact April Westerman, Historic Preservationist, by electronic mail at amwesterman@dos.state.fl.us, or by phone at (850) 245-6333. We appreciate your continued interest in protecting Florida's historic properties.

Sincerely,

Frederick P. Gaske, Director, and
State Historic Preservation Officer

JANUS TAMPA BAY
1300 North Westshore Blvd., Suite 100
Tampa, FL 33607
Tel: 813.636.8200
Fax: 813.636.8212
janus@janus-research.com

EST. 1979

JANUS SOUTH
1691 Michigan Avenue, Suite 225
Miami Beach, FL 33139
Tel: 305.535.0013
Fax: 305.535.0063
janus_south@janus-research.com

February 3, 2009

Mr. Frederick Gaske
SHPO and Director, Florida Division of Historical Resources
R.A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250

Re: FPL Riviera Power Plant: Desktop Analysis for the Proposed FPL Construction Support Area (on East Side of U.S. Highway 1) and Construction Laydown and Parking Area (on West Side of U.S. Highway 1)
Supplemental Report 1

Dear Mr. Gaske:

This letter documents the results of a desktop analysis of the proposed construction support area (on east side of U.S. Highway 1) and construction laydown and parking area (on west side of U.S. Highway 1) conducted for Florida Power & Light Company (FPL) by Janus Research in December 2008 and January 2009. These two proposed areas are associated with the Riviera Power Plant conversion project. It is anticipated that the use of the project area will result in minimal impact to the subsurface due to the temporary nature of the construction support areas and their proposed use for staging and parking. The purpose of this desktop analysis is to determine the need for additional field surveys. Your review and opinion regarding the need for a survey would be appreciated.

A previously submitted report, the Cultural Resource Review for the FPL Riviera Plant (Janus Research 2008; DHR Project File No.: 2008-06617) consisted of a desktop analysis and reconnaissance survey of the FPL Riviera Plant. This letter serves as an addendum to this previously submitted report.

The proposed construction support area (east of U.S. Highway 1) is located entirely within the area previously surveyed for historic resources (FPL Riviera Plant dated November 2008) whereas only the easternmost portion of the proposed construction laydown and parking area (west of U.S. Highway 1) is located within the area previously surveyed for historic resources. The locations of these areas relative to the previous survey are included on a USGS Quadrangle map in Attachment 1.

While no historic resources were previously identified within either of the currently proposed areas, three historic structures (8PB4463, 8PB4462, and 8PB13590) and one locally-designated historic district (Northwood Harbor Historic District) are located within 500 ft. of the proposed construction support area (east of U.S. Highway 1). Additionally, three historic linear resources including Broadway/U.S. 1, Riviera Beach (8PB12192), Old Dixie Highway (8PB13330), and the Florida East Coast Railway (8PB13559) are located within 500 ft. of the eastern and western boundaries of the proposed construction laydown and parking area (west of U.S. Highway 1). Because these resources are located outside of the proposed areas and due to the temporary nature of their use, no impacts to these resources are anticipated. The locations of these previously recorded resources are included on a USGS Quadrangle map in Attachment 2.

In addition to the 2008 survey conducted by Janus Research, six additional cultural resource surveys have been conducted within or adjacent to the proposed areas. Five of these cultural resource surveys (FMSF Survey No.: 6567, 9061, 9310, 10954, and 14000) were conducted within or adjacent to the proposed construction support area (east of U.S. Highway 1) and three of the cultural resource surveys (FMSF Survey No.: 9310, 12392, and 14000) intersect the proposed construction laydown and parking area (west of U.S. Highway 1). No archaeological resources, or features indicative of the potential for archaeological sites, were identified within the proposed areas during any of these previously conducted surveys. These six surveys are listed in Table 1.

Table 1. Previous Cultural Resource Surveys Conducted within 500 ft.

SV No.	Title, Author(s), and Date of Publication
6567	Archeological Diver Identification and Evaluation of Nineteen Potentially Significant Submerged Targets along the Intracoastal Waterway, Palm Beach County, Florida (Mid-Atlantic Technology 2000)
9061	Phase I Cultural Resources Survey and Archaeological Inventory of the Onshore Florida Portion of the Proposed Seafarer U.S. Pipeline System Project in Palm Beach and Martin Counties, Florida (R. Christopher Goodwin & Associates, Inc. 2003a)
9310	Cultural Resources Survey and Inventory of the Seafarer U.S. Pipeline System, Inc.'s Proposed 26-Inch Gas Pipeline, Florida State Waters Boundary to the Florida Mainland (R. Christopher Goodwin & Associates, Inc. 2004)
10954	Phase I Cultural Resources Survey and Archeological Inventory of the Onshore Florida Portion of the Proposed Seafarer US Pipeline System Project in Palm Beach County, Florida (R. Christopher Goodwin & Associates, Inc. 2003b)
12392	A Cultural Resource Assessment Survey of the Community Redevelopment Area, County: Palm Beach (Janus Research 2003)
14000	Cultural Resources Reconnaissance Study, South Florida East Coast Corridor Transit Analysis, Miami-Dade, Broward and Palm Beach Counties (Janus Research 2006)

The proposed construction support area (east of U.S. Highway 1) is located within the boundaries of the survey of the Riviera Plant expansion conducted by Janus Research in 2008. In November of 2008, SHPO concurred with the determination that the proposed Riviera Plant expansion will have no effect on cultural resources listed, or eligible for listing in the National Register of Historic Places (National Register) and that it will have no effect on cultural resources of architectural value (DHR Project File No.: 2008-06617; Attachment 3).

In addition, the proposed construction support area (east of U.S. Highway 1) is located in an area previously surveyed for archaeological and historic resources in 2003 by R. Christopher Goodwin and Associates (FMSF Survey No. 10954). No cultural material was recovered within the proposed construction support area (east of U.S. Highway 1) (DHR Project File No.: 2004-11008; Attachment 4)

The proposed construction laydown and parking area (west of U.S. Highway 1) has also previously surveyed for archaeological and historic resources. A cultural resource assessment survey conducted by Janus Research in 2003 identified no cultural material or historic resources within the proposed construction laydown and parking area (west of U.S. Highway 1) (DHR Project File No.: 2003-7856; Attachment 5).

The desktop analysis focused on determining areas of archaeological site potential within the proposed construction support area (east of U.S. Highway 1) and the proposed construction laydown and parking area (west of U.S. Highway 1).

Previously Recorded Archaeological Resources
Preliminary background research of the Florida Master Site File (FMSF) revealed that there are no previously recorded archaeological sites within 500 ft. of either the proposed construction support area (east of U.S. Highway 1) or the proposed construction laydown and parking area (west of U.S. Highway 1).

Pre-Development Environment and Land Use History
A review of 1859 Government Land Office (GLO) historic plat maps and surveyors' field notes was conducted to look at past environmental conditions. The proposed construction support area (east of U.S. Highway 1) is situated on the western bank of Lake Worth Lagoon and is described as pine and scrub oak vegetation (Florida Department of Environmental Protection [FDEP] 1859b, 1859d). The proposed construction laydown and parking area (west of U.S. Highway 1) is situated inland from the Lake Worth Lagoon and is also described as pine and scrub oak vegetation (FDEP 1859a, 1859c).

The historic plat maps were also reviewed for evidence of homesteads or other early settlement. During the nineteenth century (post-1821), historic settlement tended to follow the isolated homestead or farmstead pattern. Individual families or groups of related families often built homesteads on the better-drained, hardwood hammocks. There were usually several miles between these settlements to allow room for farm fields. A review of the historic plat maps shows no indication of military forts, encampments, battlefields, land grants, homesteads, farmsteads, roads, or historical Native American villages located within the vicinity of either the construction support area (east of U.S. Highway 1) or the construction laydown and parking area (west of U.S. Highway 1).

A review of historic aerials from 1953 and 1968 (State University System of Florida [SUSF] 2004) was conducted to examine land use during the mid-1900s. As shown by the 1953 historic aerial, the proposed construction support area (east of U.S. Highway 1) looks to have been partially cleared by this date with several areas of natural vegetation remaining while the surrounding area is largely developed or under construction. As shown by the 1953 historic aerial, the proposed construction laydown and parking area (west of U.S. Highway 1) is undeveloped; a residential development is located to the south.

By the late 1960s, as evidenced by the 1968 aerial, residential development is beginning to occur within the proposed construction support area (east of U.S. Highway 1), particularly in the northwestern quarter of the area. Current aerials obtained from Google Earth show this development has since been demolished (this is consistent with the previously conducted historic resources survey) and some areas of vegetation have grown back. Additionally, the current aerial illustrates the presence of a light duty road running east-west in the northern third of the proposed construction support area (east of U.S. Highway 1) and a seawall running north-south adjacent to its eastern edge.

Contrastingly, the 1968 aerial illustrates the proposed construction laydown and parking area (west of U.S. Highway 1) as an existing transmission line corridor that has been cleared of any natural vegetation except for native grasses. While the amount of residential development surrounding the area has increased dramatically by this date, only the transmission line corridor is present within the proposed construction laydown and parking area (west of U.S. Highway 1).

The partially developed and disturbed characteristics of both the proposed construction support area (east of U.S. Highway 1) and the proposed construction laydown and parking area (west of U.S. Highway 1) suggested by the historic aerials are supported by the 1978 Palm Beach County soil survey descriptions of the soil types located within these two proposed areas (Table 2).

Table 2. Description of Detailed Soil Types

Drainage Characteristic	Soil Type	Environmental Association
Excessively drained	St. Lucie-Paola-Urban Land Complex	Developed Areas
N/A	Urban Land Complex	Developed Areas

Source: USDA 1978

Archaeological Site Potential Zones

Site potential zones were designated based on their potential for containing archaeological sites. These site potential zones were based on the background research, previous research conducted within the Glades cultural region, and more specifically, Palm Beach County, in conjunction with pertinent environmental variables. Variables used to determine site potential zones include distance to fresh water sources (e.g., lakes, creeks, and wetlands), relative elevation, soil drainage characteristics, and the presence of hardwood vegetation.

Fresh water was an important resource for precontact populations. This variable would have been of greater importance during the Paleoindian and Early Archaic stages (12,000–5000 BC), when the perched water system was more restricted. Access to fresh water during these early periods would have been from sinkholes and aquifer-fed rivers.

The proposed construction support area (east of U.S. Highway 1) is located adjacent to Lake Worth Lagoon and the proposed construction laydown and parking area (west of U.S. Highway 1) is located approximately 0.3 miles inland. However, the developed and modified nature of these areas and their surroundings make it difficult to ascertain additional water sources that may have historically been available to pre-Columbian populations.

Due to the proximity to the Lake Worth Lagoon, higher elevations would have been favorable for archaeological sites to avoid seasonal flooding. The USGS Quadrangle map was reviewed to target areas of higher elevation, and particular focus was placed on slopes adjacent to fresh water sources. The proposed construction support area (east of U.S. Highway 1) is located in an area of lower elevation adjacent to the lake shore with areas of higher elevation approximately 3000 ft. to the west. The proposed construction laydown and parking area (west of U.S. Highway 1) is inland from the lake shore with areas of higher elevation approximately 1300 ft. to the west. These areas of higher elevation to the west would have been more favorable to pre-Columbian populations for settlement. With an abundance of fresh water from Lake Worth Lagoon and relatively low elevation, hardwood vegetation would have been an important factor in determining probable archaeological site locations.

The use of hammock vegetation during the precontact and historic periods is well documented. Hammocks are not usually prone to flooding and retard the development and spread of fires (Austin 1992). The thick foliage of hammocks provides shade and moderates temperatures year-round. The thick canopies of hammocks also provide good shelter during periods of heavy weather. Mature hammocks offer enough open space for habitation and activity areas. Finally, many fruits, nuts and tubers are available in hammocks that are important as human food sources as well as for their ability to attract game animals. For these reasons, areas with soil types indicative of hardwood or hammock vegetation are considered to have a high archaeological potential regardless of drainage characteristics. However, none of the soils within the proposed areas typically support hardwood hammock vegetation, and no hardwood hammock vegetation is visible on the historic aerials.

Drainage characteristics of soil have been successfully used in the formulation of site location and predictive models. Moderately well drained and excessively well drained soil types, particularly those found in areas of higher elevation, were determined to have high archaeological site potential. As mentioned previously, the soils within the proposed areas are indicative of development and disturbance and are characterized as excessively drained.

In Florida, sites associated with early European settlement and exploration frequently co-occur with precontact archaeological sites. This is often the result of environmental conditions found desirable by both groups: better-drained upland knolls near transportation routes (i.e., historic trails and major rivers). Use of the land around the project corridor during the earliest historic periods (First Spanish, English, and Second Spanish) was probably limited; occupations from these periods would have been of such short duration that evidence of parties crossing the project vicinity is almost impossible to detect archaeologically. Furthermore, no such groups are known or suspected of having settled or camped within the project area.

While the proposed construction support area (east of U.S. Highway 1) and construction laydown and parking area (west of U.S. Highway 1) are located near a major water source, the low elevation of the surrounding area may have increased the probability of seasonal flooding making the higher elevation to the west more favorable. Additionally, the GLO surveyors' field notes for the project area do not describe any hardwood or hammock vegetation. These factors, coupled with the fact that no archaeological sites were identified within either area during previous archaeological survey, suggest a low potential for finding intact archaeological sites.

Based on the results of this background research, no additional archaeological survey is recommended. However, it is suggested that FPL initiate coordination with the Palm Beach County Planning Division regarding any county specific cultural resource concerns.

Although unlikely, should construction activities uncover any archaeological remains, it is recommended that activity in the immediate area of the remains be stopped while a professional archaeologist evaluates the remains. In the event that human remains are found during construction or maintenance activities, the provisions of Chapter 872.05 of the Florida Statutes will apply. Chapter 872.05 states that, when human remains are encountered, all activity that might disturb the remains shall cease and may not resume until authorized by the District Medical Examiner or the State Archaeologist. The District Medical Examiner has jurisdiction if the remains are less than 75 years old or if the remains are involved in a criminal investigation. The State Archaeologist has jurisdiction if the remains are more than 75 years of age.

If you have questions, please feel free to contact me at (813) 636-8200. Thank you for your help and attention on this effort.

Sincerely,

Adam M Schiffer

for Kathleen S. Hoffman, Ph.D.
Janus Research

cc: Ken Kosky, Golder Associates
Kerri Kitchen, Golder Associates
Adam Schieffer, Janus Research

If you concur with these findings please sign below:

_____ _____

Frederick Gaske, SHPO and Director — Date
Florida Division of Historical Resources

REFERENCES CITED

Austin, Daniel F.
1992 Plant Communities of Southern Florida. Lecture Notes, Florida Atlantic University.

Janus Research
2008 Cultural Resource Review of the FPL Riviera Beach Plant. Manuscript on file, Florida Department of State, Division of Historical Resources, Tallahassee.

Florida Department of Environmental Protection (FDEP)
1859a Plat Map for Township 42 South, Range 43 East. Division of State Lands, Board of Trustees Land Document System. Accessed online at http://199.73.242.56/default.asp.
1859b Plat Map for Township 43 South, Range 43 East. Division of State Lands, Board of Trustees Land Document System. Accessed online at http://199.73.242.56/default.asp.
1859c Surveyors Notes for Township 42 South, Range 43 East. Accessed online at http://data.labins.org/2003/surveydata/landrecords/glo/index.cfm.
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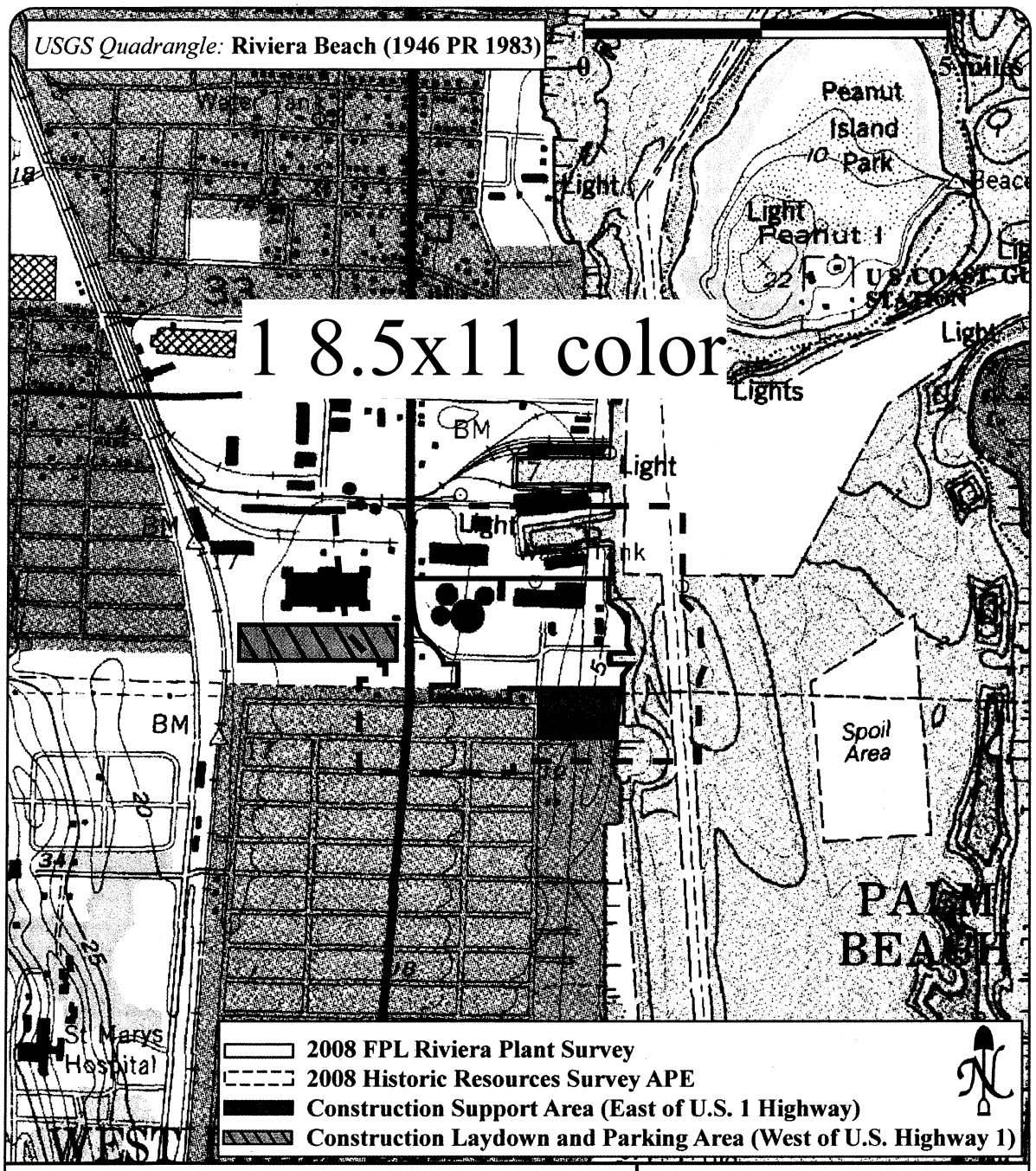
State University System of Florida (SUSF)
2004 Publication of Archival, Library & Museum Materials (PALMM) - Aerial Photography: Florida (FLAP). Accessed online at http://www.uflib.ufl.edu/digital/collections/flap/

United States Department of Agriculture (USDA)
1978 Soil Survey of Palm Beach County, Florida. USDA/Soil Conservation Service.

Attachment 1:

Newly Proposed FPL Construction Support Area (East of U.S. Highway 1), Construction Laydown and Parking Area (West of U.S. Highway 1), and Previously Submitted 2008 Plant Surveys Illustrated on USGS Quadrangle



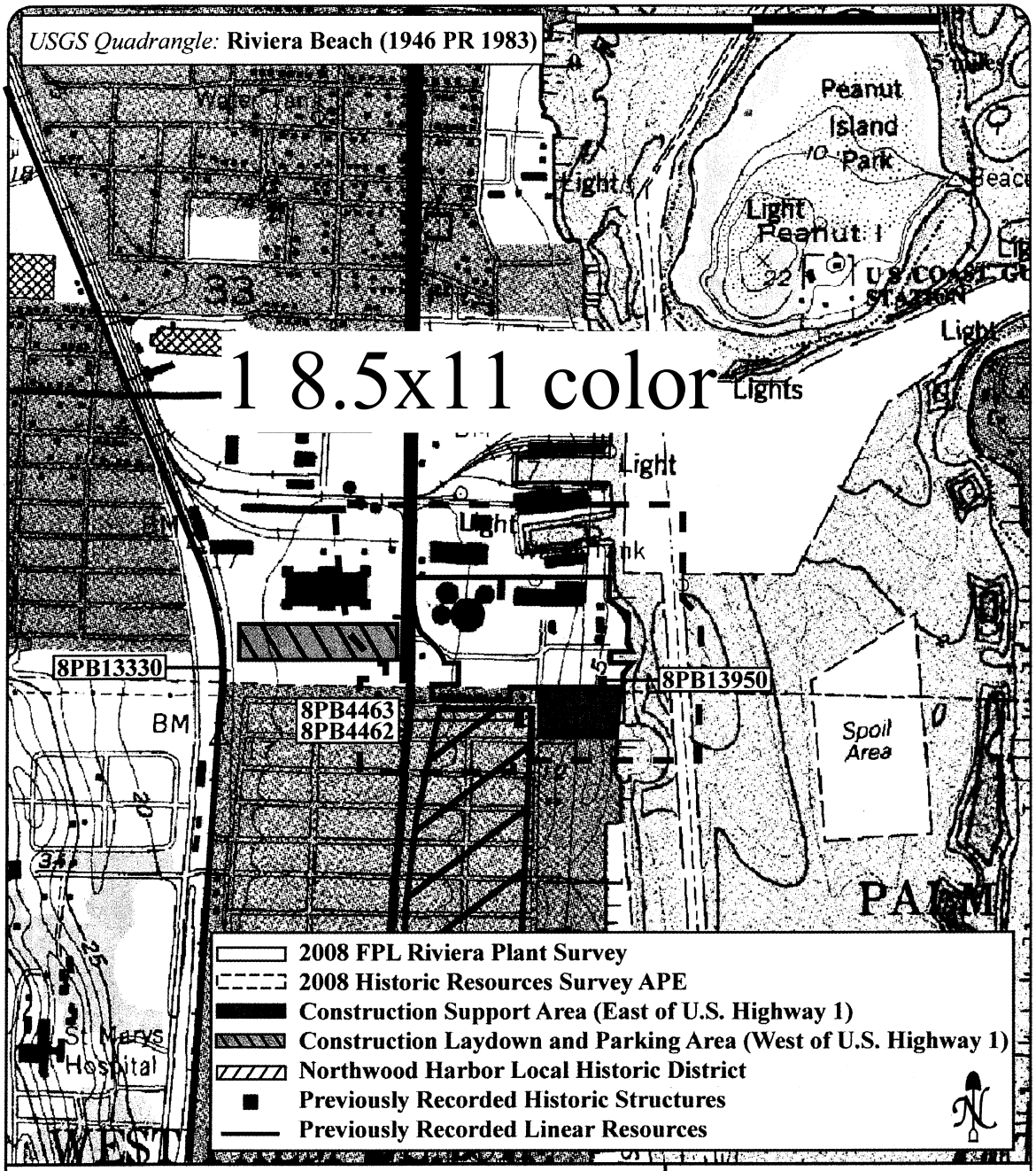
1 8.5x11 color

Newly Proposed FPL Construction Support Area (East of U.S. Highway 1), Construction Laydown and Parking Area (West of U.S. Highway 1), and Previously Submitted 2008 Plant Surveys Illustrated on USGS Quadrangle

JANUS RESEARCH

Attachment 2:

Previously Recorded Resources Adjacent to the Newly Proposed FPL Construction Support Area (East of U.S. Highway 1) and Construction Laydown and Parking Area (West of U.S. Highway 1) Illustrated on USGS Quadrangle



Previously Recorded Resources Adjacent to the Newly Proposed FPL Construction Support Area (East of U.S. Highway 1) and Construction Laydown and Parking Area (West of U.S. Highway 1) Illustrated on USGS Quadrangle

JANUS RESEARCH

Attachment 3:

SHPO Concurrence Letter for the 2008 Cultural Resource Review of the FPL Riviera Plant

FLORIDA DEPARTMENT OF STATE
Kurt S. Browning
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Ms. Kathleen Hoffman, Ph.D.
Janus Research
1300 N. Westshore Blvd., Suite 100
Tampa, Florida 33607

November 21, 2008

Re: DHR Project File No.: 2008-06617
Received by DHR: October 20, 2008
Cultural Resource Review for the FPL Riviera Plant

Dear Dr. Hoffman:

Our office received and reviewed the above referenced survey report in accordance with Chapters 267, 373, and 403 of the *Florida Statutes*, as well as pertinent local ordinances, for possible adverse impact to cultural resources (any prehistoric or historic district, site, building, structure, or object) listed, or eligible for listing, in the National Register of Historic Places (NRHP).

In September 2008, Janus Research conducted an archaeological and historical survey of the proposed FPL Riviera Plant Conversion project area on behalf of Florida Power & Light Company and Golder Associates. Janus Research identified seven previously unrecorded historic structures, six of which constitute a historic resource group, within the project area during the investigation.

Janus Research determined that the FPL Riveira Plant Complex Resource Group (8PB13944) does not appear to be eligible for listing on the NRHP based on lack of distinctive architecture, extensive alterations to historic structures, and a large number of non-historic buildings within the district.

Furthermore, Janus Research determined that the three historic buildings (8PB13945 – 8PB13947), two historic fuel oil tanks (8PB13948 – 8PB13949), and one historic water tower (8PB13951) that make up the resource group do not appear to be individually eligible for listing on the NRHP. One additional historic building (8PB1350) appears to be ineligible for listing on the NRHP based on its common form and lack of significant historic associations.

Janus Research determined that the proposed development will have no effect on cultural resources listed, or eligible for listing, in the NRHP, or otherwise of historical, archaeological, or architectural value. Janus Research recommends no further investigation of the subject parcel.

Based on the information provided, our office concurs with these determinations and finds the submitted report complete and sufficient in accordance with Chapter 1A-46, *Florida Administrative Code.*

For any questions concerning our comments, please contact April Westerman, Historic Preservationist, by electronic mail at amwesterman@dos.state.fl.us, or by phone at (850) 245-6333. We appreciate your continued interest in protecting Florida's historic properties.

Sincerely,

Frederick P. Gaske, Director, and
State Historic Preservation Officer

Attachment 4:

SHPO Concurrence Letter for FMSF Survey No. 10954

10054

FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Ms. Heidi R. Post
R. Christopher Goodwin & Associates, Inc.
309 Jefferson Highway
New Orleans, LA 70121

December 8, 2004

Re: DHR Project File No. 2004-11008 (2003-6710)/ Received by DHR: November 8, 2004
Phase I Cultural Resources Survey and Archaeological Inventory of the Onshore Florida Portion of the Proposed Seafarer US Pipeline System Project, Palm Beach County, Florida

Dear Ms. Post:

Our office received and reviewed the above referenced survey report in accordance with Section 106 of the *National Historic Preservation Act of 1966* (Public Law 89-665), as amended in 1992; *36 C.F.R., Part 800: Protection of Historic Properties*; and Chapter 267, *Florida Statutes*, for assessment of possible adverse impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places (NRHP)*.

From February 2002 to February 2003, R. Christopher Goodwin & Associates, Inc. conducted an archaeological and historical survey of the Onshore Florida portion of the proposed Seafarer US pipeline project area on behalf of Seafarer US Pipeline System, Inc. No cultural resources were identified within the project area during the investigation.

It is the opinion of R. Christopher Goodwin & Associates, Inc. that the proposed development will have no effect on cultural resources listed or eligible for listing in the *NRHP*, or otherwise of historical, architectural or archaeological value. R. Christopher Goodwin & Associates, Inc. recommends no further investigation of the subject parcel.

Based on the information provided, our office concurs with these determinations and finds the submitted report complete and sufficient in accordance with Chapter 1A-46, *Florida Administrative Code*.

If you have any questions concerning our comments, please contact Ron Grayson, Historic Sites Specialist, by phone at (850) 245-6333, or by electronic mail at rigrayson@dos.state.fl.us. Your continued interest in protecting Florida's historic properties is appreciated.

Sincerely,

for Laura L. Kammerer, Deputy SHPO
Frederick Gaske, Director, and
State Historic Preservation Officer

500 S. Bronough Street • Tallahassee, FL 32399-0250 • http://www.flheritage.com

☐ Director's Office (850) 245-6300 • FAX: 245-6435
☐ Archaeological Research (850) 245-6444 • FAX: 245-6436
☑ Historic Preservation (850) 245-6333 • FAX: 245-6437
☐ Historical Museums (850) 245-6400 • FAX: 245-6433

☐ Palm Beach Regional Office (561) 279-1475 • FAX: 279-1476
☐ St. Augustine Regional Office (904) 825-5045 • FAX: 825-5044
☐ Tampa Regional Office (813) 272-3843 • FAX: 272-2340

Attachment 5:

SHPO Concurrence Letter for FMSF Survey No. 12392

FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Mr. Kenneth W. Hardin, President and CEO
Janus Research
2935 1st Avenue North
St. Petersburg, Florida 33713

September 12, 2003

Re: DHR Number: 2003-7856 / Date Received by DHR: June 28, 2003
U.S. Department of Housing and Urban Development
Cultural Resource Assessment Survey of the Riviera Beach Community Redevelopment Area
Riviera Beach, Palm Beach County

Dear Mr. Hardin:

Our office received and reviewed the referenced cultural resource assessment survey in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, and implementing regulations in 36 CFR Part 800, for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places* (NRHP). The State Historic Preservation Officer is to advise Federal agencies as they identify historic properties (listed or eligible for listing, in the *NRHP*. We find the report complete and sufficient, in accordance with 1A-46, *Florida Administrative Code*.

Results of the archaeological survey investigations resulted in the evaluation of one previously recorded archaeological site, the Riviera Site (8PB30) and no previously unrecorded archaeological resources within the Riviera Beach Community Redevelopment Area (CRA). The testing completed during this survey failed to locate any surviving evidence of the large oyster shell mound originally reported in 1914. The small remnant of the Riviera Site, a "trace of relatively undisturbed shell midden consists of a small triangular-shaped area along the eastern edge of the Spanish Courts tourist courts." "This small remnant is not considered eligible for listing in the NRHP under Criterion D due to its extremely small size and the sparse and relatively unexceptional nature of the archaeological assemblage". This office concurs with this determination and finds the Riviera Site not eligible for the National Register, or otherwise of archaeological or historical significance.

The architectural resources portion of the survey resulted in the identification of 302 properties (8PB7699, 8PB12210-12451, 8PB12463-12517, 8PB12797-12799). Only one of the properties was previously recorded (8PB11641). Three historic tourists courts: Hibiscus Court (8PB12397), Winter Haven Court (8PB12398) and Miramar Tourist Court (8PB12429); and one small historic district: East 21st Street Historic District (8PB12290, 8PB12292-12296, and 8PB2298) located during the survey are

considered potentially eligible for listing in the NRHP.

Based on the information provided, our office concurs with the determination regarding the three tourist courts considered potentially eligible for listing in the NRHP. However, we disagree that the East 21st Street District is eligible for listing in the *NRHP*. In addition, we concur that the remaining properties identified are not eligible for inclusion in the NRHP.

We look forward to consulting with the stakeholders and the interested parties during the evaluation of potential effects on the historic properties identified as eligible for listing in the *NRHP* noted above, and the identification of measures to avoid or minimize adverse effects to those historic properties.

If you have any questions concerning our comments, please contact Laura Kammerer, Historic Preservationist Supervisor, at (850) 245-6333, or my electronic mail at lkammerer@dos.state.fl.us. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,

Janet Snyder Matthews, Ph.D., Director, and
State Historic Preservation Officer

APPENDIX 10.7.3

NOISE INFORMATION

NOISE EQUIPMENT – CALIBRATION AND CONFORMANCE CERTIFICATE

PCB PIEZOTRONICS
A PCB GROUP COMPANY

Certificate of Calibration and Conformance

Certificate Number 2007-92877

Instrument Model 824, Serial Number 3106, was calibrated on 08MAY2007. The instrument meets factory specifications per Procedure D0001.8046, IEC 61672-1:2002 Class 1; IEC 60651-2001, 60804-2000 and ANSI S1.4-1983 Type 1 1/3, 1/1 Oct. Filters; S1.11-1986 Type 1C; IEC61260-am1-2001 Class 1 .

Instrument found to be in calibration as received: YES
Date Calibrated: 08MAY2007
Calibration due: 08MAY2008

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY NO.
Larson Davis	LDSigGn/2209	0589 / 0103	12 Months	06DEC2007	2006-87149

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Temperature: 23 ° Centigrade

Relative Humidity: 31 %

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Provo Engineering & Manufacturing Center. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

This calibration complies with the requirements of ISO 17025 and ANSI Z540. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the issuer.

"As Received" data is the same as shipped data.

Tested with PRM902 S/N 3275

Signed:
Technician: Scott Montgomery

Provo Engineering and Manufacturing Center, 1681 West 820 North, Provo, Utah 84601
Toll Free: 888.258.3222 Telephone: 716.926.8243 Fax: 716.926.8215
ISO 9001-2000 Certified

PCB PIEZOTRONICS
A PCB GROUP COMPANY

Certificate of Calibration and Conformance

Certificate Number 2007-92859

Instrument Model PRM902, Serial Number 3275, was calibrated on 08MAY2007. The instrument meets factory specifications per Procedure D0001.8126.

Instrument found to be in calibration as received: YES
Date Calibrated: 08MAY2007
Calibration due: 08MAY2008

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY NO.
Larson Davis	2900 / 2209	0097 / 0118	12 Months	04AUG2007	2006-82872
Hewlett Packard	34401A	MY41044529	12 Months	08JAN2008	295900

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Temperature: 23 ° Centigrade

Relative Humidity: 31 %

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Provo Engineering & Manufacturing Center. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

This calibration complies with the requirements of ISO 17025 and ANSI Z540. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the issuer.

"As Received" data is the same as shipped data.

Signed: Scott Montgomery
Technician: Scott Montgomery

Provo Engineering and Manufacturing Center, 1681 West 820 North, Provo, Utah 84601
Toll Free: 888.258.3222 Telephone: 716.926.8243 Fax: 716.926.8215
ISO 9001-2000 Certified

PCB PIEZOTRONICS
A PCB GROUP COMPANY

Certificate of Calibration and Conformance

Certificate Number 2007-92886

Microphone Model 2560, Serial Number 3424, was calibrated on 08MAY2007. The microphone meets current factory specifications per Test Procedure D0001.8167.

Instrument found to be in calibration as received: YES
Date Calibrated: 08MAY2007
Calibration due: 08MAY2008

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL DUE	TRACEABILITY NO.
Larson Davis	2900	0575	12 Months	27JUN2007	2006-81604
Larson Davis	CAL250	42630	12 Months	03AUG2007	2006-82792
Larson Davis	2559	3034LF	12 Months	30AUG2007	2006-83723
Larson Davis	PRM902	0529	12 Months	06SEP2007	2006-83918
Larson Davis	PRM902	0528	12 Months	06SEP2007	2006-83919
Larson Davis	MTS1000 / 2201	1000 / 0100	12 Months	11SEP2007	2006-0911-1
Larson Davis	PRM915	0102	12 Months	13NOV2007	2006-86003
Larson Davis	PRM902	0208	12 Months	13NOV2007	2006-85999
Larson Davis	PRM916	0102	12 Months	13NOV2007	2006-86001
Hewlett Packard	34401A	3146A62099	12 Months	13NOV2007	294607
Larson Davis	2559	2506	12 Months	30JAN2008	14714-1

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Environmental test conditions as printed on microphone calibration chart.

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U S National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Provo Engineering & Manufacturing Center. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

This calibration complies with the requirements of ISO 17025 and ANSI Z540. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the issuer

"AS RECEIVED" data is the same as shipped data.

Signed: Abraham Ortega
Technician: Abraham Ortega

Provo Engineering and Manufacturing Center, 1681 West 820 North, Provo, Utah 84601
Toll Free: 888.258.3222 Telephone: 716.926.8243 Fax: 716.926.8215
ISO 9001-2000 Certified

PCB PIEZOTRONICS
A PCB GROUP COMPANY

Certificate of Calibration and Conformance

Certificate Number 2007-92854

Instrument Model CAL200, Serial Number 4318, was calibrated on 08MAY2007. The instrument meets factory specifications per Procedure D0001.8190.

Instrument found to be in calibration as received: YES
Date Calibrated: 08MAY2007
Calibration due: 08MAY2008

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY NO.
Hewlett Packard	34401A	US36033460	12 Months	02JUN2007	290347
Hewlett Packard	34401A	3146A10352	12 Months	23JUN2007	291010
Larson Davis	MTS1000/2201	0111	12 Months	11SEP2007	2006-0911-2
Larson Davis	PRM915	0112	12 Months	18SEP2007	2006-84212
Larson Davis	PRM902	0480	12 Months	18SEP2007	2006-84211
Larson Davis	2559	2504	12 Months	11OCT2007	14485-1
Schaevitz	P3061-15PSIA	17590	12 Months	16NOV2007	294809
Larson Davis	2900	0661	12 Months	04APR2008	2007-91426

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Environmental test conditions as shown on calibration report.

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Provo Engineering & Manufacturing Center. An acceptable accuracy ratio between the Standard(s) and the Item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

This calibration complies with the requirements of ISO 17025 and ANSI Z540. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the Issuer.

Before: 114.09 dB, 94.10 dB, 1000.3 Hz @ sea level.
After: Refer to Certificate of Measured Output.

Signed: Scott Montgomery
Technician: Scott Montgomery

Provo Engineering and Manufacturing Center, 1681 West 820 North, Provo, Utah 84601
Toll Free: 888.258.3222 Telephone: 716.926.8243 Fax: 716.926.8215
ISO 9001-2000 Certified

APPENDIX 10.7.4

TRAFFIC INFORMATION

Riviera Plant Facility

traffic study

prepared for:
Golder Associates, Inc.

Traf Tech
ENGINEERING, INC.

January 2009

Traf Tech
ENGINEERING, INC.

January 19, 2009

Ms. Kerri J. Kitchen
Senior Planner
Golder Associates, Inc.
5100 W. Lemon Street, Suite 114
Tampa, Florida 33609

Re: Riviera Plant Facility – Traffic Study

Dear Kerri:

Traf Tech Engineering, Inc. is pleased to provide you with the results of the traffic study undertaken for the Riviera Beach Energy Center (RBEC) Conversion Project located in Riviera Beach, Florida. It has been a pleasure serving Golder Associates on this project.

Sincerely,

TRAF TECH ENGINEERING, INC.

Joaquin E. Vargas, P.E.
Senior Transportation Engineer

8400 North University Drive, Suite 202, Tamarac, Florida 33321
Tel: (954) 582-0988 Fax: (954) 582-0989 E-mail: joaquin@traftech.biz

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INTRODUCTION

The Riviera Beach Florida Power & Light (FPL) Power Plant facility is located on the east side of Broadway (US1) just north of 59th Street in the City of Riviera Beach in Palm Beach County, Florida. Figure 1 on the following page shows the location of the Riviera Plant facility and its relationship to the existing street system surrounding the subject utility plant.

Traf Tech Engineering, Inc. was retained by Golder Associates, Inc. to conduct a traffic study associated with the Riviera Beach Energy Center (RBEC) Conversion Project. The Conversion Project will decommission and dismantle the existing utility facility and build a new more energy-efficient facility within the same site. The traffic study evaluates the traffic impacts during the construction phase of the project and during normal operation (after the RBEC Conversion Project is completed).

This study is divided into six (6) sections, as listed below:

1. Inventory
2. Traffic Counts
3. Trip Generation
4. Trip Distribution and Traffic Assignment
5. Traffic Analysis
6. Conclusions and Recommendations

Traf Tech
ENGINEERING, INC.

PROJECT LOCATION MAP

FIGURE 1
Riviera Plant
Riviera Beach, Florida

INVENTORY

Existing Land Use and Access

Based on information provided by FPL, the current power plant has 40 employees and a total gross building size (including all existing buildings) of approximately 67,450 square feet (including warehouse, office, and storage).

Access to the Riviera Plant site is provided via three access driveways (Gates 3, 9, and 10). Two gates (Gates 3 and 10) are accessed after turning east from US 1 and Gate 9 is located immediately north of the intersection of 59th Street and North Flagler Drive, as illustrated in Figure 1.

Proposed Land Use and Access

The resulting RBEC Conversion project will have a total square footage of approximately 23,690 square feet. The existing driveways will remain. The number of employees will not increase as a result of the conversion project.

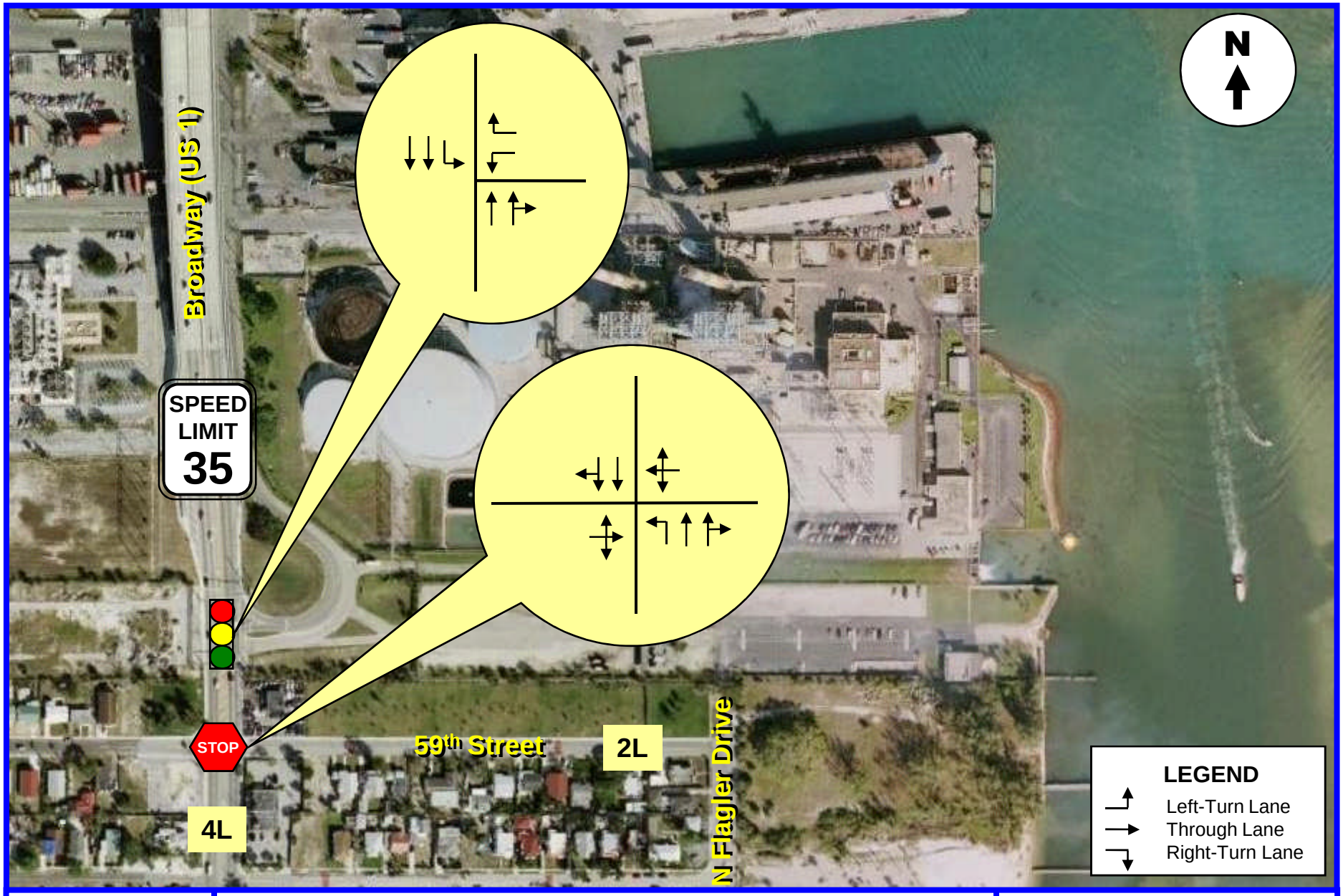
Additionally, a Manatee Viewing Facility is proposed at a vacant parcel located south and east of Gate 9 (east side of N. Flagler Drive at 59th Street). This facility will include a surface parking lot with approximately 52 parking spaces and a building of approximately 6,000 square feet. Access to this facility is planned via a full access driveway on N. Flagler Drive just north of 59th Street. A conceptual layout of the Manatee Viewing Area is contained in Appendix A.

Roadway System

One main roadway (US 1 – Broadway) is located in the vicinity of the project site. US 1 provides two through lanes in each direction between Blue Heron Boulevard on the north and 45th Street on the south. According to Palm Beach County, US 1 currently carries

approximately 2,226 vehicles during the AM peak hour and approximately 2,582 vehicles during the typical afternoon peak period near the Riviera Plant facility. The roadway capacity of US 1 is 3,110 vehicles per hour. Therefore, US 1 has excess capacity to accommodate additional traffic during the morning and afternoon peak periods.

The intersection of US 1 (Broadway) and the main project entrance/exit driveway is currently signalized. Figure 2 shows the existing lane geometry of the signalized intersection located near the project site and at the intersection of US 1 and 59th Street. The number of lanes on the street system surrounding the project site is also depicted in the figure.



Traf Tech ENGINEERING, INC.

EXISTING LANE GEOMETRY

FIGURE 2
Riviera Plant
Riviera Beach, Florida

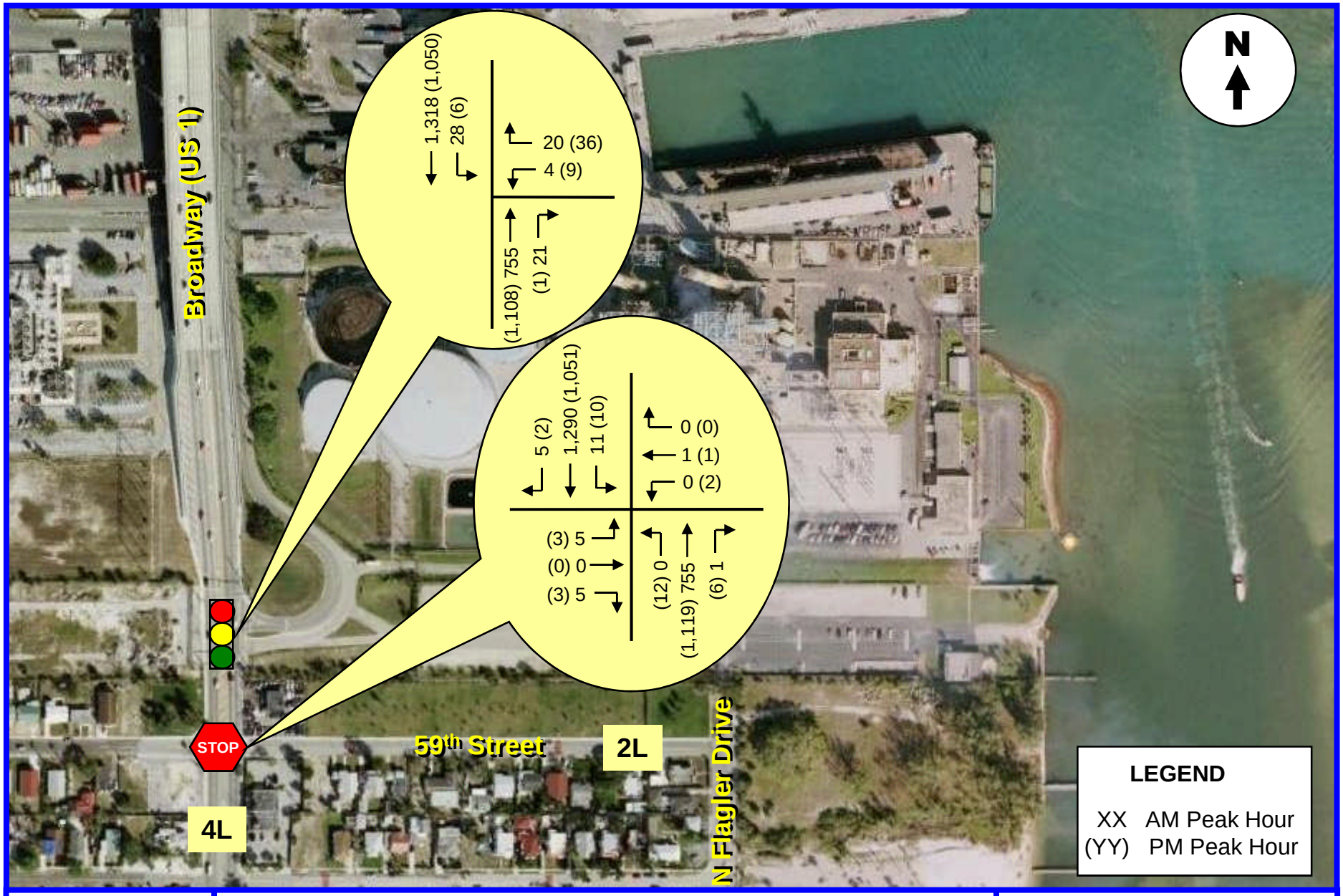
TRAFFIC COUNTS

Traf Tech Engineering, Inc., in association with Crossroads Engineering Data, Inc., collected peak period intersection turning movement counts at the following two intersections located near the project site:

1. US 1 and Main Project Driveway (Signalized)
2. US 1 and 59th Street (Stop-Controlled)

The intersection turning movement counts were collected on Tuesday, September 16, 2008 between 7:00 AM and 9:00 AM and from 4:00 PM to 6:00 PM. Figure 3 summarizes the results of the intersection turning movement counts undertaken during the AM and PM peak hours. Appendix B contains the intersection turning movement counts, as collected in the field. The signal-timing plan for the signalized intersection was obtained from Palm Beach County and is included in Appendix C of this report.

Additionally, two-day machine traffic counts were recorded on US 1, south of 59th Street, and on the main project driveway located on the east side of Broadway. The machine traffic counts were recorded on Tuesday and Wednesday, September 16 and 17, 2008. Appendix D contains the results of the 2-day machine traffic counts.



Traf Tech
ENGINEERING, INC.

EXISTING TRAFFIC COUNTS
(Tuesday, September 16, 2008)

FIGURE 3
Riviera Plant
Riviera Beach, Florida

TRIP GENERATION

The trip generation during normal plant operation and during the construction phase of the project was determined.

Normal Operation

In order to determine the existing trip generation of the subject utility plant, machine traffic counts were placed at the three access driveways (Gates 3, 9, and 10). The traffic counts were conducted on Wednesday and Thursday, July 16 and 17, 2008. (It is important to mention that during the traffic count period, modifications to the existing substation on the Site were being made, which likely resulted in an increase in traffic due to additional Plant personnel required to perform the work). Appendix E contains the results of the machine traffic counts recorded at the three entrance/exit gates.

Table 1 below documents the existing daily traffic volumes recorded at the three entry gates. As indicated in Table 1, the Riviera Plant facility is currently generating approximately 368 daily trips. Tables 2 and 3 present the AM and PM peak hour volumes recorded at the three access driveways. The AM and PM peak hour volumes, as recorded in the field, for the existing utility plant are 46 and 37 vehicles per hour, respectively.

TABLE 1
Daily Traffic Volumes
Riviera Plant Facility

	Daily Traffic Volumes		
Gate Number	**Wed (7/16/08)**	**Thurs (7/17/08)**	**Average**
3	182	186	184
9	15	11	13
10	161	180	171
Total	**358**	**377**	**368**

Source: Traf Tech Engineering, Inc. and KMF Data.

TABLE 2
Determination of AM Peak Hour Volume (7-9)
Riviera Plant Facility

Wednesday, July 16, 2008

Start Time	Gate 3	Gate 9	Gate 10	Total 15-min	Total Hourly	Peak Hour
7:00 AM	3	0	0	3		
7:15 AM	2	0	0	2		
7:30 AM	9	0	0	9		
7:45 AM	9	0	3	12	26	7:00 AM - 8:00 AM
8:00 AM	7	0	12	19	**42**	**7:15 AM - 8:15 AM**
8:15 AM	1	0	1	2	42	7:30 AM - 8:30 AM
8:30 AM	2	3	0	5	38	7:45 AM - 8:45 AM
8:45 AM	2	0	3	5	31	8:00 AM - 9:00 AM

Thursday, July 17, 2008

Start Time	Gate 3	Gate 9	Gate 10	Total 15-min	Total Hourly	Peak Hour
7:00 AM	5	0	2	7		
7:15 AM	1	0	0	1		
7:30 AM	6	0	2	8		
7:45 AM	15	0	6	21	37	7:00 AM - 8:00 AM
8:00 AM	3	0	7	10	40	7:15 AM - 8:15 AM
8:15 AM	1	0	2	3	42	7:30 AM - 8:30 AM
8:30 AM	1	0	15	16	**50**	**7:45 AM - 8:45 AM**
8:45 AM	3	0	1	4	33	8:00 AM - 9:00 AM

Average AM Peak Hour Volume	**46**

Source: Traf Tech Engineering, Inc. and KMF Data

TABLE 3
Determination of PM Peak Hour Volume (4-6)
Riviera Plant Facility

Wednesday, July 16, 2008

Start Time	Gate 3	Gate 9	Gate 10	Total 15-min	Total Hourly	Peak Hour
4:00 PM	4	1	3	8		
4:15 PM	2	1	5	8		
4:30 PM	4	0	14	18		
4:45 PM	5	0	3	8	42	4:00 PM - 5:00 PM
5:00 PM	6	1	7	14	**48**	**4:15 PM - 5:15 PM**
5:15 PM	4	0	3	7	47	4:30 PM - 5:30 PM
5:30 PM	3	0	0	3	32	4:45 PM - 5:45 PM
5:45 PM	3	0	2	5	29	5:00 PM - 6:00 PM

Thursday, July 17, 2008

Start Time	Gate 3	Gate 9	Gate 10	Total 15-min	Total Hourly	Peak Hour
4:00 PM	10	0	1	11		
4:15 PM	5	2	0	7		
4:30 PM	5	0	0	5		
4:45 PM	1	0	2	3	**26**	**4:00 PM - 5:00 PM**
5:00 PM	6	0	0	6	21	4:15 PM - 5:15 PM
5:15 PM	1	0	4	5	19	4:30 PM - 5:30 PM
5:30 PM	2	0	1	3	17	4:45 PM - 5:45 PM
5:45 PM	6	0	0	6	20	5:00 PM - 6:00 PM

Average PM Peak Hour Volume	**37**

Source: Traf Tech Engineering, Inc. and KMF Data

Since the number of employees is anticipated to remain the same, and the total gross square footage is projected to decrease, the existing number of trips, as recorded in the field, is not anticipated to increase. Hence, it is concluded that the existing number of daily and peak hour trips will not increase as a result of the RBEC Conversion project. That is, during normal operation the daily number of trips is projected to be approximately 358 vehicles and the AM and PM peak hour trips are estimated at approximately 46 and 37 vehicles per hour, respectively.

Construction Traffic

The construction workforce for the project is expected to average approximately 290 workers. Dismantlement is anticipated to commence in the spring of 2010 and Project construction conclude in the summer of 2014. Peak construction is estimated at approximately 650 workers in mid-2013. Assuming an automobile occupancy of 1.3 workers per vehicle, approximately 500 vehicles are anticipated during the peak construction period. That is, 500 inbound vehicles during the AM peak hour and 500 exiting vehicles during the PM peak hour.

For purposes of this traffic study, only the worse construction-period scenario was evaluated (650 workers).

Manatee Viewing Facility

A review of the land uses contained in *Palm Beach County's Trip Generation Rates* document and the Institute of Transportation Engineer's (ITE) *Trip Generation* (8th Edition) report was conducted in order to develop traffic volumes for the proposed Manatee Viewing Facility. However, the above trip generation documents do not contain a land use that is comparable to the proposed educational facility. For this reason, the trip generation associated with the proposed Manatee Viewing Facility was based on the following assumptions:

- A comparable facility (FPL Energy Encounter) is located at the St. Lucie nuclear power plant on South Hutchinson Island

- According to information provided by FPL Energy Encounter, approximately 19,370 people (adults and school children) visited the subject facility in 2008 (refer to visitation data contained in Appendix F)

- In order to assess impacts with a conservative approach, and since the manatee season occurs between November and April (six months), it was assumed that the proposed Manatee Viewing Facility will attract 19,370 visitors in a six-month period

- Assuming the proposed Manatee Viewing Facility will be open six days per week and closed during holidays (like FPL Energy Encounter), the 19,370 people will visit the Manatee Viewing Facility in approximately 148 days[1], or approximately 131 visitor per day

- Assuming a conservative (40% of the visitors were students from different schools[2]) four person per vehicle occupancy results in approximately 33 vehicles per day, or 66 trips per day (33 inbound and 33 outbound)

- Using the typical 10% peak to daily ratio, during the peak hour we expect 3.3 (say 4) inbound vehicles and 3.3 (say 4) outbound vehicles, which is insignificant from a traffic engineering standpoint

Based on the above analysis, the proposed Manatee Viewing Facility is projected to generate approximately 66 vehicle-trips per day and eight peak hour trips (four inbound and four outbound) during the peak season.

[1] Six months (26 weeks) times six days per week less eight holidays (two in November, two in December, two in January, and two in April) = 148 days.
[2] Refer to FPL Energy Encounter visitation data contained in Appendix F

TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

The trip distribution and traffic assignment for the project was based on the existing traffic patterns and examination of the surrounding street system located in the immediate vicinity of the project site.

The following traffic assignment was assumed for the subject project:

- 57% to and from the north via US 1
- 43% to and from the south via US 1

The 500 construction-related vehicles will park at the following temporary parking areas:

- 100 vehicles will park at the future Manatee Viewing Facility site located south and east of Gate 9 (east side of N. Flagler Drive at 59th Street)
- 400 vehicles will park on the west side of US 1 near the existing signalized intersection (access to this parking site will be temporarily provided via the existing signalized T-intersection). A temporary west leg will be added to the subject intersection.

TRAFFIC ANALYSIS

This section of the study is divided into two parts. The first part consists of developing the future conditions traffic volumes for the study area for both peak construction and normal operation conditions, including the Manatee Viewing Facility traffic. The second part includes level-of-service analyses for existing conditions, peak construction traffic conditions, and future conditions for normal operation, including the Manatee Viewing Facility traffic.

Future Conditions Traffic Volumes

Two sets of future traffic volumes were developed. The first set includes year 2013 conditions for peak construction period and the second set generates future traffic volumes for the year 2014 for normal operation (including the Manatee Viewing Facility traffic).

Year 2013 Conditions (Peak Construction Period)

In order to develop year 2013 traffic volumes for the peak construction period, two separate analyses were undertaken. The first analysis converts the existing peak hour traffic counts collected in the field during the month of September 2008 to average conditions. Based on FDOT's Peak Season Factor Category report, a factor of 1.13 is required to convert traffic counts collected in the third week of September to average conditions (refer to Appendix G). The second analysis includes a growth factor to project 2008 average traffic volumes to the year 2013. Based on traffic growth data published by the FDOT for a traffic count station located near the project site on US 1, traffic has remained relatively constant during the past five years (refer to Appendix G). Additionally, Palm Beach County records (refer to Appendix G) indicate that traffic volumes on US 1 have, on average[3], declined between the years 2002 and 2007. However, in order to assess impacts with a conservative approach, a 1.0% growth rate,

[3] Average of three count stations on Broadway.

compounded annually, was assumed for the study area. This growth rate, in combination with the seasonal factor of 13%, results in approximately 19% growth in background traffic within the study area for this project.

Additionally, the peak construction traffic documented in the trip generation section of this report was added to the year 2013 background traffic to develop 2013 peak construction period traffic conditions. The future traffic projections for the critical intersection of US 1 and the main project entrance/exit driveway (peak season adjustments, growth rates, and peak construction traffic) are contained in Appendix H.

Similarly, year 2014 traffic volumes were developed for the study area in order to analyze traffic conditions after the RBEC Conversion Project is in place, including the Manatee Viewing Facility. Appendix H also contains the year 2014 traffic projections for the AM and PM peak hours.

Level of Service Analyses

Intersection capacity/level of service analyses were performed for the critical signalized intersection of US 1 and the main entrance/exit driveway for both scenarios (peak construction period and normal operation, including traffic associated with the proposed Manatee Viewing Facility). The analyses were undertaken following the capacity/level of service procedures outlined in the Highway Capacity Manual (HCS+ Version 5.2). The results of the capacity analyses are summarized in Tables 4 and 5. As indicated in the tables, the main signalized access driveway intersection is currently operating at an acceptable level of service and will continue to operate adequately during the peak construction period and during normal operation. During the peak construction period, the following roadway improvements are required:

- Construct the west leg of the existing signalized T-intersection in order to provide temporary access to the construction parking area

- Signalize the driveway's egress movements (west leg)
- Provide one inbound lane and two egress lanes
- Provide a northbound left-turn lane on US 1 (this can be accomplished by continuing the existing northbound left-turn lane at 59th Street to the signalized driveway location (extend north by approximately 150 feet). This can be accomplished by re-striping the median (no new construction is required).

TABLE 4
Riviera Plant – Peak Construction Period
Intersection Capacity/Level of Service Analyses

Intersection	Existing (2008) Conditions		Future (2013) Volumes w/o Construction Traffic		Future (2013) Volumes w/Construction Traffic	
	Delay	LOS	Delay	LOS	Delay	LOS
US 1/Drive	12.7 (16.2)	B (B)	14.4 (20.1)	B (C)	35.2 (25.8)	D (C)

Source: Highway Capacity Software (HCS+ Version 5.2). LEGEND: AM Peak (PM Peak)

TABLE 5
Riviera Plant – Normal Operation (Includes Manatee Viewing Traffic)
Intersection Capacity/Level of Service Analyses

Intersection	Existing (2008) Conditions		Future (2014) Volumes w/o Conversion Project		Future (2014) Volumes w/Conversion Project	
	Delay	LOS	Delay	LOS	Delay	LOS
US 1/Drive	12.7 (16.2)	B (B)	16.2 (20.5)	B (C)	16.2 (20.7)	B (C)

Source: Highway Capacity Software (HCS+ Version 5.2). LEGEND: AM Peak (PM Peak)

Additionally, during the peak construction period the signal timing of the intersection of US 1 and the main project driveway needs to be adjusted in order to provide timing for the new movements added to this intersection. With signal timing adjustments and the roadway improvements listed above, the intersection is projected to operate at an acceptable level of service.

Appendix I contains the computer printouts of the intersection capacity analyses.

CONCLUSIONS AND RECOMMENDATIONS

The Riviera Beach Florida Power & Light (FPL) Power Plant facility is located on the east side of Broadway (US1) just north of 59th Street in the City of Riviera Beach in Palm Beach County, Florida. Based on information provided by FPL, the current power plant has 40 employees and a total gross building size (including all existing buildings) of approximately 67,450 square feet (including warehouse, office, and storage).

Access to the Riviera Plant site is provided via three access driveways (Gates 3, 9, and 10). Two gates (Gates 3 and 10) are accessed after turning east from US 1 and Gate 9 is located immediately north of the intersection of 59th Street and North Flagler Drive.

Traf Tech Engineering, Inc. was retained by Golder Associates, Inc. to conduct a traffic study associated with the RBEC Conversion Project. The Conversion Project will decommission and dismantle the existing utility facility and build a new more energy-efficient facility within the same site. The traffic study evaluated the traffic impacts during the construction phase of the project and during normal operation (after the RBEC conversion project is completed), including a proposed Manatee Viewing Facility.

The resulting RBEC Conversion project will have a total square footage of approximately 23,690 square feet. The existing driveways will remain. The number of employees will not increase as a result of the conversion project.

The Manatee Viewing Facility is planned to be located near Gate 9 and will include a surface parking lot with approximately 52 parking spaces and a building of approximately 6,000 square feet. Access to this facility is planned via a full access driveway on N. Flagler Drive just north of 59th Street.

The Riviera Plant facility is currently generating approximately 368 daily trips, and 46 and 37 vehicles per hour during the AM and PM peak hours, respectively. Since the number of employees is anticipated to remain the same, and the total gross square footage

is projected to decrease, the existing number of trips, as recorded in the field, is not anticipated to increase. Hence, it is concluded that the existing number of daily and peak hour trips will not increase as a result of the RBEC Conversion project (with the exception of the Manatee Viewing Facility) and therefore, no new traffic impacts are created by the subject conversion project. The proposed Manatee Viewing Facility is projected to generate approximately 66 new vehicle-trips per day and eight peak hour trips (four inbound and four outbound) during the peak season, which is insignificant from a traffic engineering standpoint.

During the construction phase of the project, approximately 500 vehicles are anticipated during the peak construction period. That is, 500 inbound vehicles during the AM peak hour and 500 exiting vehicles during the PM peak hour. The 500 construction-related vehicles will park at the following temporary parking areas:

- 100 vehicles will park at the future Manatee Viewing Facility site located south and east of Gate 9 (east side of N. Flagler Drive at 59th Street)

- 400 vehicles will park on the west side of US 1 near the existing signalized intersection (access to this parking site will be temporarily provided via the existing signalized T-intersection). A temporary west leg will be added to the subject intersection.

The main signalized access driveway intersection is currently operating at an acceptable level of service and will continue to operate adequately during the peak construction period and during normal operation (including the Manatee Viewing Facility). During the peak construction period, the following roadway improvements are required:

- Construct the west leg of the existing signalized T-intersection in order to provide temporary access to the construction parking area

- Signalize the driveway's egress movements (west leg)

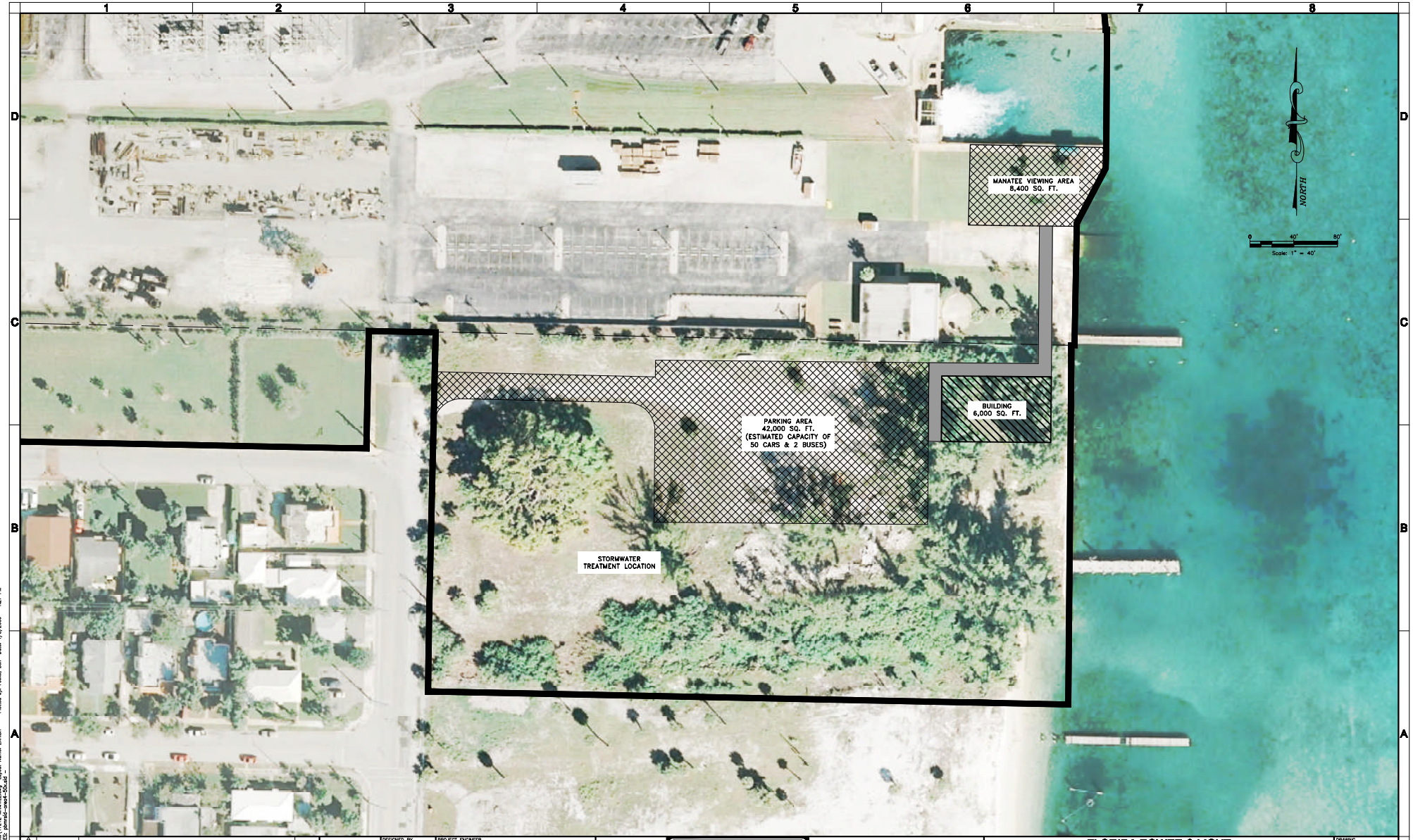
- Provide one inbound lane and two egress lanes

- Provide a northbound left-turn lane on US 1 (this can be accomplished by continuing the existing northbound left-turn lane at 59th Street to the signalized driveway location (extend north by approximately 150 feet). This can be accomplished by re-striping the median (no new construction is required).

Additionally, during the peak construction period the signal timing of the intersection of US 1 and the main project driveway needs to be adjusted in order to provide timing for the new movements added to this intersection. With signal timing adjustments and the roadway improvements listed above, the intersection is projected to operate at an acceptable level of service.

APPENDIX A

Manatee Viewing Area Site



REV	DATE	DESCRIPTION	APPR
7			
6			
5			
4			
3			
2			
1			

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY BF
DRAWN BY RCF
CHECKED BY PL
DATE 1/7/2009

PROJECT ENGINEER
REG NUMBER EXP DATE
PROJECT NUMBER
CADD STANDARDS

BOYLE | AECOM
BOYLE ENGINEERING
3550 S.W. Corporate Parkway
Palm City, Florida 34990
T 772-286-3883 F 772-286-3925
BPR & FBPE License No's 2005 & LB7622
www.boyle.aecom.com

FLORIDA POWER & LIGHT
RIVIERA BEACH ENERGY CENTER

MANATEE VIEWING AREA EXHIBIT

DRAWING 17212 MANATEE
SHEET
OF SHEETS

DWG: P:\17212\Permit\SOA\Exhibits\17212_MANATEE.dwg Layout Name: EXHIBIT - Plotted by: Fesko, Ben Date: 1/8/2009 - 1:27 PM
XREFS: 17212_XREF EXT IMAGES: pmmsd-nwe4-50e.sid -

APPENDIX B

Intersection Turning Movement Counts

Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : TRAFTECH
JOB NO.: 2008-093
PROJECT: RIVIERA BEACH FPL
COUNTY : PALM BEACH

File Name : US1@DRIVEWAY
Site Code : 00000000
Start Date : 9/16/2008
Page No : 1

Groups Printed- AUTOS - HEAVY VEHICLES

	US1 From North				ENT DRIVEWAY TO PORT OF PALM BEACH From East				US1 From South				ENT DRIVEWAY TO PORT OF PALM BEACH From West				
Start Time	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Int. Total
07:00 AM	0	217	1	0	3	0	0	0	0	149	0	0	0	0	0	0	370
07:15 AM	0	270	5	0	2	0	0	0	0	155	0	0	0	0	0	0	432
07:30 AM	0	335	7	0	5	0	0	0	2	194	0	0	0	0	0	0	543
07:45 AM	0	310	11	0	5	0	1	0	6	200	0	0	0	0	0	0	533
Total	0	1132	24	0	15	0	1	0	8	698	0	0	0	0	0	0	1878
08:00 AM	0	317	3	0	6	0	2	0	6	191	0	0	0	0	0	0	525
08:15 AM	0	356	7	0	4	0	1	0	7	170	0	0	0	0	0	0	545
08:30 AM	0	301	5	0	7	0	1	0	5	163	0	0	0	0	0	0	482
08:45 AM	0	246	5	0	6	0	1	0	4	159	0	0	0	0	0	0	421
Total	0	1220	20	0	23	0	5	0	22	683	0	0	0	0	0	0	1973
*** BREAK ***																	
04:00 PM	0	233	1	0	3	0	6	0	0	246	0	0	0	0	0	0	489
04:15 PM	0	262	2	0	5	0	1	0	2	249	0	0	0	0	0	0	521
04:30 PM	0	246	3	0	9	0	1	0	2	241	0	0	0	0	0	0	502
04:45 PM	0	251	0	0	10	0	4	0	0	270	0	0	0	0	0	0	535
Total	0	992	6	0	27	0	12	0	4	1006	0	0	0	0	0	0	2047
05:00 PM	0	259	1	0	11	0	3	0	0	305	0	0	0	0	0	0	579
05:15 PM	0	279	3	0	9	0	1	0	0	272	0	0	0	0	0	0	564
05:30 PM	0	261	2	0	6	0	1	0	1	261	0	0	0	0	0	0	532
05:45 PM	0	236	3	0	6	0	1	0	0	259	0	0	0	0	0	0	505
Total	0	1035	9	0	32	0	6	0	1	1097	0	0	0	0	0	0	2180
Grand Total	0	4379	59	0	97	0	24	0	35	3484	0	0	0	0	0	0	8078
Apprch %	0	98.7	1.3	0	80.2	0	19.8	0	1	99	0	0	0	0	0	0	
Total %	0	54.2	0.7	0	1.2	0	0.3	0	0.4	43.1	0	0	0	0	0	0	
AUTOS	0	4349	57	0	97	0	23	0	34	3440	0	0	0	0	0	0	8000
% AUTOS	0	99.3	96.6	0	100	0	95.8	0	97.1	98.7	0	0	0	0	0	0	99
HEAVY VEHICLES	0	30	2	0	0	0	1	0	1	44	0	0	0	0	0	0	78
% HEAVY VEHICLES	0	0.7	3.4	0	0	0	4.2	0	2.9	1.3	0	0	0	0	0	0	1

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13284 SW 120th Street
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Groups Printed- HEAVY VEHICLES

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07:00 AM	0	3	0	0	0	0	0	0	0	5	0	0	0	0	0	0	8
07:15 AM	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	0	6
07:30 AM	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	4
07:45 AM	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0	0	7
Total	0	8	0	0	0	0	0	0	0	17	0	0	0	0	0	0	25
08:00 AM	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	5
08:15 AM	0	5	1	0	0	0	0	0	0	3	0	0	0	0	0	0	9
08:30 AM	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	4
08:45 AM	0	3	1	0	0	0	0	0	0	2	0	0	0	0	0	0	6
Total	0	10	2	0	0	0	0	0	1	11	0	0	0	0	0	0	24
*** BREAK ***																	
04:00 PM	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0	0	7
04:15 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
04:45 PM	0	4	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6
Total	0	10	0	0	0	0	1	0	0	7	0	0	0	0	0	0	18
05:00 PM	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	5
05:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																	
05:45 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5
Total	0	2	0	0	0	0	0	0	0	9	0	0	0	0	0	0	11
Grand Total	0	30	2	0	0	0	1	0	1	44	0	0	0	0	0	0	78
Apprch %	0	93.8	6.2	0	0	0	100	0	2.2	97.8	0	0	0	0	0	0	
Total %	0	38.5	2.6	0	0	0	1.3	0	1.3	56.4	0	0	0	0	0	0	

Crossroads Engineering
13284 SW 120th Street
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Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : TRAFTECH
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File Name : US1@DRIVEWAY
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Start Date : 9/16/2008
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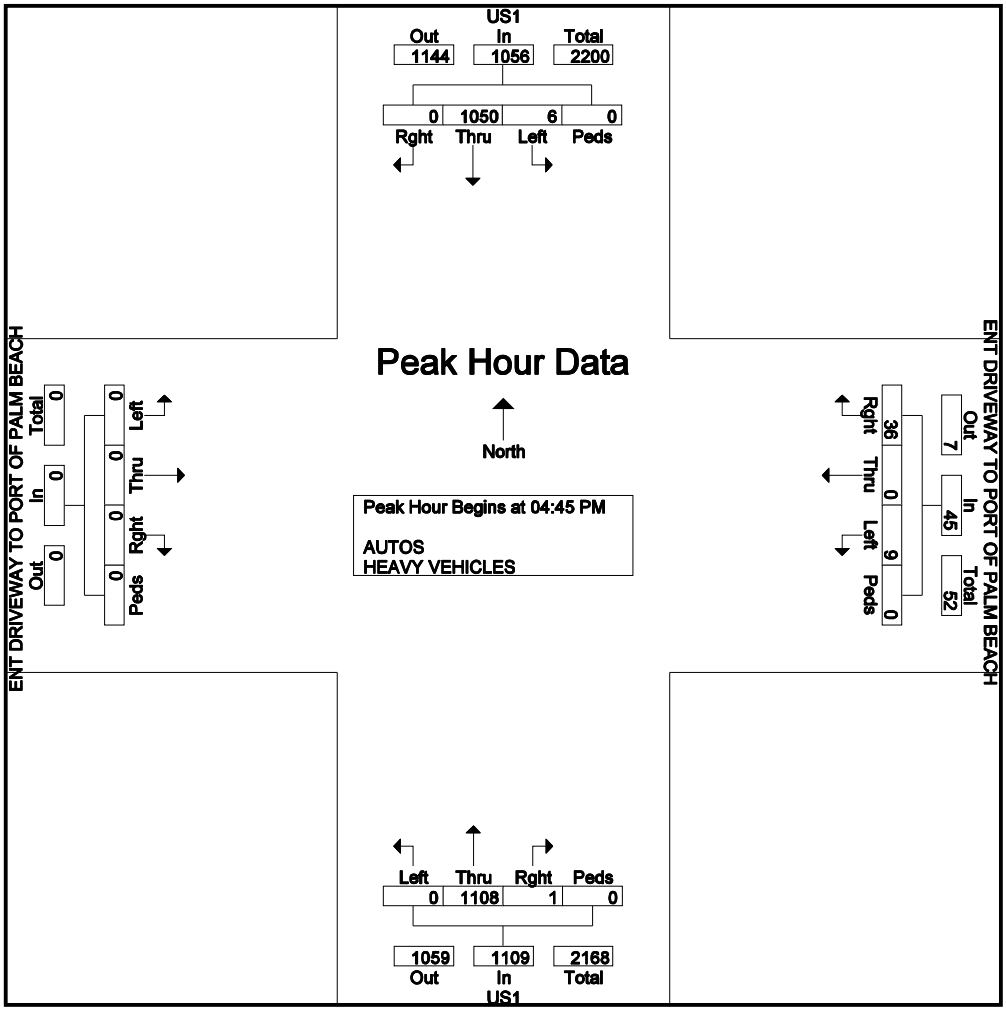
	US1 From North					ENT DRIVEWAY TO PORT OF PALM BEACH From East					US1 From South					ENT DRIVEWAY TO PORT OF PALM BEACH From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	251	0	0	251	10	0	4	0	14	0	270	0	0	270	0	0	0	0	0	535
05:00 PM	0	259	1	0	260	11	0	3	0	14	0	305	0	0	305	0	0	0	0	0	579
05:15 PM	0	279	3	0	282	9	0	1	0	10	0	272	0	0	272	0	0	0	0	0	564
05:30 PM	0	261	2	0	263	6	0	1	0	7	1	261	0	0	262	0	0	0	0	0	532
Total Volume	0	1050	6	0	1056	36	0	9	0	45	1	1108	0	0	1109	0	0	0	0	0	2210
% App. Total	0	99.4	0.6	0		80	0	20	0		0.1	99.9	0	0		0	0	0	0		
PHF	.000	.941	.500	.000	.936	.818	.000	.563	.000	.804	.250	.908	.000	.000	.909	.000	.000	.000	.000	.000	.954

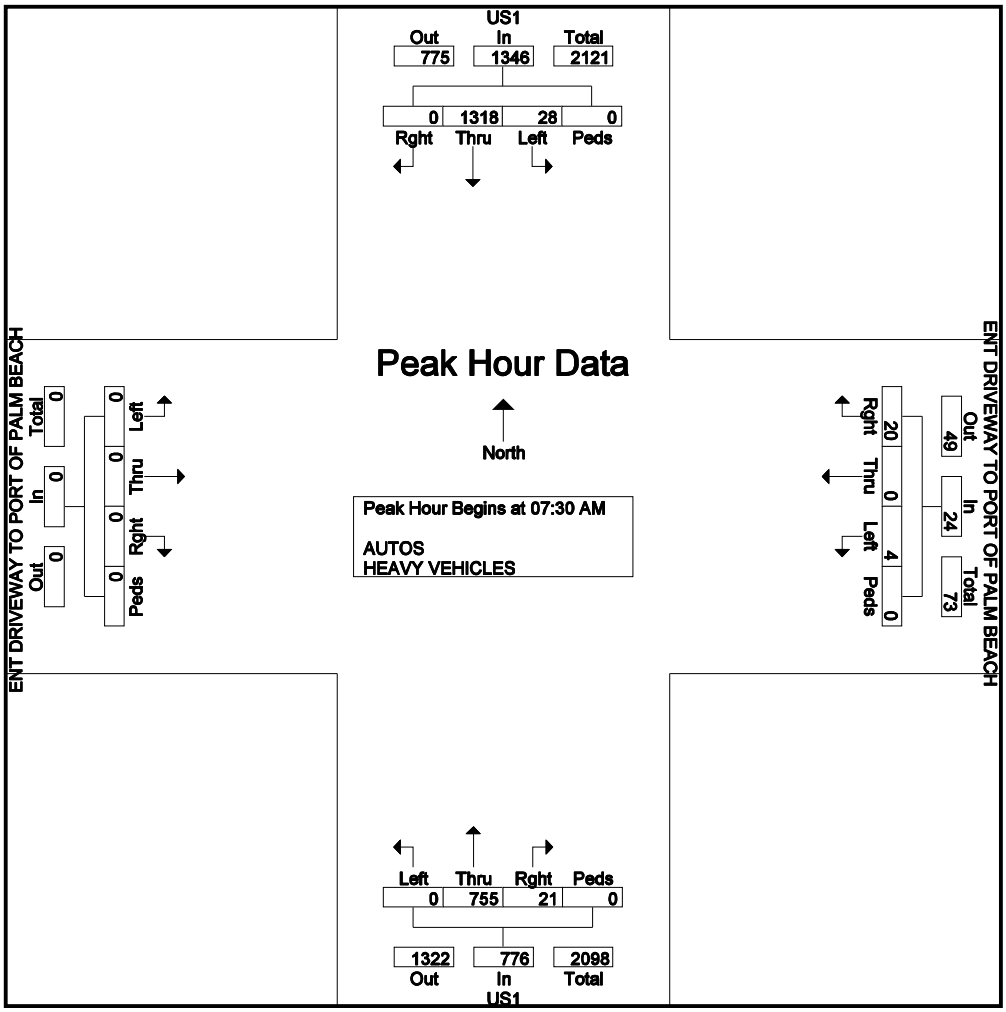


Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : TRAFTECH
JOB NO.: 2008-093
PROJECT: RIVIERA BEACH FPL
COUNTY : PALM BEACH

File Name : US1@DRIVEWAY
Site Code : 00000000
Start Date : 9/16/2008
Page No : 3

	US1 From North					ENT DRIVEWAY TO PORT OF PALM BEACH From East					US1 From South					ENT DRIVEWAY TO PORT OF PALM BEACH From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	335	7	0	342	5	0	0	0	5	2	194	0	0	196	0	0	0	0	0	543
07:45 AM	0	310	11	0	321	5	0	1	0	6	6	200	0	0	206	0	0	0	0	0	533
08:00 AM	0	317	3	0	320	6	0	2	0	8	6	191	0	0	197	0	0	0	0	0	525
08:15 AM	0	356	7	0	363	4	0	1	0	5	7	170	0	0	177	0	0	0	0	0	545
Total Volume	0	1318	28	0	1346	20	0	4	0	24	21	755	0	0	776	0	0	0	0	0	2146
% App. Total	0	97.9	2.1	0		83.3	0	16.7	0		2.7	97.3	0	0		0	0	0	0		
PHF	.000	.926	.636	.000	.927	.833	.000	.500	.000	.750	.750	.944	.000	.000	.942	.000	.000	.000	.000	.000	.984



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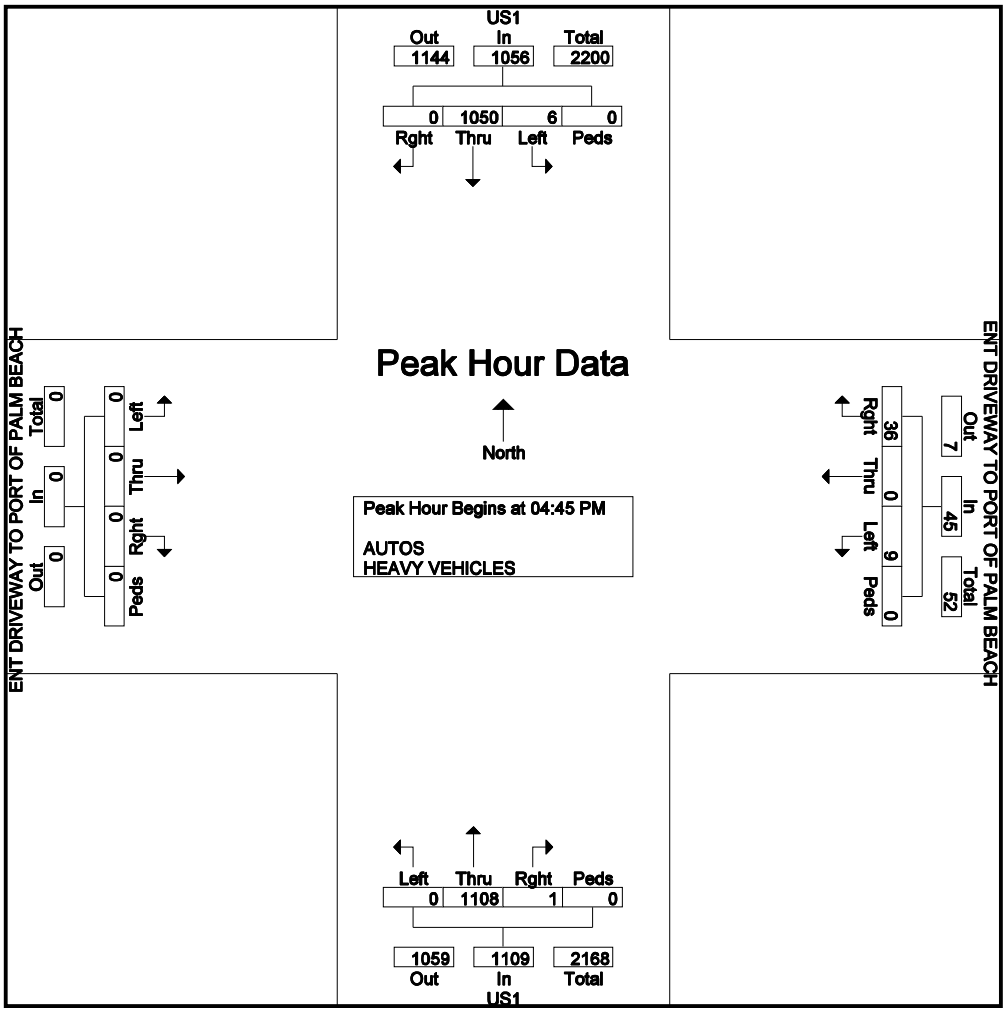
COUNTY : PALM BEACH

File Name : US1@DRIVEWAY
Site Code : 00000000
Start Date : 9/16/2008
Page No : 4

	US1 From North					ENT DRIVEWAY TO PORT OF PALM BEACH From East					US1 From South					ENT DRIVEWAY TO PORT OF PALM BEACH From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	251	0	0	251	10	0	4	0	14	0	270	0	0	270	0	0	0	0	0	535
05:00 PM	0	259	1	0	260	11	0	3	0	14	0	305	0	0	305	0	0	0	0	0	579
05:15 PM	0	279	3	0	282	9	0	1	0	10	0	272	0	0	272	0	0	0	0	0	564
05:30 PM	0	261	2	0	263	6	0	1	0	7	1	261	0	0	262	0	0	0	0	0	532
Total Volume	0	1050	6	0	1056	36	0	9	0	45	1	1108	0	0	1109	0	0	0	0	0	2210
% App. Total	0	99.4	0.6	0		80	0	20	0		0.1	99.9	0	0		0	0	0	0		
PHF	.000	.941	.500	.000	.936	.818	.000	.563	.000	.804	.250	.908	.000	.000	.909	.000	.000	.000	.000	.000	.954



Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : TRAFTECH
JOB NO.: 2008-093
PROJECT: RIVIERA BEACH FPL
COUNTY : PALM BEACH

File Name : US1@59ST
Site Code : 00000000
Start Date : 9/16/2008
Page No : 1

Groups Printed- AUTOS - HEAVY VEHICLES

	US1 From North				59TH STREET From East				US1 From South				59TH STREET From West				
Start Time	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Int. Total
07:00 AM	2	208	2	0	0	1	1	0	0	128	1	0	1	0	3	0	347
07:15 AM	1	240	1	0	0	0	0	0	0	166	1	0	3	0	2	0	414
07:30 AM	1	335	1	0	0	0	0	0	1	196	0	0	1	0	1	0	536
07:45 AM	1	307	4	0	0	1	0	0	0	204	0	0	0	0	1	0	518
Total	5	1090	8	0	0	2	1	0	1	694	2	0	5	0	7	0	1815
08:00 AM	2	329	2	0	0	0	0	0	0	196	0	0	0	0	1	0	530
08:15 AM	1	319	4	0	0	0	0	0	0	159	0	0	4	0	2	0	489
08:30 AM	0	306	1	0	0	0	0	0	0	165	0	0	2	0	1	0	475
08:45 AM	0	257	0	0	0	0	0	0	1	167	0	0	2	0	1	0	428
Total	3	1211	7	0	0	0	0	0	1	687	0	0	8	0	5	0	1922
*** BREAK ***																	
04:00 PM	3	233	2	0	0	0	0	0	0	236	0	0	2	0	2	0	478
04:15 PM	3	239	3	0	0	0	1	0	1	249	0	0	0	0	1	0	497
04:30 PM	1	250	2	0	0	0	0	0	0	241	1	0	0	0	3	0	498
04:45 PM	0	263	1	0	0	0	0	0	5	266	2	0	1	0	1	0	539
Total	7	985	8	0	0	0	1	0	6	992	3	0	3	0	7	0	2012
05:00 PM	0	269	2	0	0	0	1	0	0	261	4	0	1	0	1	0	539
05:15 PM	1	267	7	0	0	0	0	0	1	270	4	0	0	0	1	0	551
05:30 PM	1	252	0	0	0	1	1	0	0	322	2	0	1	0	0	0	580
05:45 PM	4	235	1	0	0	0	1	0	0	237	3	0	3	0	0	0	484
Total	6	1023	10	0	0	1	3	0	1	1090	13	0	5	0	2	0	2154
Grand Total	21	4309	33	0	0	3	5	0	9	3463	18	0	21	0	21	0	7903
Apprch %	0.5	98.8	0.8	0	0	37.5	62.5	0	0.3	99.2	0.5	0	50	0	50	0	
Total %	0.3	54.5	0.4	0	0	0	0.1	0	0.1	43.8	0.2	0	0.3	0	0.3	0	
AUTOS	21	4270	33	0	0	3	5	0	9	3447	18	0	21	0	21	0	7848
% AUTOS	100	99.1	100	0	0	100	100	0	100	99.5	100	0	100	0	100	0	99.3
HEAVY VEHICLES	0	39	0	0	0	0	0	0	0	16	0	0	0	0	0	0	55
% HEAVY VEHICLES	0	0.9	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0.7

Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : TRAFTECH
JOB NO.: 2008-093
PROJECT: RIVIERA BEACH FPL
COUNTY : PALM BEACH

File Name : US1@59ST
Site Code : 00000000
Start Date : 9/16/2008
Page No : 1

Groups Printed- HEAVY VEHICLES

	US1 From North				59TH STREET From East				US1 From South				59TH STREET From West				
Start Time	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Int. Total
07:00 AM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
07:30 AM	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5
07:45 AM	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	4
Total	0	7	0	0	0	0	0	0	0	6	0	0	0	0	0	0	13
08:00 AM	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	5
08:15 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:45 AM	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	5
Total	0	10	0	0	0	0	0	0	0	5	0	0	0	0	0	0	15
*** BREAK ***																	
04:00 PM	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5
04:15 PM	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4
04:30 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
04:45 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	0	13	0	0	0	0	0	0	0	3	0	0	0	0	0	0	16
05:00 PM	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5
05:15 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
05:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	9	0	0	0	0	0	0	0	2	0	0	0	0	0	0	11
Grand Total	0	39	0	0	0	0	0	0	0	16	0	0	0	0	0	0	55
Apprch %	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	
Total %	0	70.9	0	0	0	0	0	0	0	29.1	0	0	0	0	0	0	

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Miami, Fl 33186
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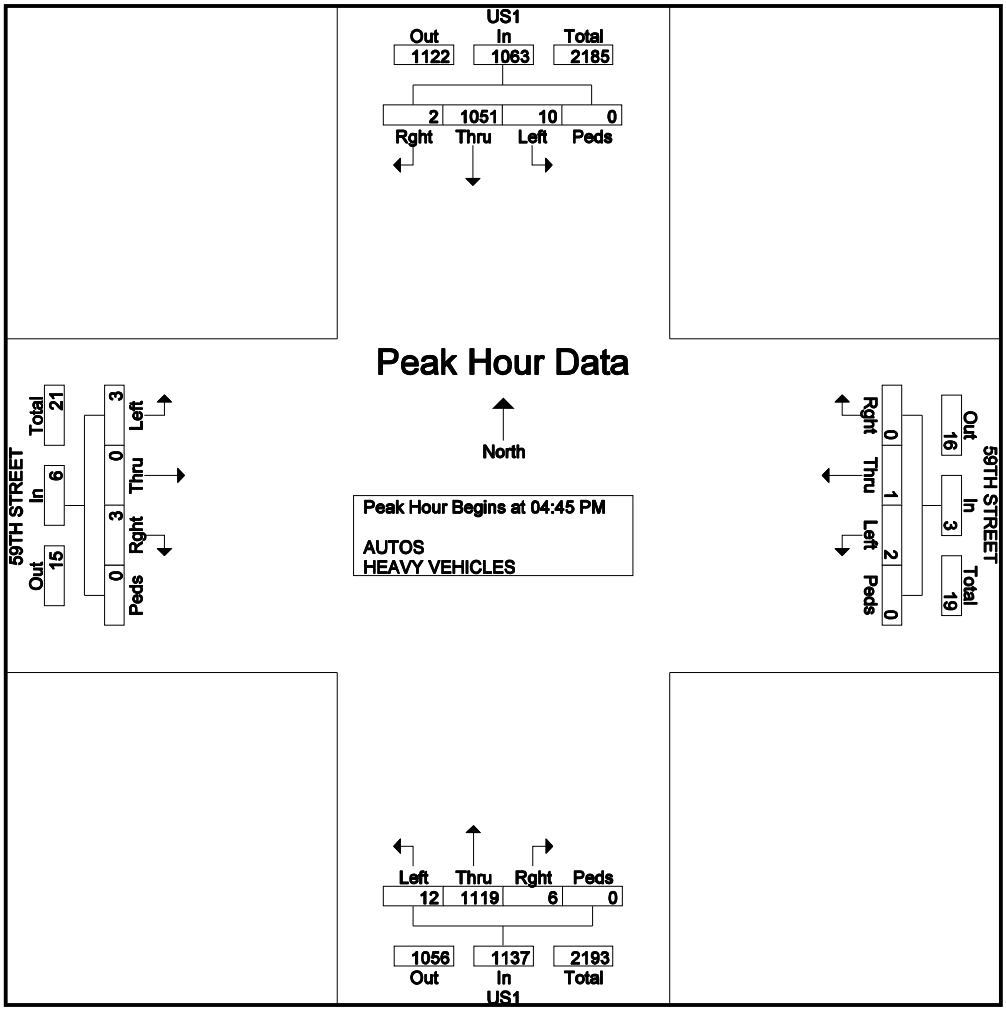
CLIENT : TRAFTECH
JOB NO.: 2008-093
PROJECT: RIVIERA BEACH FPL
COUNTY : PALM BEACH

File Name : US1@59ST
Site Code : 00000000
Start Date : 9/16/2008
Page No : 2

	US1 From North					59TH STREET From East					US1 From South					59TH STREET From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	263	1	0	264	0	0	0	0	0	5	266	2	0	273	1	0	1	0	2	539
05:00 PM	0	269	2	0	271	0	0	1	0	1	0	261	4	0	265	1	0	1	0	2	539
05:15 PM	1	267	7	0	275	0	0	0	0	0	1	270	4	0	275	0	0	1	0	1	551
05:30 PM	1	252	0	0	253	0	1	1	0	2	0	322	2	0	324	1	0	0	0	1	580
Total Volume	2	1051	10	0	1063	0	1	2	0	3	6	1119	12	0	1137	3	0	3	0	6	2209
% App. Total	0.2	98.9	0.9	0		0	33.3	66.7	0		0.5	98.4	1.1	0		50	0	50	0		
PHF	.500	.977	.357	.000	.966	.000	.250	.500	.000	.375	.300	.869	.750	.000	.877	.750	.000	.750	.000	.750	.952



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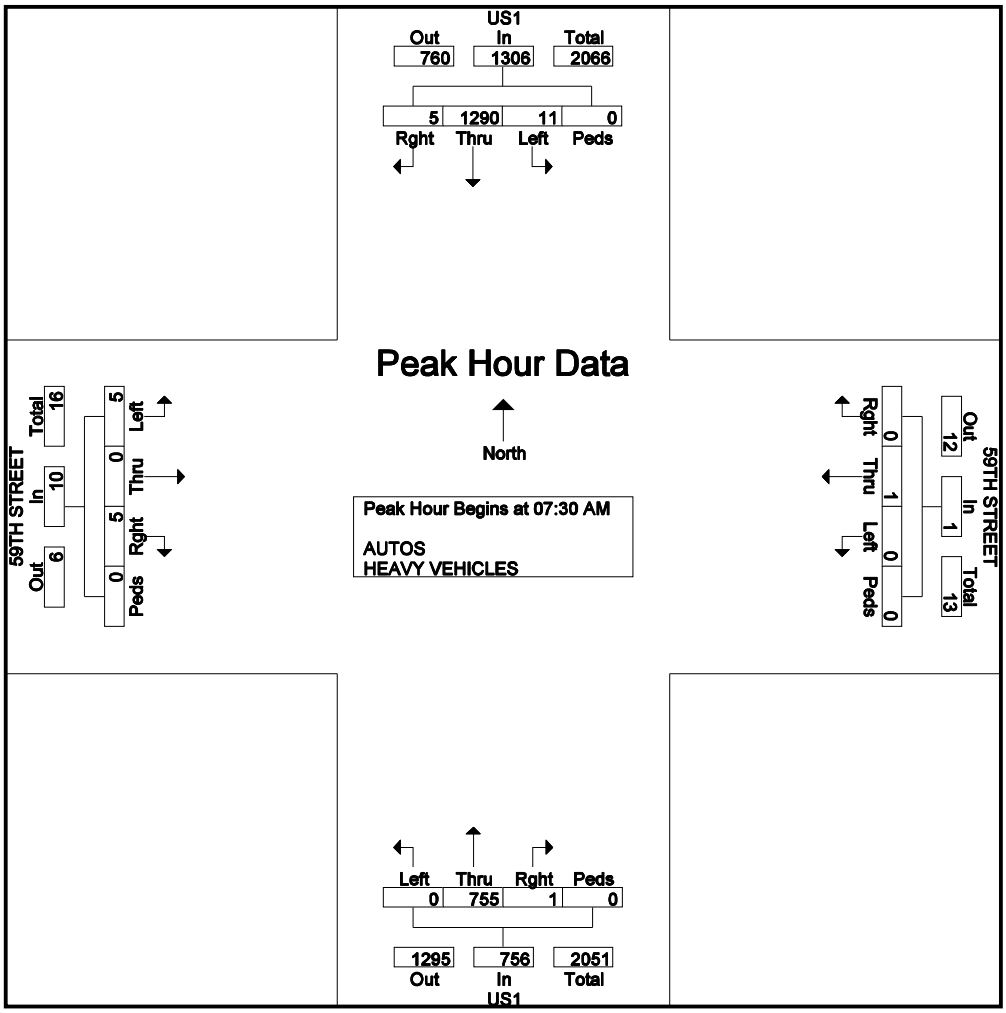
JOB NO.: 2008-093
PROJECT: RIVIERA BEACH FPL
COUNTY : PALM BEACH

File Name : US1@59ST
Site Code : 00000000
Start Date : 9/16/2008
Page No : 3

	US1 From North					59TH STREET From East					US1 From South					59TH STREET From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	1	335	1	0	337	0	0	0	0	0	1	196	0	0	197	1	0	1	0	2	536
07:45 AM	1	307	4	0	312	0	1	0	0	1	0	204	0	0	204	0	0	1	0	1	518
08:00 AM	2	329	2	0	333	0	0	0	0	0	0	196	0	0	196	0	0	1	0	1	530
08:15 AM	1	319	4	0	324	0	0	0	0	0	0	159	0	0	159	4	0	2	0	6	489
Total Volume	5	1290	11	0	1306	0	1	0	0	1	1	755	0	0	756	5	0	5	0	10	2073
% App. Total	0.4	98.8	0.8	0		0	100	0	0		0.1	99.9	0	0		50	0	50	0		
PHF	.625	.963	.688	.000	.969	.000	.250	.000	.000	.250	.250	.925	.000	.000	.926	.313	.000	.625	.000	.417	.967



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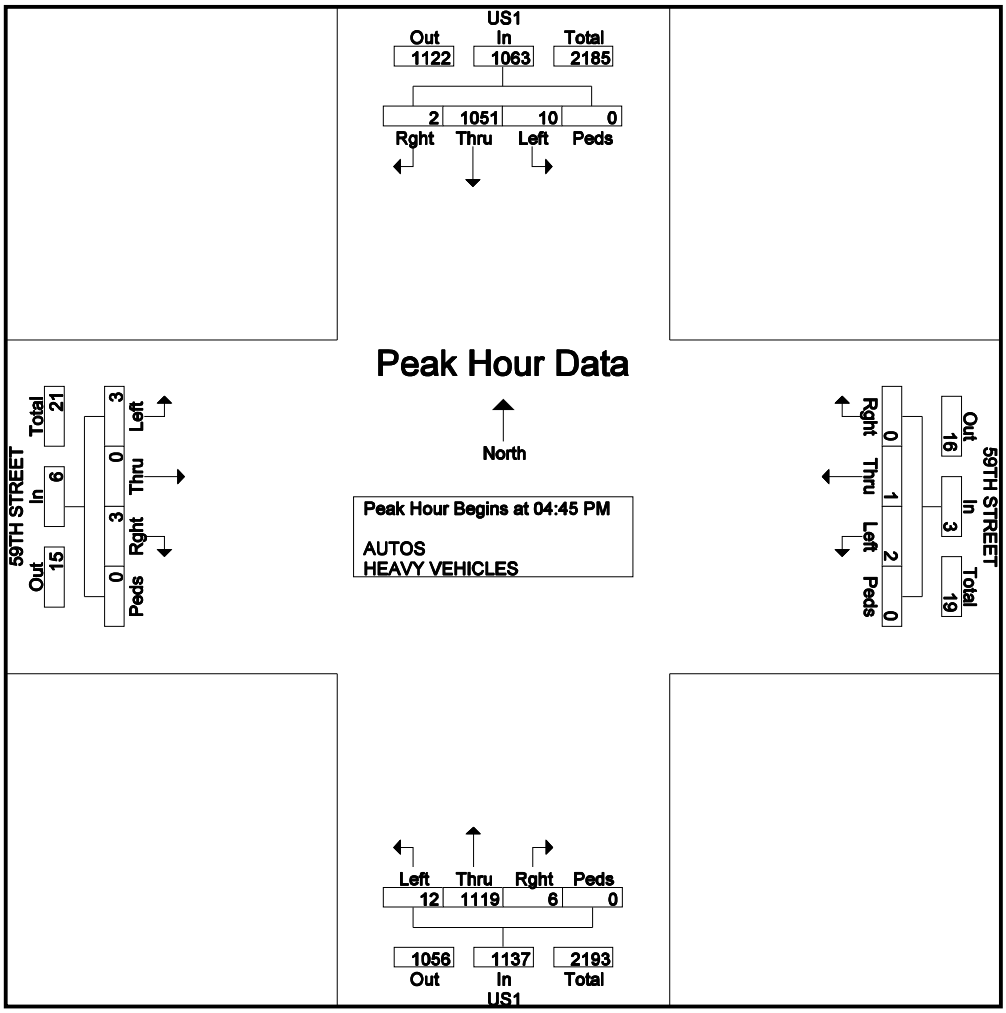
COUNTY : PALM BEACH

File Name : US1@59ST
Site Code : 00000000
Start Date : 9/16/2008
Page No : 4

	US1 From North					59TH STREET From East					US1 From South					59TH STREET From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	263	1	0	264	0	0	0	0	0	5	266	2	0	273	1	0	1	0	2	539
05:00 PM	0	269	2	0	271	0	0	1	0	1	0	261	4	0	265	1	0	1	0	2	539
05:15 PM	1	267	7	0	275	0	0	0	0	0	1	270	4	0	275	0	0	1	0	1	551
05:30 PM	1	252	0	0	253	0	1	1	0	2	0	322	2	0	324	1	0	0	0	1	580
Total Volume	2	1051	10	0	1063	0	1	2	0	3	6	1119	12	0	1137	3	0	3	0	6	2209
% App. Total	0.2	98.9	0.9	0		0	33.3	66.7	0		0.5	98.4	1.1	0		50	0	50	0		
PHF	.500	.977	.357	.000	.966	.000	.250	.500	.000	.375	.300	.869	.750	.000	.877	.750	.000	.750	.000	.750	.952



APPENDIX C

Signal Timing Plan

CONTROLLER TIME SHEET

DATE TIMING INSTALLED: _____

INTERSECTION	PORT ACCESS RD AND US-1	CONTROLLER TYPE	NAZTEC
SIGNAL #	21380	SYSTEM #	1015

PHASE NUMBER	APPROACH / INTERVAL	MIN GREEN	CAR EXT	MAX 1	MAX 2	YEL CLR	RED CLR	WALK	PED CLR	MIN RCL	MAX RCL	PED RCL	LOCK CALLS	NAT RIW	DETECTOR SETTINGS
0															
2	NA	20.0	4.0	45.0		4.0	2.0	0.0	0.0	1			0		L2=NORMAL
3															
4	EA	6.0	2.0	20.0		4.0	2.0	7.0	20.0	0			0		L4:NORMAL L4R:D/N (10)
5	NALT	5.0	3.0	15.0		4.0	2.0	0.0	0.0	0			0		L5=NORMAL
6	SA	20.0	4.0	45.0		4.0	2.0	7.0	30.0	1			0		L6=NORMAL
7															
8	WA	6.0	2.0	20.0		4.0	2.0	7.0	20.0	0			0		L8:D/N(5)

PREEMPTION TIMING	GREEN BEFORE	TRACK CLR	TRACK CURVE	MIN DWELL	YEL AFTER	RED AFTER		SPECIAL FUNCTIONS	START TO	DUAL ENTRY	DET SWITCH	QUEUE FLASH	INTER FLASH	
										YES	NO			
									2-6			2-6	4-8	

COMMENTS		TIMING DESIGNED BY	SDS	DATE	3/21/2007
		APPROVED BY	S. SHREVE, P.E.	DATE	

APPENDIX D

Machine Traffic Counts

CLIENT : TRAF TECH
JOB NO : 2008-093
PROJECT: RIVIERA BEACH FPL
COUNTY : PALM BEACH
Street name :US1 SOUTH OF Cross street:59TH STREET.

CROOSROADS ENGINEERING
13284 SW 120ST
MIAMI, FLORIDA
305-233-3997

Site Code : 842000121100
Start Date: 09/16/2008
File I.D. : 842000-R
Page : 1

Begin	<------ NB		------>		<------ SB		------>		<------Combined		------>		Tuesday
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		
12:00 09/16	32		144		29		179		61		323		
12:15	33		152		25		162		58		314		
12:30	22		157		20		157		42		314		
12:45	22	109	135	588	12	86	185	683	34	195	320	1271	
01:00	15		142		19		153		34		295		
01:15	22		163		15		179		37		342		
01:30	11		162		10		182		21		344		
01:45	11	59	154	621	10	54	154	668	21	113	308	1289	
02:00	10		151		18		172		28		323		
02:15	12		130		9		165		21		295		
02:30	14		168		12		207		26		375		
02:45	11	47	153	602	10	49	228	772	21	96	381	1374	
03:00	6		187		3		190		9		377		
03:15	9		200		6		165		15		365		
03:30	12		197		10		227		22		424		
03:45	15	42	202	786	10	29	207	789	25	71	409	1575	
04:00	14		223		9		231		23		454		
04:15	8		267		21		240		29		507		
04:30	9		265		8		258		17		523		
04:45	12	43	255	1010	21	59	257	986	33	102	512	1996	
05:00	17		282		21		278		38		560		
05:15	19		270		36		251		55		521		
05:30	26		306		25		256		51		562		
05:45	45	107	256	1114	45	127	253	1038	90	234	509	2152	
06:00	42		239		50		177		92		416		
06:15	47		196		80		198		127		394		
06:30	94		153		140		150		234		303		
06:45	142	325	152	740	145	415	121	646	287	740	273	1386	
07:00	123		121		195		144		318		265		
07:15	190		112		287		157		477		269		
07:30	184		125		304		125		488		250		
07:45	204	701	106	464	314	1100	133	559	518	1801	239	1023	
08:00	199		105		305		128		504		233		
08:15	169		101		339		100		508		201		
08:30	165		79		305		92		470		171		
08:45	161	694	79	364	268	1217	114	434	429	1911	193	798	
09:00	118		100		193		74		311		174		
09:15	122		85		174		72		296		157		
09:30	133		66		197		79		330		145		
09:45	160	533	79	330	177	741	65	290	337	1274	144	620	
10:00	129		55		138		65		267		120		
10:15	117		51		164		63		281		114		
10:30	132		54		168		48		300		102		
10:45	140	518	51	211	146	616	45	221	286	1134	96	432	
11:00	140		33		165		47		305		80		
11:15	160		28		150		43		310		71		
11:30	139		33		141		28		280		61		
11:45	163	602	30	124	164	620	91	209	327	1222	121	333	
Totals	3780		6954		5113		7295		8893		14249		
Day Totals		10734				12408				23142			
Split %	42.5%		48.8%		57.4%		51.2%						

Peak Hour	07:15	05:00	07:45	04:30	07:30	04:45
Volume	777	1114	1263	1044	2018	2155
P.H.F.	.95	.91	.93	.93	.97	.95

CLIENT : TRAF TECH
JOB NO : 2008-093
PROJECT: RIVIERA BEACH FPL
COUNTY : PALM BEACH
Street name :US1 SOUTH OF Cross street:59TH STREET.

CROOSROADS ENGINEERING
13284 SW 120ST
MIAMI, FLORIDA
305-233-3997

Site Code : 842000121100
Start Date: 09/16/2008
File I.D. : 842000-R
Page : 2

Begin	<------ NB		------>		<------ SB		------>		<------Combined		------>		Wednesday
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		
12:00 09/17	30		158		37		173		67		331		
12:15	28		157		23		165		51		322		
12:30	15		141		22		180		37		321		
12:45	19	92	136	592	19	101	160	678	38	193	296	1270	
01:00	18		135		8		154		26		289		
01:15	21		149		11		175		32		324		
01:30	12		166		12		161		24		327		
01:45	6	57	161	611	2	33	166	656	8	90	327	1267	
02:00	11		157		9		163		20		320		
02:15	9		155		12		189		21		344		
02:30	10		165		13		174		23		339		
02:45	6	36	168	645	8	42	199	725	14	78	367	1370	
03:00	8		184		6		164		14		348		
03:15	14		200		9		184		23		384		
03:30	12		206		11		267		23		473		
03:45	12	46	241	831	9	35	176	791	21	81	417	1622	
04:00	7		219		7		218		14		437		
04:15	8		190		9		221		17		411		
04:30	10		234		11		255		21		489		
04:45	18	43	270	913	15	42	241	935	33	85	511	1848	
05:00	18		283		25		232		43		515		
05:15	20		306		25		254		45		560		
05:30	28		288		33		245		61		533		
05:45	42	108	255	1132	44	127	208	939	86	235	463	2071	
06:00	50		230		42		193		92		423		
06:15	51		180		70		182		121		362		
06:30	76		147		132		172		208		319		
06:45	138	315	135	692	158	402	139	686	296	717	274	1378	
07:00	117		114		175		127		292		241		
07:15	169		120		234		128		403		248		
07:30	187		110		305		123		492		233		
07:45	204	677	121	465	307	1021	116	494	511	1698	237	959	
08:00	202		94		305		152		507		246		
08:15	157		105		336		102		493		207		
08:30	168		85		273		111		441		196		
08:45	134	661	84	368	248	1162	84	449	382	1823	168	817	
09:00	129		97		194		88		323		185		
09:15	155		83		171		90		326		173		
09:30	116		76		194		81		310		157		
09:45	139	539	64	320	179	738	86	345	318	1277	150	665	
10:00	132		62		140		73		272		135		
10:15	105		56		164		62		269		118		
10:30	136		59		158		59		294		118		
10:45	166	539	58	235	151	613	58	252	317	1152	116	487	
11:00	152		45		164		42		316		87		
11:15	131		62		149		32		280		94		
11:30	160		36		165		54		325		90		
11:45	152	595	29	172	160	638	101	229	312	1233	130	401	
Totals	3708		6976		4954		7179		8662		14155		
Day Totals		10684				12133				22817			
Split %	42.8%		49.2%		57.1%		50.7%						
Peak Hour	07:15		04:45		07:30		04:30		07:30		04:45		
Volume	762		1147		1253		982		2003		2119		
P.H.F.	.93		.93		.93		.96		.97		.94		

CLIENT : TRAF TECH
JOB NO : 2008-093
PROJECT: RIVIERA BEACH FPL
COUNTY : PALM BEACH

CROOSROADS ENGINEERING
13284 SW 120ST
MIAMI, FLORIDA
305-233-3997

Site Code : 841000321100
Start Date: 09/16/2008
File I.D. : 841000-R

Street name :ENTRANCE/EXIT DRIVEWAY TO/FROM Cross street:PORT OF PALM BEACH/RIVIERA FPL. ,

Begin	<------ EB		------>		<------ WB		------>		<------Combined		------>		Tuesday
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		
12:00 09/16	0		1		0		26		0		27		
12:15	0		5		0		8		0		13		
12:30	0		5		0		9		0		14		
12:45	0	*	4	15	0	*	4	47	0	*	8	62	
01:00	0		8		0		13		0		21		
01:15	0		6		0		6		0		12		
01:30	0		7		0		6		0		13		
01:45	0	*	1	22	0	*	8	33	0	*	9	55	
02:00	0		0		0		7		0		7		
02:15	0		5		0		4		0		9		
02:30	0		8		0		3		0		11		
02:45	0	*	8	21	0	*	5	19	0	*	13	40	
03:00	0		3		0		9		0		12		
03:15	0		0		0		6		0		6		
03:30	0		3		0		4		0		7		
03:45	0	*	3	9	0	*	2	21	0	*	5	30	
04:00	0		2		0		13		0		15		
04:15	0		3		0		5		0		8		
04:30	0		2		0		12		0		14		
04:45	0	*	1	8	0	*	9	39	0	*	10	47	
05:00	0		0		0		16		0		16		
05:15	0		3		0		6		0		9		
05:30	0		7		0		10		0		17		
05:45	0	*	0	10	0	*	7	39	0	*	7	49	
06:00	6		0		0		2		6		2		
06:15	4		0		1		0		5		0		
06:30	6		0		0		4		6		4		
06:45	5	21	0	*	0	1	4	10	5	22	4	10	
07:00	3		0		2		2		5		2		
07:15	4		0		0		0		4		0		
07:30	10		0		6		0		16		0		
07:45	15	32	0	*	8	16	0	2	23	48	0	2	
08:00	16		0		9		0		25		0		
08:15	12		0		10		2		22		2		
08:30	8		0		1		0		9		0		
08:45	6	42	0	*	9	29	1	3	15	71	1	3	
09:00	12		0		3		1		15		1		
09:15	2		0		6		0		8		0		
09:30	5		0		3		0		8		0		
09:45	12	31	0	*	4	16	0	1	16	47	0	1	
10:00	5		0		8		0		13		0		
10:15	0		0		5		0		5		0		
10:30	1		0		7		2		8		2		
10:45	1	7	0	*	5	25	2	4	6	32	2	4	
11:00	6		0		8		0		14		0		
11:15	7		0		8		0		15		0		
11:30	2		3		4		3		6		6		
11:45	16	31	0	3	6	26	0	3	22	57	0	6	
Totals	164		88		113		221		277		309		
Day Totals		252				334				586			
Split %	59.2%		28.4%		40.7%		71.5%						

Peak Hour	07:30	12:45	07:30	12:00	07:30	12:00
Volume	53	25	33	47	86	62
P.H.F.	.82	.78	.82	.45	.86	.57

CLIENT : TRAF TECH
JOB NO : 2008-093
PROJECT: RIVIERA BEACH FPL
COUNTY : PALM BEACH

CROOSROADS ENGINEERING
13284 SW 120ST
MIAMI, FLORIDA
305-233-3997

Site Code : 841000321100
Start Date: 09/16/2008
File I.D. : 841000-R

Street name :ENTRANCE/EXIT DRIVEWAY TO/FROM Cross street:PORT OF PALM BEACH/RIVIERA FPL. ,

Begin	<------ EB		------>		<------ WB		------>		<------Combined		------>		Wednesday
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		
12:00 09/17	0		5		0		14		0		19		
12:15	0		9		0		16		0		25		
12:30	0		6		0		8		0		14		
12:45	0	*	4	24	0	*	6	44	0	*	10	68	
01:00	0		6		0		21		0		27		
01:15	0		5		0		9		0		14		
01:30	0		6		0		7		0		13		
01:45	0	*	9	26	0	*	2	39	0	*	11	65	
02:00	0		4		0		5		0		9		
02:15	0		3		0		2		0		5		
02:30	0		5		0		2		0		7		
02:45	0	*	2	14	0	*	2	11	0	*	4	25	
03:00	0		4		0		5		0		9		
03:15	0		2		0		12		0		14		
03:30	0		5		0		9		0		14		
03:45	0	*	4	15	0	*	5	31	0	*	9	46	
04:00	0		2		0		6		0		8		
04:15	0		0		0		7		0		7		
04:30	0		4		0		13		0		17		
04:45	0	*	2	8	0	*	12	38	0	*	14	46	
05:00	0		0		0		18		0		18		
05:15	0		0		0		7		0		7		
05:30	1		2		0		9		1		11		
05:45	1	2	4	6	1	1	3	37	2	3	7	43	
06:00	3		2		1		2		4		4		
06:15	5		2		2		5		7		7		
06:30	3		0		4		2		7		2		
06:45	5	16	0	4	2	9	0	9	7	25	0	13	
07:00	1		0		1		0		2		0		
07:15	2		1		5		1		7		2		
07:30	5		1		0		0		5		1		
07:45	14	22	0	2	2	8	0	1	16	30	0	3	
08:00	26		1		9		2		35		3		
08:15	13		0		9		0		22		0		
08:30	5		0		2		1		7		1		
08:45	2	46	1	2	4	24	0	3	6	70	1	5	
09:00	8		0		8		0		16		0		
09:15	5		0		5		0		10		0		
09:30	4		0		5		0		9		0		
09:45	7	24	0	*	7	25	0	*	14	49	0	*	
10:00	3		0		0		0		3		0		
10:15	2		0		2		0		4		0		
10:30	0		1		2		2		2		3		
10:45	6	11	1	2	13	17	2	4	19	28	3	6	
11:00	4		4		2		0		6		4		
11:15	6		0		8		0		14		0		
11:30	1		0		7		5		8		5		
11:45	4	15	0	4	7	24	0	5	11	39	0	9	
Totals	136		107		108		222		244		329		
Day Totals		243				330				573			
Split %	55.7%		32.5%		44.2%		67.4%						

Peak Hour	07:30	01:00	10:45	12:15	07:45	12:15
Volume	58	26	30	51	80	76
P.H.F.	.55	.72	.57	.60	.57	.70

APPENDIX E

Driveway Counts

KMF DATA LLC

1669 SW College Street, Stuart, FL, USA 34997
Voice and Fax 772-221-7971

FPL GATE#3 Riviera Beach, FL.
Automatic Traffic Recorder
From July 15, 2008 (2:00 PM)
To July 18, 2008 (2:00 PM)

Site Code: 08-114

Start Time	15-Jul- Tue	OUT A.M.	OUT P.M.	IN A.M.	IN P.M.	Combined A.M.	Combined P.M.	16-Jul- Wed	OUT A.M.	OUT P.M.	IN A.M.	IN P.M.	Combined A.M.	Combined P.M.
12:00		*	*	*	*	*	*		0	1	0	0	0	1
12:15		*	*	*	*	*	*		0	3	0	3	0	6
12:30		*	*	*	*	*	*		0	2	0	2	0	4
12:45		*	*	*	*	*	*		0	1	0	0	0	1
01:00		*	*	*	*	*	*		0	2	0	2	0	4
01:15		*	*	*	*	*	*		0	2	0	1	0	3
01:30		*	*	*	*	*	*		0	1	0	0	0	1
01:45		*	*	*	*	*	*		0	0	0	1	0	1
02:00		*	0	*	0	*	0		0	0	0	3	0	3
02:15		*	0	*	1	*	1		0	0	0	0	0	0
02:30		*	0	*	1	*	1		0	1	0	4	0	5
02:45		*	1	*	1	*	2		0	2	0	0	0	2
03:00		*	0	*	1	*	1		0	0	0	0	0	0
03:15		*	2	*	1	*	3		0	0	0	0	0	0
03:30		*	2	*	1	*	3		0	4	0	1	0	5
03:45		*	5	*	1	*	6		0	4	0	1	0	5
04:00		*	3	*	0	*	3		0	4	0	0	0	4
04:15		*	3	*	4	*	7		0	0	0	2	0	2
04:30		*	17	*	2	*	19		0	2	1	2	1	4
04:45		*	2	*	0	*	2		0	5	0	0	0	5
05:00		*	1	*	0	*	1		0	5	0	1	0	6
05:15		*	4	*	0	*	4		1	4	0	0	1	4
05:30		*	2	*	0	*	2		0	2	0	1	0	3
05:45		*	2	*	2	*	4		0	1	3	2	3	3
06:00		*	0	*	2	*	2		0	5	3	3	3	8
06:15		*	2	*	1	*	3		4	3	2	0	6	3
06:30		*	1	*	0	*	1		1	2	7	0	8	2
06:45		*	1	*	0	*	1		0	1	7	0	7	1
07:00		*	0	*	1	*	1		0	0	3	0	3	0
07:15		*	0	*	0	*	0		0	0	2	0	2	0
07:30		*	0	*	0	*	0		2	0	7	0	9	0
07:45		*	0	*	0	*	0		0	0	9	0	9	0
08:00		*	0	*	1	*	1		0	1	7	0	7	1
08:15		*	0	*	0	*	0		0	0	1	0	1	0
08:30		*	0	*	0	*	0		0	1	2	0	2	1
08:45		*	0	*	0	*	0		0	0	2	0	2	0
09:00		*	0	*	0	*	0		0	0	2	0	2	0
09:15		*	0	*	0	*	0		1	0	2	0	3	0
09:30		*	0	*	0	*	0		0	0	1	0	1	0
09:45		*	0	*	0	*	0		0	0	0	0	0	0
10:00		*	0	*	0	*	0		2	0	0	0	2	0
10:15		*	2	*	3	*	5		0	0	1	1	1	1
10:30		*	0	*	0	*	0		2	1	2	0	4	1
10:45		*	0	*	0	*	0		1	0	2	0	3	0
11:00		*	2	*	0	*	2		0	0	2	0	2	0
11:15		*	0	*	0	*	0		0	0	2	0	2	0
11:30		*	0	*	0	*	0		4	0	2	0	6	0
11:45		*	0	*	0	*	0		2	0	0	0	2	0
Total		0	52	0	23	0	75		20	60	72	30	92	90
Day Total		52		23		75			80		102		182	
% Total		0.0%	69.3%	0.0%	30.7%				11.0%	33.0%	39.6%	16.5%		
Peak			03:45		03:45		03:45		11:00	04:30	07:15	01:45	07:15	04:30
Vol.			28		7		35		6	16	25	8	27	19
P.H.F.			0.412		0.438		0.461		0.375	0.800	0.694	0.500	0.750	0.792

KMF DATA LLC

1669 SW College Street, Stuart, FL, USA 34997
Voice and Fax 772-221-7971

FPL GATE#3 Riviera Beach, FL.
Automatic Traffic Recorder
From July 15, 2008 (2:00 PM)
To July 18, 2008 (2:00 PM)

Site Code: 08-114

Start Time	17-Jul- Thu	OUT A.M.	OUT P.M.	IN A.M.	IN P.M.	Combined A.M.	Combined P.M.	18-Jul- Fri	OUT A.M.	OUT P.M.	IN A.M.	IN P.M.	Combined A.M.	Combined P.M.
12:00		0	2	0	1	0	3		0	1	0	0	0	1
12:15		0	3	0	2	0	5		0	2	0	5	0	7
12:30		0	2	0	2	0	4		0	1	0	2	0	3
12:45		0	2	0	1	0	3		0	2	0	2	0	4
01:00		0	3	0	0	0	3		0	4	0	1	0	5
01:15		0	1	0	1	0	2		0	1	0	0	0	1
01:30		0	0	0	1	0	1		0	2	0	2	0	4
01:45		0	0	0	2	0	2		0	0	0	1	0	1
02:00		0	2	0	0	0	2		0	*	0	*	0	*
02:15		0	0	0	1	0	1		0	*	0	*	0	*
02:30		0	1	0	0	0	1		0	*	0	*	0	*
02:45		0	0	0	1	0	1		0	*	0	*	0	*
03:00		0	0	0	1	0	1		0	*	0	*	0	*
03:15		0	3	0	1	0	4		0	*	0	*	0	*
03:30		0	3	0	2	0	5		0	*	0	*	0	*
03:45		0	2	1	0	1	2		0	*	0	*	0	*
04:00		0	10	1	0	1	10		0	*	0	*	0	*
04:15		0	5	0	0	0	5		0	*	1	*	1	*
04:30		0	3	0	2	0	5		0	*	0	*	0	*
04:45		0	1	0	0	0	1		0	*	0	*	0	*
05:00		0	6	0	0	0	6		0	*	0	*	0	*
05:15		0	1	0	0	0	1		0	*	0	*	0	*
05:30		0	2	0	0	0	2		0	*	0	*	0	*
05:45		0	5	3	1	3	6		0	*	2	*	2	*
06:00		0	1	4	5	4	6		1	*	3	*	4	*
06:15		2	1	2	0	4	1		1	*	3	*	4	*
06:30		1	0	9	0	10	0		0	*	9	*	9	*
06:45		1	3	7	0	8	3		5	*	5	*	10	*
07:00		1	0	4	2	5	2		0	*	0	*	0	*
07:15		0	0	1	1	1	1		0	*	1	*	1	*
07:30		1	0	5	0	6	0		0	*	5	*	5	*
07:45		3	1	12	0	15	1		0	*	9	*	9	*
08:00		0	2	3	0	3	2		2	*	1	*	3	*
08:15		0	1	1	0	1	1		0	*	1	*	1	*
08:30		0	1	1	0	1	1		1	*	0	*	1	*
08:45		0	0	3	0	3	0		0	*	0	*	0	*
09:00		1	0	1	0	2	0		0	*	1	*	1	*
09:15		1	0	1	0	2	0		0	*	0	*	0	*
09:30		0	0	0	0	0	0		1	*	1	*	2	*
09:45		1	0	1	0	2	0		0	*	1	*	1	*
10:00		0	2	0	0	0	2		0	*	2	*	2	*
10:15		2	1	1	1	3	2		1	*	2	*	3	*
10:30		2	0	1	0	3	0		2	*	0	*	2	*
10:45		0	0	1	0	1	0		0	*	1	*	1	*
11:00		0	0	3	0	3	0		1	*	1	*	2	*
11:15		0	0	0	0	0	0		2	*	0	*	2	*
11:30		2	0	0	0	2	0		3	*	1	*	4	*
11:45		3	0	1	0	4	0		2	*	1	*	3	*
Total		21	70	67	28	88	98		22	13	51	13	73	26
Day Total		91		95		186			35		64		99	
% Total		11.3%	37.6%	36.0%	15.1%				22.2%	13.1%	51.5%	13.1%		
Peak		06:15	03:30	06:00	12:00	06:15	03:30		11:00	00:15	06:00	00:15	06:00	00:15
Vol.		5	20	22	6	27	22		8	9	20	10	27	19
P.H.F.		0.625	0.500	0.611	0.750	0.675	0.550		0.400	0.563	0.556	0.500	0.675	0.679

ADT	ADT 184	AADT 184

KMF DATA LLC
1669 SW College Street, Stuart, FL, USA 34997
Voice and Fax 772-221-7971

FPL GATE#3 Riviera Beach, FL.
Automatic Traffic Recorder
From July 15, 2008 (2:00 PM)
To July 18, 2008 (2:00 PM)

Site Code: 08-114

KMF DATA LLC

1669 SW College Street, Stuart, FL, USA 34997
Voice and Fax 772-221-7971

FPL GATE #9 (North Flagler Dr.)
Automatic Traffic Recorder
From July 15, 2008 (2:00 PM)
To July 18, 2008 (2:00 PM)

Site Code: 08-114

Start Time	15-Jul- Tue	OUT A.M.	OUT P.M.	IN A.M.	IN P.M.	Combined A.M.	Combined P.M.	16-Jul- Wed	OUT A.M.	OUT P.M.	IN A.M.	IN P.M.	Combined A.M.	Combined P.M.
12:00		*	0	*	0	*	0		0	0	0	0	0	0
12:15		*	0	*	0	*	0		0	0	0	0	0	0
12:30		*	0	*	0	*	0		0	0	0	0	0	0
12:45		*	0	*	0	*	0		0	0	0	0	0	0
01:00		*	0	*	0	*	0		0	1	0	0	0	1
01:15		*	0	*	0	*	0		0	0	0	0	0	0
01:30		*	0	*	0	*	0		0	0	0	0	0	0
01:45		*	0	*	0	*	0		0	0	0	0	0	0
02:00		*	0	*	0	*	0		0	0	0	0	0	0
02:15		*	0	*	0	*	0		0	0	0	0	0	0
02:30		*	0	*	0	*	0		0	0	0	0	0	0
02:45		*	0	*	0	*	0		0	0	0	1	0	1
03:00		*	3	*	0	*	3		0	0	0	0	0	0
03:15		*	0	*	0	*	0		0	0	0	0	0	0
03:30		*	0	*	0	*	0		0	0	0	1	0	1
03:45		*	0	*	0	*	0		0	0	0	0	0	0
04:00		*	0	*	0	*	0		0	1	0	0	0	1
04:15		*	0	*	0	*	0		0	1	0	0	0	1
04:30		*	0	*	0	*	0		0	0	0	0	0	0
04:45		*	0	*	0	*	0		0	0	0	0	0	0
05:00		*	1	*	0	*	1		0	1	0	0	0	1
05:15		*	0	*	0	*	0		0	0	1	0	1	0
05:30		*	0	*	0	*	0		0	0	0	0	0	0
05:45		*	0	*	0	*	0		0	0	0	0	0	0
06:00		*	0	*	0	*	0		1	0	2	0	3	0
06:15		*	0	*	0	*	0		0	0	0	0	0	0
06:30		*	0	*	0	*	0		0	0	0	0	0	0
06:45		*	0	*	0	*	0		0	0	0	0	0	0
07:00		*	0	*	0	*	0		0	0	0	1	0	1
07:15		*	0	*	1	*	1		0	1	0	0	0	1
07:30		*	0	*	0	*	0		0	0	0	0	0	0
07:45		*	0	*	0	*	0		0	0	0	0	0	0
08:00		*	0	*	0	*	0		0	0	0	0	0	0
08:15		*	0	*	0	*	0		0	0	0	0	0	0
08:30		*	0	*	0	*	0		2	0	1	0	3	0
08:45		*	0	*	0	*	0		0	0	0	0	0	0
09:00		*	0	*	0	*	0		0	0	0	0	0	0
09:15		*	0	*	0	*	0		0	0	0	0	0	0
09:30		*	0	*	0	*	0		0	0	0	0	0	0
09:45		*	0	*	0	*	0		0	0	0	0	0	0
10:00		*	0	*	0	*	0		0	0	0	0	0	0
10:15		*	0	*	0	*	0		0	0	0	0	0	0
10:30		*	0	*	0	*	0		0	0	0	0	0	0
10:45		*	0	*	0	*	0		0	0	0	0	0	0
11:00		*	0	*	0	*	0		0	0	0	0	0	0
11:15		*	0	*	0	*	0		0	0	0	0	0	0
11:30		*	0	*	0	*	0		0	0	0	0	0	0
11:45		*	0	*	0	*	0		0	0	0	0	0	0
Total		0	4	0	1	0	5		3	5	4	3	7	8
Day Total		4		1		5			8		7		15	
% Total		0.0%	80.0%	0.0%	20.0%				20.0%	33.3%	26.7%	20.0%		
Peak			02:15		06:30		02:15		07:45	03:30	05:15	02:45	05:15	03:30
Vol.			3		1		3		2	2	3	2	4	3
P.H.F.			0.250		0.250		0.250		0.250	0.500	0.375	0.500	0.333	0.750

KMF DATA LLC

1669 SW College Street, Stuart, FL, USA 34997
Voice and Fax 772-221-7971

FPL GATE #9 (North Flagler Dr.)
Automatic Traffic Recorder
From July 15, 2008 (2:00 PM)
To July 18, 2008 (2:00 PM)

Site Code: 08-114

Start Time	17-Jul- Thu	OUT A.M.	OUT P.M.	IN A.M.	IN P.M.	Combined A.M.	Combined P.M.	18-Jul- Fri	OUT A.M.	OUT P.M.	IN A.M.	IN P.M.	Combined A.M.	Combined P.M.
12:00		0	0	0	0	0	0		0	0	0	0	0	0
12:15		0	0	0	0	0	0		0	0	0	0	0	0
12:30		0	0	0	0	0	0		0	0	0	1	0	1
12:45		0	0	0	0	0	0		0	0	0	0	0	0
01:00		0	0	0	0	0	0		0	0	0	0	0	0
01:15		0	0	0	0	0	0		0	0	0	0	0	0
01:30		0	0	0	0	0	0		0	0	0	0	0	0
01:45		0	0	0	0	0	0		0	0	0	0	0	0
02:00		0	0	0	0	0	0		0	*	0	*	0	*
02:15		0	0	0	0	0	0		0	*	0	*	0	*
02:30		0	0	0	0	0	0		0	*	0	*	0	*
02:45		0	2	0	1	0	3		0	*	0	*	0	*
03:00		0	0	0	0	0	0		0	*	0	*	0	*
03:15		0	0	0	0	0	0		0	*	0	*	0	*
03:30		0	0	0	0	0	0		0	*	0	*	0	*
03:45		0	0	0	0	0	0		0	*	0	*	0	*
04:00		0	0	0	0	0	0		0	*	0	*	0	*
04:15		0	2	0	0	0	2		0	*	0	*	0	*
04:30		0	0	0	0	0	0		0	*	0	*	0	*
04:45		0	0	0	0	0	0		0	*	0	*	0	*
05:00		0	0	0	0	0	0		0	*	0	*	0	*
05:15		0	0	0	0	0	0		0	*	0	*	0	*
05:30		0	0	0	0	0	0		0	*	0	*	0	*
05:45		0	0	2	0	2	0		0	*	1	*	1	*
06:00		1	0	1	0	2	0		0	*	0	*	0	*
06:15		0	0	1	0	1	0		0	*	3	*	3	*
06:30		0	0	0	0	0	0		0	*	0	*	0	*
06:45		0	0	0	0	0	0		0	*	0	*	0	*
07:00		0	0	0	0	0	0		0	*	0	*	0	*
07:15		0	1	0	0	0	1		0	*	0	*	0	*
07:30		0	0	0	0	0	0		0	*	0	*	0	*
07:45		0	0	0	0	0	0		0	*	0	*	0	*
08:00		0	0	0	0	0	0		0	*	0	*	0	*
08:15		0	0	0	0	0	0		0	*	0	*	0	*
08:30		0	0	0	0	0	0		0	*	0	*	0	*
08:45		0	0	0	0	0	0		0	*	0	*	0	*
09:00		0	0	0	0	0	0		0	*	0	*	0	*
09:15		0	0	0	0	0	0		0	*	0	*	0	*
09:30		0	0	0	0	0	0		0	*	0	*	0	*
09:45		0	0	0	0	0	0		0	*	0	*	0	*
10:00		0	0	0	0	0	0		0	*	0	*	0	*
10:15		0	0	0	0	0	0		0	*	0	*	0	*
10:30		0	0	0	0	0	0		0	*	0	*	0	*
10:45		0	0	0	0	0	0		0	*	0	*	0	*
11:00		0	0	0	0	0	0		0	*	0	*	0	*
11:15		0	0	0	0	0	0		0	*	0	*	0	*
11:30		0	0	0	0	0	0		0	*	0	*	0	*
11:45		0	0	0	0	0	0		0	*	0	*	0	*
Total		1	5	4	1	5	6		0	0	4	1	4	1
Day Total		6		5		11			0		5		5	
% Total		9.1%	45.5%	36.4%	9.1%				0.0%	0.0%	80.0%	20.0%		
Peak		05:15	02:00	05:30	02:00	05:30	02:00				05:30	12:00	05:30	12:00
Vol.		1	2	4	1	5	3				4	1	4	1
P.H.F.		0.250	0.250	0.500	0.250	0.625	0.250				0.333	0.250	0.333	0.250

ADT	ADT 13	AADT 13

KMF DATA LLC
1669 SW College Street, Stuart, FL, USA 34997
Voice and Fax 772-221-7971

FPL GATE #9 (North Flagler Dr.)
Automatic Traffic Recorder
From July 15, 2008 (2:00 PM)
To July 18, 2008 (2:00 PM)

Site Code: 08-114

KMF DATA LLC

1669 SW College Street, Stuart, FL, USA 34997
Voice and Fax 772-221-7971

FPL GATE #10 (Riviera Beach, FL)
Automatic Traffic Recorder
From: July 15, 2008 (2:00 PM)
To July 18,2008 (2:00 PM)

Site Code: 08-114

Start Time	15-Jul- Tue	OUT A.M.	OUT P.M.	IN A.M.	IN P.M.	Combined A.M.	Combined P.M.	16-Jul- Wed	OUT A.M.	OUT P.M.	IN A.M.	IN P.M.	Combined A.M.	Combined P.M.
12:00		*	*	*	*	*	*		0	1	0	0	0	1
12:15		*	*	*	*	*	*		0	1	0	0	0	1
12:30		*	*	*	*	*	*		0	1	0	1	0	2
12:45		*	*	*	*	*	*		0	2	0	2	0	4
01:00		*	*	*	*	*	*		0	0	0	0	0	0
01:15		*	*	*	*	*	*		0	1	0	0	0	1
01:30		*	*	*	*	*	*		0	0	0	0	0	0
01:45		*	*	*	*	*	*		0	0	0	0	0	0
02:00		*	0	*	0	*	0		0	5	0	3	0	8
02:15		*	0	*	0	*	0		0	1	0	4	0	5
02:30		*	0	*	0	*	0		0	4	0	1	0	5
02:45		*	0	*	0	*	0		0	0	0	0	0	0
03:00		*	0	*	0	*	0		0	0	0	0	0	0
03:15		*	4	*	1	*	5		0	0	0	0	0	0
03:30		*	0	*	0	*	0		0	4	0	0	0	4
03:45		*	0	*	2	*	2		0	0	0	0	0	0
04:00		*	6	*	5	*	11		0	1	0	2	0	3
04:15		*	0	*	0	*	0		0	***5***	0	0	0	***5***
04:30		*	0	*	0	*	0		0	***12***	0	2	0	***14***
04:45		*	***0***	*	***0***	*	***0***		0	***0***	0	3	0	***3***
05:00		*	***3***	*	***3***	*	***6***		0	***7***	0	0	0	***7***
05:15		*	***5***	*	***11***	*	***16***		0	1	0	2	0	3
05:30		*	***3***	*	***1***	*	***4***		0	0	0	0	0	0
05:45		*	0	*	0	*	0		0	2	0	***0***	0	2
06:00		*	0	*	0	*	0		0	2	1	***4***	1	6
06:15		*	0	*	0	*	0		0	3	0	***2***	0	5
06:30		*	0	*	0	*	0		0	6	0	***9***	0	15
06:45		*	0	*	0	*	0		0	0	0	0	0	0
07:00		*	0	*	0	*	0		0	0	0	0	0	0
07:15		*	0	*	0	*	0		0	0	0	0	0	0
07:30		*	0	*	0	*	0		0	0	0	0	0	0
07:45		*	0	*	0	*	0		2	0	1	0	3	0
08:00		*	0	*	1	*	1		***8***	0	4	2	12	2
08:15		*	0	*	0	*	0		***1***	0	0	0	1	0
08:30		*	0	*	0	*	0		***0***	0	0	0	0	0
08:45		*	0	*	0	*	0		***3***	0	***0***	0	***3***	0
09:00		*	0	*	0	*	0		1	0	***2***	0	***3***	0
09:15		*	0	*	0	*	0		2	0	***8***	0	***10***	0
09:30		*	0	*	0	*	0		5	0	***3***	0	***8***	0
09:45		*	0	*	0	*	0		0	0	0	0	0	0
10:00		*	0	*	0	*	0		1	0	1	0	2	0
10:15		*	0	*	0	*	0		0	0	0	0	0	0
10:30		*	0	*	0	*	0		1	0	0	0	1	0
10:45		*	0	*	0	*	0		3	0	0	0	3	0
11:00		*	0	*	0	*	0		0	0	2	0	2	0
11:15		*	0	*	0	*	0		4	0	3	0	7	0
11:30		*	0	*	0	*	0		4	0	1	0	5	0
11:45		*	0	*	0	*	0		2	0	2	0	4	0
Total		0	21	0	24	0	45		37	59	28	37	65	96
Day Total		21		24		45			96		65		161	
% Total		0.0%	46.7%	0.0%	53.3%				23.0%	36.6%	17.4%	23.0%		
Peak			04:45		04:45		04:45		08:00	04:15	08:45	05:45	08:45	04:15
Vol.			11		15		26		12	24	13	15	24	29
P.H.F.			0.458		0.341		0.406		0.375	0.500	0.406	0.417	0.500	0.518

KMF DATA LLC

1669 SW College Street, Stuart, FL, USA 34997
Voice and Fax 772-221-7971

FPL GATE #10 (Riviera Beach, FL)
Automatic Traffic Recorder
From: July 15, 2008 (2:00 PM)
To July 18,2008 (2:00 PM)

Site Code: 08-114

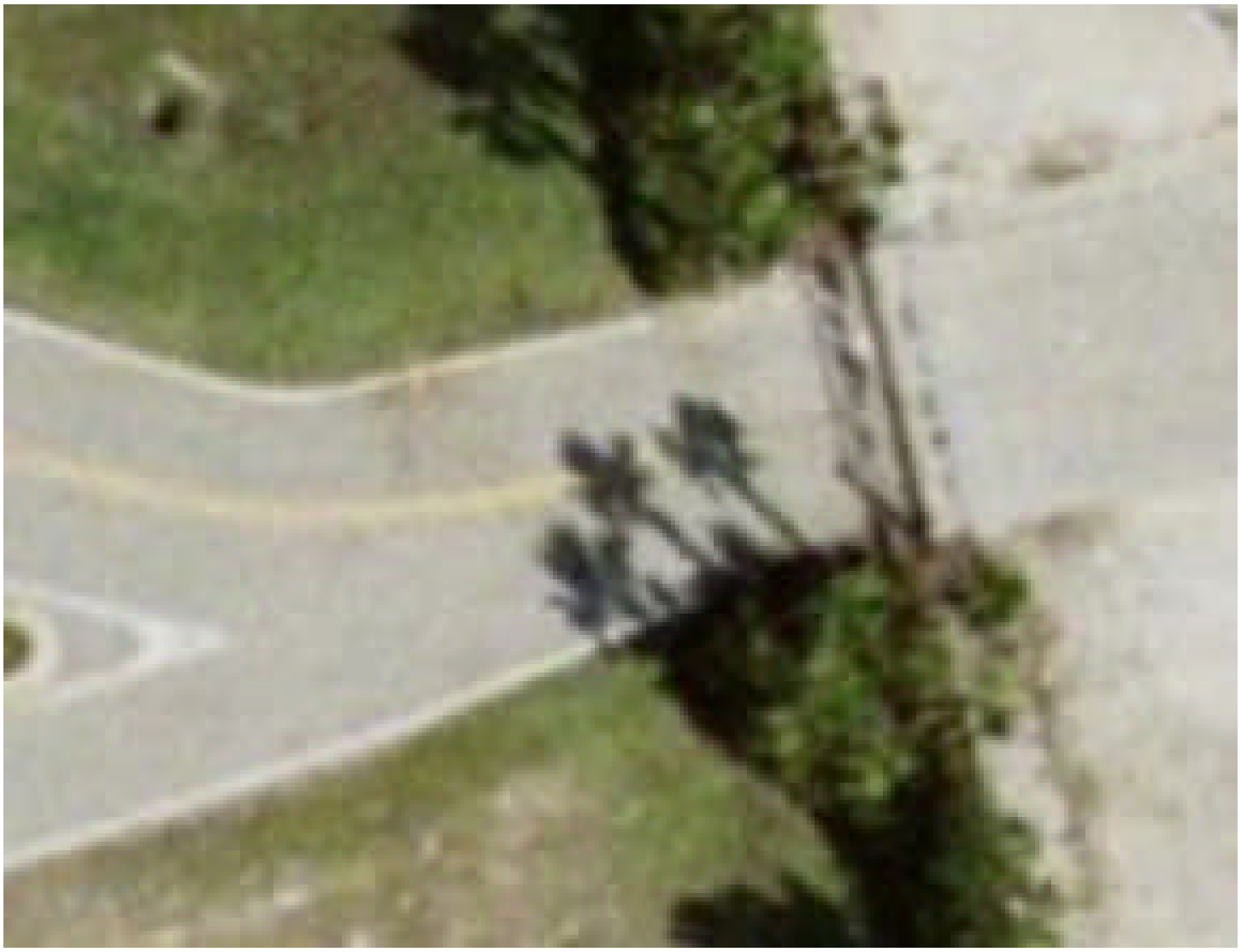
Start Time	17-Jul- Thu	OUT A.M.	OUT P.M.	IN A.M.	IN P.M.	Combined A.M.	Combined P.M.	18-Jul- Fri	OUT A.M.	OUT P.M.	IN A.M.	IN P.M.	Combined A.M.	Combined P.M.
12:00		0	1	0	1	0	2		0	2	0	2	0	4
12:15		0	1	0	0	0	1		0	0	0	0	0	0
12:30		0	0	0	2	0	2		0	0	0	1	0	1
12:45		0	4	0	0	0	4		0	0	0	0	0	0
01:00		0	2	0	1	0	3		0	1	0	1	0	2
01:15		0	0	0	0	0	0		0	0	0	0	0	0
01:30		0	0	0	1	0	1		0	2	0	4	0	6
01:45		0	6	0	4	0	10		0	6	0	1	0	7
02:00		0	0	0	0	0	0		0	*	0	*	0	*
02:15		0	0	0	0	0	0		0	*	0	*	0	*
02:30		0	0	0	2	0	2		0	*	0	*	0	*
02:45		0	2	0	2	0	4		0	*	0	*	0	*
03:00		0	0	0	0	0	0		0	*	0	*	0	*
03:15		0	0	0	1	0	1		0	*	0	*	0	*
03:30		0	0	0	0	0	0		0	*	0	*	0	*
03:45		0	2	0	2	0	4		0	*	0	*	0	*
04:00		0	1	0	0	0	1		0	*	0	*	0	*
04:15		0	0	0	0	0	0		0	*	0	*	0	*
04:30		0	0	0	0	0	0		0	*	0	*	0	*
04:45		0	1	0	1	0	2		0	*	0	*	0	*
05:00		0	0	0	0	0	0		0	*	0	*	0	*
05:15		0	0	0	4	0	4		0	*	0	*	0	*
05:30		0	0	0	1	0	1		0	*	0	*	0	*
05:45		1	0	0	0	1	0		0	*	1	*	1	*
06:00		1	4	1	0	2	4		0	*	0	*	0	*
06:15		2	0	0	0	2	0		0	*	0	*	0	*
06:30		0	3	0	5	0	8		1	*	0	*	1	*
06:45		1	4	1	3	2	7		0	*	0	*	0	*
07:00		0	0	2	0	2	0		0	*	0	*	0	*
07:15		0	0	0	0	0	0		0	*	0	*	0	*
07:30		0	4	2	4	2	8		2	*	0	*	2	*
07:45		0	1	6	2	6	3		1	*	1	*	2	*
08:00		1	8	6	7	7	15		0	*	7	*	7	*
08:15		1	7	1	5	2	12		0	*	2	*	2	*
08:30		12	4	3	0	15	4		9	*	2	*	11	*
08:45		0	0	1	0	1	0		5	*	1	*	6	*
09:00		2	0	2	0	4	0		4	*	1	*	5	*
09:15		3	0	3	0	6	0		5	*	4	*	9	*
09:30		2	0	2	0	4	0		3	*	5	*	8	*
09:45		0	0	0	0	0	0		0	*	0	*	0	*
10:00		0	0	0	0	0	0		0	*	0	*	0	*
10:15		2	0	0	0	2	0		2	*	1	*	3	*
10:30		3	0	2	0	5	0		0	*	0	*	0	*
10:45		2	0	2	0	4	0		1	*	0	*	1	*
11:00		1	0	3	0	4	0		1	*	0	*	1	*
11:15		1	0	0	0	1	0		0	*	0	*	0	*
11:30		2	0	0	0	2	0		3	*	4	*	7	*
11:45		1	0	2	0	3	0		1	*	0	*	1	*
Total		38	55	39	48	77	103		38	11	29	9	67	20
Day Total		93		87		180			49		38		87	
% Total		21.1%	30.6%	21.7%	26.7%				43.7%	12.6%	33.3%	10.3%		
Peak		08:30	07:30	07:45	07:30	07:45	07:30		08:30	01:00	07:45	01:00	08:30	01:00
Vol.		17	20	16	18	30	38		23	9	12	6	31	15
P.H.F.		0.354	0.625	0.667	0.643	0.500	0.633		0.639	0.375	0.429	0.375	0.705	0.536

ADT	ADT 170	AADT 170

KMF DATA LLC
1669 SW College Street, Stuart, FL, USA 34997
Voice and Fax 772-221-7971

FPL GATE #10 (Riviera Beach, FL)
Automatic Traffic Recorder
From: July 15, 2008 (2:00 PM)
To July 18,2008 (2:00 PM)

Site Code: 08-114



APPENDIX F

FPL Energy Encounter Visitation Data

FPL Energy Encounter

2008 Year-To-Date Visitations

	Walk-Ins	EE Programs	Environ. Programs	Meetings/Special Events	IR Schools	IR Adults	MC Schools	MC Adults	OK Schools	OK Adults	PBC Schools	PBC Adults	SLC Schools	SLC Adults	Other Counties	Other County Adults	TBNT	Turtle Walks	Outreach	Visitors for the month
January	592	30	29	444	45	8	19	4	0	0	110	36	441	117	0	0	0	0	60	1,935
February	652	33	33	148	0	0	8	2	0	0	0	0	745	152	86	13	0	0	15	1,887
March	724	28	26	100	198	17	20	5	0	0	93	19	511	84	0	0	0	0	635	1,771
April	932	33	34	327	0	0	160	33	0	0	81	4	462	100	88	14	0	0	1,495	1,823
May	364	26	26	43	36	4	0	0	0	0	56	8	651	110	0	0	0	0	0	1,272
June	872	0	11	156	51	7	164	25	30	5	235	23	405	54	0	0	0	289	0	2,316
July	1,255	0	6	64	164	14	141	20	50	6	70	8	835	109	24	6	0	214	552	2,980
August	709	0	0	0	0	0	0	0	0	0	0	0	90	14	0	0	0	0	350	813
September	288	3	3	208	0	0	8	3	0	0	0	0	148	19	0	0	0	0	141	674
October	573	25	22	119	0	0	24	13	0	0	0	0	381	65	69	13	0	0	1,015	1,257
November	376	21	22	119	0	0	0	0	0	0	0	0	538	140	0	0	0	0	185	1,173
December	693	13	13	197	95	16	21	8	0	0	88	8	209	34	100	10	0	0	0	1,469
Total	**8,030**	**212**	**225**	**1,925**	**589**	**66**	**565**	**113**	**80**	**11**	**733**	**106**	**5,416**	**998**	**367**	**56**	**0**	**503**	**4,448**	**19,370**

Students for the Month

	Indian River	Martin	Okeechobee	Palm Beach	St. Lucie	Other	TOTAL
January	45	19	0	110	441	0	**615**
February	0	8	0	0	745	86	**839**
March	198	20	0	93	511	0	**822**
April	0	160	0	81	462	88	**791**
May	36	0	0	56	651	0	**743**
June	51	164	30	235	405	0	**885**
July	164	141	50	70	835	24	**1,284**
August	0	0	0	0	90	0	**90**
September	0	8	0	0	148	0	**156**
October	0	24	0	0	381	69	**474**
November	0	0	0	0	538	0	**538**
December	95	21	0	88	209	100	**513**
YTD Total	**589**	**565**	**80**	**733**	**5,416**	**367**	**7,750**

APPENDIX G

Seasonal Factors and Growth Data

2007 Peak Season Factor Category Report - Report Type: ALL
Category: 9300 EAST- A1A TO US1

MOCF: 0.88

Week	Dates	SF	PSCF
1	01/01/2007 - 01/06/2007	0.99	1.12
2	01/07/2007 - 01/13/2007	0.95	1.08
* 3	01/14/2007 - 01/20/2007	0.91	1.03
* 4	01/21/2007 - 01/27/2007	0.90	1.02
* 5	01/28/2007 - 02/03/2007	0.89	1.01
* 6	02/04/2007 - 02/10/2007	0.88	1.00
* 7	02/11/2007 - 02/17/2007	0.87	0.99
* 8	02/18/2007 - 02/24/2007	0.87	0.99
* 9	02/25/2007 - 03/03/2007	0.87	0.99
*10	03/04/2007 - 03/10/2007	0.86	0.97
*11	03/11/2007 - 03/17/2007	0.86	0.97
*12	03/18/2007 - 03/24/2007	0.87	0.99
*13	03/25/2007 - 03/31/2007	0.89	1.01
*14	04/01/2007 - 04/07/2007	0.90	1.02
*15	04/08/2007 - 04/14/2007	0.91	1.03
16	04/15/2007 - 04/21/2007	0.93	1.05
17	04/22/2007 - 04/28/2007	0.94	1.06
18	04/29/2007 - 05/05/2007	0.96	1.09
19	05/06/2007 - 05/12/2007	0.98	1.11
20	05/13/2007 - 05/19/2007	1.00	1.13
21	05/20/2007 - 05/26/2007	1.02	1.16
22	05/27/2007 - 06/02/2007	1.04	1.18
23	06/03/2007 - 06/09/2007	1.06	1.20
24	06/10/2007 - 06/16/2007	1.09	1.23
25	06/17/2007 - 06/23/2007	1.10	1.25
26	06/24/2007 - 06/30/2007	1.11	1.26
27	07/01/2007 - 07/07/2007	1.12	1.27
28	07/08/2007 - 07/14/2007	1.13	1.28
29	07/15/2007 - 07/21/2007	1.14	1.29
30	07/22/2007 - 07/28/2007	1.14	1.29
31	07/29/2007 - 08/04/2007	1.13	1.28
32	08/05/2007 - 08/11/2007	1.13	1.28
33	08/12/2007 - 08/18/2007	1.13	1.28
34	08/19/2007 - 08/25/2007	1.13	1.28
35	08/26/2007 - 09/01/2007	1.14	1.29
36	09/02/2007 - 09/08/2007	1.14	1.29
37	09/09/2007 - 09/15/2007	1.15	1.30
38	09/16/2007 - 09/22/2007	1.13	1.28
39	09/23/2007 - 09/29/2007	1.12	1.27
40	09/30/2007 - 10/06/2007	1.10	1.25
41	10/07/2007 - 10/13/2007	1.08	1.22
42	10/14/2007 - 10/20/2007	1.06	1.20
43	10/21/2007 - 10/27/2007	1.05	1.19
44	10/28/2007 - 11/03/2007	1.04	1.18
45	11/04/2007 - 11/10/2007	1.02	1.16
46	11/11/2007 - 11/17/2007	1.01	1.14
47	11/18/2007 - 11/24/2007	1.00	1.13
48	11/25/2007 - 12/01/2007	1.00	1.13
49	12/02/2007 - 12/08/2007	0.99	1.12
50	12/09/2007 - 12/15/2007	0.99	1.12
51	12/16/2007 - 12/22/2007	0.96	1.09
52	12/23/2007 - 12/29/2007	0.93	1.05
53	12/30/2007 - 12/31/2007	0.91	1.03

* Peak Season

Florida Department of Transportation
Transportation Statistics Office
2007 Historical AADT Report

County: 93 - PALM BEACH

Site: 5090 - SR 5 / BROADWAY - N OF 45 ST,WPB

Year	AADT	Direction 1	Direction 2	K Factor	D Factor	T Factor
2007	26000 C	N 12000	S 14000	10.80	57.68	6.70
2006	27500 C	N 13000	S 14500	10.77	57.38	3.30
2005	26500 C	N 12500	S 14000	10.80	56.50	6.60
2004	26500 C	N 12500	S 14000	10.80	58.20	6.60
2003	29500 C	N 15000	S 14500	10.70	56.40	6.60
2002	29000 F	N 15000	S 14000	10.80	58.40	2.60
2001	29000 C	N 15000	S 14000	10.90	59.50	2.00
2000	32000 C	N 15500	S 16500	10.20	58.40	5.20
1999	30500 C	N 15000	S 15500	10.50	59.70	3.10
1998	30000 C	N 15000	S 15000	10.20	56.50	5.20
1997	27500 C	N 13500	S 14000	9.90	53.40	2.80
1996	26500 C	N 13000	S 13500	9.90	51.10	2.80
1995	23000 C	N 11000	S 12000	10.50	65.20	5.50
1994	23000 C	N 11000	S 12000	10.40	59.90	1.60
1993	20100 C	N 8600	S 11500	0.00	0.00	0.00

AADT Flags: C = Computed; E = Manual Estimate; F = First Year Estimate
S = Second Year Estimate; T = Third Year Estimate; X = Unknown

PALM BEACH COUNTY
TRAFFIC DIVISION
HISTORIC TRAFFIC GROWTH TABLE

CURRENT YEAR – 2007

(For use after July 1, 2007)

This document was developed as supporting information to be used in connection with Article 12 of the Unified Land Development Code, the Traffic Performance Standards. This table shows historical peak season daily traffic counts from 2002 to 2007 as well as a calculated growth rate for each count station. Note that technical and equipment difficulties invalidated the 2002 count data. The volumes shown for 2002 have been calculated as the average of the 2001 and 2003 counts. A 3-year timeframe was used to calculate the growth rate shown. Growth rates have not been tabulated based on peak hour volumes because it is generally understood that daily trends are more appropriate for forecasting. However, it is acknowledged that Article 12 of the ULDC allows for the consideration of peak hour growth rates. The use of peak hour growth rates in a traffic impact study will be considered on a case-by-case basis.

For the purposes of this report, the default time frame should be 2004 – 2007. Where a growth trend other than a compounded rate appears to be appropriate for a given count station, this may be proposed and will be considered for use in a traffic study on a case-by-case basis.

Engineering judgment should be exercised in the use of the growth rates presented, particularly in the following cases:

1. Where negative growth rates were caused by opening parallel road facilities, construction activity, or other extraordinary circumstances.
2. Where extraordinarily high growth rates resulted from new road improvements, opening of a high traffic generator (e.g. a regional mall), or a low initial count.
3. For projects with a lengthy build out time (5 years or more), an area-wide growth rate may be considered per Article 12 of the ULDC.

STA	ROAD	FROM	TO	LANES	DAILY TRAFFIC VOLUMES 2002	2003	2004	2005	2006	2007 DAILY DATE	VOL	GR	2007 AM PEAK HOUR* 2-WAY	NB/EB	SB/WB	2007 PM PEAK HOUR* 2-WAY	NB/EB	SB/WB
5201	BOYNTON BEACH BLVD	Turnpike	Hagen Ranch Rd	6D	33278	39134	41736	41174	40673	1/18/2007	47354	4.30%	4056	1993	2151	4191	2032	2159
5641	BOYNTON BEACH BLVD	Hagen Ranch Rd	Jog Rd	6D	36533	37417	42272	44733	43126	1/18/2007	43388	0.87%	3160	1629	1636	3667	1942	1750
5633	BOYNTON BEACH BLVD	Jog Rd	El Clair Ranch Rd	6D	37491	39390	44721	44668	41588	1/18/2007	41825	-2.21%	2839	1620	1353	3432	1821	1665
5611	BOYNTON BEACH BLVD	El Clair Ranch Rd	Military Tr	6D	40919	43380	47654	51515	46150	1/18/2007	43811	-2.76%	2949	1675	1404	3447	1660	1792
5613	BOYNTON BEACH BLVD	Military Tr	Lawrence Rd	6D	35693	36983	39277	38992	38718	1/18/2007	37554	-1.48%	2682	1414	1268	2923	1429	1494
5601	BOYNTON BEACH BLVD	Lawrence Rd	Congress Ave	6D	39195	40530	38835	45860	47540	2/28/2007	40461	1.38%	2925	1625	1300	2939	1448	1525
5615	BOYNTON BEACH BLVD	Congress Ave	Old Boynton Rd	6D	30636	31760	35294	39769	38084	2/28/2007	32351	-2.86%	2143	1102	1044	2305	1147	1220
5203	BOYNTON BEACH BLVD	Old Boynton Rd	I-95	6D	44041	45692	47590	48405	47299		47800	0.15%	0	0	0	0	0	0
5301	BOYNTON BEACH BLVD	I-95	Seacrest Blvd	5	33123	34330	35319	34557	35678		36100	0.73%	0	0	0	0	0	0
5807	BOYNTON BEACH BLVD	Seacrest Blvd	US-1	4	17940	18951	19963	17887	18409	1/29/2007	14142	-10.86%	1064	535	529	1267	668	604
3812	BROADWAY	36TH St	25Th St	4	17369	13083	15505	13197	18919		15200	-0.66%	0	0	0	0	0	0
3804	BROADWAY	45th St	36th St	4	15298	15298	21602	20849	23842		20400	-1.89%	0	0	0	0	0	0
3882	BROADWAY	59th St	45th St	4D	25187	25048	24910	28985	26079	2/28/2007	28392	4.46%	2226	865	1361	2582	1378	1218
3304	BROADWAY	Martin Luthur King Jr Bl	59th St	4	30068	30798	30293	32003	27235		30100	-0.21%	0	0	0	0	0	0
2818	BROADWAY	Blue Heron Blvd	MLK Bl	5	29489	27655	30074	32546	29787	1/18/2007	20590	-11.86%	2454	889	1585	2811	1529	1282
3829	BUNKER RD	US 1	Parker Ave	2	6463	6674	6855	7041	5365		6500	-1.76%	0	0	0	0	0	0
2305	BURNS RD	SR 811	Military Tr	4D	17347	16645	19869	22681	23922	2/6/2007	20016	0.25%	1814	1105	719	2031	702	1329
2835	BURNS RD	Sandalwood Ct	SR-811	4D	18313	17006	20284	20527	19841	2/13/2007	19989	-0.49%	1867	1026	843	1646	760	900
2839	BURNS RD	Prosperity Farms Rd	Sandalwood Cir	4D	9591	12129	10983	7122	10577	1/9/2007	9551	-4.55%	819	415	430	842	405	459
6638	BUTTS RD	Glades Rd	Town Center Rd	2	10593	9820	10602	11749	12440		12100	4.50%	0	0	0	0	0	0
6627	BUTTS RD	Military Tr	Glades Rd	2	9355	9824	12763	10082	8884		10500	-6.30%	0	0	0	0	0	0
6422	CAIN BLVD	W Kimberly Blvd	Glades Rd	2	17345	17258	17253	16875	17363	1/29/2007	16428	-1.62%	1476	676	814	1618	794	824

*Note: Where no peak hour volumes are shown, the 2007 daily volume was estimated based on previous count data or collected without peak hour data.

APPENDIX H

Projected Turning Movement Volumes

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

US 1 and Main Entrance/Exit Driveway
AM Peak Hour Analysis (Peak Construction Period)

	US 1 Northbound			US 1 Southbound			Eastbound			Driveway Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2008 Existing Traffic (9/16/08)	0	755	21	28	1,318	0	0	0	0	4		20
Season Adjustment Factor	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
2008 Peak Season Traffic	0	853	24	32	1,489	0	0	0	0	5	0	23
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
2013 Growth Traffic	0	897	25	33	1,565	0	0	0	0	5	0	24
2013 Background Traffic	0	897	25	33	1,565	0	0	0	0	5	0	24
Peak Construction Traffic	171				57	229						
2013 Total Traffic	**171**	**897**	**25**	**33**	**1,622**	**229**	**0**	**0**	**0**	**5**	**0**	**24**

Traf Tech
ENGINEERING, INC.

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

US 1 and Main Entrance/Exit Driveway
PM Peak Hour Analysis (Peak Construction Period)

	US 1 Northbound			US 1 Southbound			Eastbound			Driveway Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2008 Existing Traffic (9/16/08)	0	1,108	1	6	1,050	0	0	0	0	9		36
Season Adjustment Factor	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
2008 Peak Season Traffic	0	1,252	1	7	1,187	0	0	0	0	10	0	41
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
2013 Growth Traffic	0	1,316	1	7	1,247	0	0	0	0	11	0	43
2013 Background Traffic	0	1,316	1	7	1,247	0	0	0	0	11	0	43
Peak Construction Traffic		57					229		171			
2013 Total Traffic	**0**	**1,373**	**1**	**7**	**1,247**	**0**	**229**	**0**	**171**	**11**	**0**	**43**

Traf Tech
ENGINEERING, INC.

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

US 1 and Main Entrance/Exit Driveway
AM Peak Hour Analysis (Normal Operation)

Description	US 1 Northbound			US 1 Southbound			Eastbound			Driveway Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2008 Existing Traffic (9/16/08)	0	755	21	28	1,318	0	0	0	0	4		20
Season Adjustment Factor	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
2008 Peak Season Traffic	0	853	24	32	1,489	0	0	0	0	5	0	23
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
2014 Growth Traffic	0	906	25	34	1,581	0	0	0	0	5	0	24
2014 Background Traffic	0	906	25	34	1,581	0	0	0	0	5	0	24
Manatee Viewing		4			4							
2014 Total Traffic	**0**	**910**	**25**	**34**	**1,585**	**0**	**0**	**0**	**0**	**5**	**0**	**24**

Traf Tech
ENGINEERING, INC.

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

US 1 and Main Entrance/Exit Driveway
PM Peak Hour Analysis (Normal Operation)

Description	US 1 Northbound			US 1 Southbound			Eastbound			Driveway Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2008 Existing Traffic (9/16/08)	0	1,108	1	6	1,050	0	0	0	0	9		36
Season Adjustment Factor	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
2008 Peak Season Traffic	0	1,252	1	7	1,187	0	0	0	0	10	0	41
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
2014 Growth Traffic	0	1,329	1	7	1,259	0	0	0	0	11	0	43
2014 Background Traffic	0	1,329	1	7	1,259	0	0	0	0	11	0	43
Manatee Viewing		4			4							
2014 Total Traffic	**0**	**1,333**	**1**	**7**	**1,263**	**0**	**0**	**0**	**0**	**11**	**0**	**43**

Traf Tech
ENGINEERING, INC.

APPENDIX I

Capacity Analyses

HCS+: Signalized Intersections Release 5.2

Analyst: Vargas
Agency: Traf Tech Engineering, Inc.
Date: 9/28/2008
Period: AM Peak Hour
Project ID:
E/W St: Project Driveway

Inter.: Broadway/Driveway
Area Type: All other areas
Jurisd: Riviera Beach
Year : 2008 Existing

N/S St: Broadway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	0	2	0	1	2	0
LGConfig				L		R		TR		L	T	
Volume				4		20		755	21	28	1318	
Lane Width				12.0		12.0		12.0		12.0	12.0	
RTOR Vol						0			0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left					NB	Left				
Thru						Thru		A		
Right						Right		A		
Peds						Peds				
WB Left	A				SB	Left	A	A		
Thru						Thru	A	A		
Right	A					Right				
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right	A			
Green	20.0						15.0	45.0		
Yellow	4.0						4.0	4.0		
All Red	2.0						2.0	2.0		

Cycle Length: 98.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
L	361	1770	0.01	0.20	31.1	C		
							19.1	B
R	662	1583	0.04	0.42	16.9	B		
Northbound								
TR	1622	3532	0.51	0.46	19.0	B	19.0	B
Southbound								
L	493	1770	0.06	0.67	6.9	A		
T	2389	3547	0.59	0.67	9.1	A	9.1	A

Intersection Delay = 12.7 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.2

Analyst: Vargas
Agency: Traf Tech Engineering, Inc.
Date: 9/28/2008
Period: AM Peak Hour
Project ID:
E/W St: Project Driveway

Inter.: Broadway/Driveway
Area Type: All other areas
Jurisd: Riviera Beach
Year : 2013 Background

N/S St: Broadway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	0	2	0	1	2	0
LGConfig				L		R		TR		L	T	
Volume				5		24		897	25	33	1565	
Lane Width				12.0		12.0		12.0		12.0	12.0	
RTOR Vol						0			0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left					NB	Left				
Thru						Thru		A		
Right						Right		A		
Peds						Peds				
WB Left	A				SB	Left	A	A		
Thru						Thru	A	A		
Right	A					Right				
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right	A			
Green	20.0						15.0	45.0		
Yellow	4.0						4.0	4.0		
All Red	2.0						2.0	2.0		

Cycle Length: 98.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
L	361	1770	0.02	0.20	31.2	C		
							19.5	B
R	662	1583	0.05	0.42	16.9	B		
Northbound								
TR	1622	3532	0.60	0.46	20.5	C	20.5	C
Southbound								
L	436	1770	0.08	0.67	7.9	A		
T	2389	3547	0.70	0.67	10.9	B	10.8	B

Intersection Delay = 14.4 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.2

Analyst: Vargas
Agency: Traf Tech Engineering, Inc.
Date: 1/12/09
Period: AM Peak Hour
Project ID: AM Peak Hour (2013 Peak Construction)
E/W St: Project Driveway

Inter.: Broadway/Driveway
Area Type: All other areas
Jurisd: Riviera Beach
Year : 2013 Peak Construction
N/S St: Broadway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	1	2	0	1	2	0
LGConfig				L		R	L	TR		L	TR	
Volume				5		24	171	897	25	33	1622	229
Lane Width				12.0		12.0	12.0	12.0		12.0	12.0	
RTOR Vol						0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left					NB	Left	A	A		
Thru						Thru		A		
Right						Right		A		
Peds						Peds				
WB Left	A				SB	Left	A	A		
Thru						Thru		A		
Right	A					Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right	A			
Green	15.0						10.0	55.0		
Yellow	4.0						4.0	4.0		
All Red	2.0						2.0	2.0		

Cycle Length: 98.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
L	271	1770	0.03	0.15	35.3	D		
							25.6	C
R	501	1583	0.06	0.32	23.4	C		
Northbound								
L	262	1805	0.73	0.72	30.5	C		
TR	1982	3532	0.49	0.56	13.3	B	16.1	B
Southbound								
L	424	1770	0.08	0.72	5.5	A		
TR	1958	3488	1.02	0.56	47.2	D	46.4	D

Intersection Delay = 35.2 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.2

Analyst: Vargas
Agency: Traf Tech Engineering, Inc.
Date: 1/12/09
Period: AM Peak Hour
Project ID: AM Peak Hour (2014 Normal Operation)
E/W St: Project Driveway

Inter.: Broadway/Driveway
Area Type: All other areas
Jurisd: Riviera Beach
Year : 2014 Normal Operation
N/S St: Broadway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	0	2	0	1	2	0
LGConfig				L		R		TR		L	T	
Volume				5		24		910	25	34	1585	
Lane Width				12.0		12.0		12.0		12.0	12.0	
RTOR Vol						0			0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left					NB	Left				
Thru						Thru		A		
Right						Right		A		
Peds						Peds				
WB Left	A				SB	Left	A	A		
Thru						Thru	A	A		
Right	A					Right				
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right	A			
Green	20.0						20.0	40.0		
Yellow	4.0						4.0	4.0		
All Red	2.0						2.0	2.0		

Cycle Length: 98.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
L	361	1770	0.02	0.20	31.2	C		
							17.2	B
R	743	1583	0.04	0.47	14.1	B		
Northbound								
TR	1442	3532	0.69	0.41	25.3	C	25.3	C
Southbound								
L	483	1770	0.08	0.67	8.5	A		
T	2389	3547	0.71	0.67	11.1	B	11.0	B

Intersection Delay = 16.2 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.2

Analyst: Vargas
Agency: Traf Tech Engineering, Inc.
Date: 9/28/2008
Period: PM Peak Hour
Project ID:
E/W St: Project Driveway

Inter.: Broadway/Driveway
Area Type: All other areas
Jurisd: Riviera Beach
Year : 2008 Existing

N/S St: Broadway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	0	2	0	1	2	0
LGConfig				L		R		TR		L	T	
Volume				9		36		1108	1	6	1050	
Lane Width				12.0		12.0		12.0		12.0	12.0	
RTOR Vol						0			0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left					NB	Left				
Thru						Thru		A		
Right						Right		A		
Peds						Peds				
WB Left		A			SB	Left	A	A		
Thru						Thru	A	A		
Right		A				Right				
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right	A			
Green		20.0					15.0	45.0		
Yellow		4.0					4.0	4.0		
All Red		2.0					2.0	2.0		

Cycle Length: 98.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
L	361	1770	0.03	0.20	31.3	C		
							19.9	B
R	662	1583	0.07	0.42	17.1	B		
Northbound								
TR	1628	3546	0.75	0.46	23.8	C	23.8	C
Southbound								
L	366	1770	0.02	0.67	9.7	A		
T	2389	3547	0.47	0.67	7.8	A	7.8	A

Intersection Delay = 16.2 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.2

Analyst: Vargas
Agency: Traf Tech Engineering, Inc.
Date: 9/28/2008
Period: PM Peak Hour
Project ID:
E/W St: Project Driveway

Inter.: Broadway/Driveway
Area Type: All other areas
Jurisd: Riviera Beach
Year : 2013 Background

N/S St: Broadway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	0	2	0	1	2	0
LGConfig				L		R		TR		L	T	
Volume				11		43		1316	1	7	1247	
Lane Width				12.0		12.0		12.0		12.0	12.0	
RTOR Vol						0			0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left					NB	Left				
Thru						Thru		A		
Right						Right		A		
Peds						Peds				
WB Left		A			SB	Left	A	A		
Thru						Thru	A	A		
Right		A				Right				
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right	A			
Green		20.0					15.0	45.0		
Yellow		4.0					4.0	4.0		
All Red		2.0					2.0	2.0		

Cycle Length: 98.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
L	361	1770	0.04	0.20	31.3	C		
							20.1	C
R	662	1583	0.08	0.42	17.2	B		
Northbound								
TR	1628	3546	0.89	0.46	30.7	C	30.7	C
Southbound								
L	347	1770	0.02	0.67	13.0	B		
T	2389	3547	0.56	0.67	8.6	A	8.7	A

Intersection Delay = 20.1 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.2

Analyst: Vargas
Agency: Traf Tech Engineering, Inc.
Date: 1/12/09
Period: PM Peak Hour
Project ID: PM Peak Hour (2013 Peak Construction)
E/W St: Project Driveway

Inter.: Broadway/Driveway
Area Type: All other areas
Jurisd: Riviera Beach
Year : 2013 Peak Construction
N/S St: Broadway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	0	1	1	0	1	0	2	0	1	2	0
LGConfig	L		R	L		R		TR		L	T	
Volume	229		171	11		43		1373	1	7	1247	
Lane Width	12.0		12.0	12.0		12.0		12.0		12.0	12.0	
RTOR Vol			0			0			0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A	A			NB Left				
Thru					Thru		A		
Right	A	A			Right		A		
Peds					Peds				
WB Left		A			SB Left	A	A		
Thru					Thru	A	A		
Right		A			Right				
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right	A			
Green	13.0	10.0				6.0	45.0		
Yellow	4.0	4.0				4.0	4.0		
All Red	2.0	2.0				2.0	2.0		

Cycle Length: 98.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	534	1805	0.48	0.30	28.9	C		
							28.6	C
R	478	1615	0.40	0.30	28.1	C		
Westbound								
L	181	1770	0.08	0.10	40.0	D		
							32.6	C
R	355	1583	0.15	0.22	30.7	C		
Northbound								
TR	1628	3546	0.93	0.46	34.6	C	34.6	C
Southbound								
L	184	1770	0.04	0.58	17.7	B		
T	2063	3547	0.64	0.58	14.4	B	14.4	B

Intersection Delay = 25.8 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.2

Analyst: Vargas
Agency: Traf Tech Engineering, Inc.
Date: 1/12/09
Period: PM Peak Hour
Project ID: PM Peak Hour (2014 Normal Operation)
E/W St: Project Driveway

Inter.: Broadway/Driveway
Area Type: All other areas
Jurisd: Riviera Beach
Year : 2014 Normal Operation
N/S St: Broadway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	0	2	0	1	2	0
LGConfig				L		R		TR		L	T	
Volume				11		43		1333	1	7	1263	
Lane Width				12.0		12.0		12.0		12.0	12.0	
RTOR Vol						0			0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left					NB	Left				
Thru						Thru		A		
Right						Right		A		
Peds						Peds				
WB Left	A				SB	Left	A	A		
Thru						Thru	A	A		
Right	A					Right				
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right	A			
Green	20.0						15.0	45.0		
Yellow	4.0						4.0	4.0		
All Red	2.0						2.0	2.0		

Cycle Length: 98.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
L	361	1770	0.04	0.20	31.3	C		
							20.1	C
R	662	1583	0.08	0.42	17.2	B		
Northbound								
TR	1628	3546	0.90	0.46	31.7	C	31.7	C
Southbound								
L	347	1770	0.02	0.67	13.4	B		
T	2389	3547	0.56	0.67	8.7	A	8.7	A

Intersection Delay = 20.7 (sec/veh) Intersection LOS = C

Department of Engineering and Public Works

P.O. Box 21229

West Palm Beach, FL 33416-1229

(561) 684-4000

www.pbcgov.com

September 30, 2008

Mr. Jerrell Harris
P & Z Administrator
City of Riviera Beach
600 West Blue Heron Boulevard
Riviera Beach, FL 33404

RE: FPL – PVR Conversion – Build-Out Extension
Project #: 080907
TRAFFIC PERFORMANCE STANDARDS REVIEW

Dear Jerrell:

The Palm Beach County Traffic Division has reviewed the traffic statement for the build-out extension for the previously approved expansion project entitled **FPL – PVR Conversion,** pursuant to the Traffic Performance Standards in Article 12 of the Palm Beach County Land Development Code. The project is summarized as follows:

Location:	East side of US-1, just north of 59th Street.
Municipality:	Riviera Beach
Parcel ID#:	56-43-42-33-00-000-5180
Existing Uses:	67,450 SF FPL Facility – with 40 Employees – to be demolished.
Proposed Uses:	23,690 SF FPL Facility – with 40 Employees (No Change).
New Daily Trips:	None
New PH Trips:	None
Build-Out:	End of Year 2014

Based on our review, the Traffic Division has the following comment:

- The Traffic Division is concerned over traffic circulation and parking related issues during the construction period. Provide a general description of the construction related traffic, an evaluation of traffic impacts, and a description of potential traffic and parking related mitigations if necessary.

If you have any questions regarding this determination, please contact me at 684-4030.

Sincerely,

Masoud Atefi, MSCE.
TPS Administrator, Municipalities - Traffic Engineering Division

MA:saf
cc: Traf Tech

File General - TPS - Mun - Traffic Study Review
F:\TRAFFIC\ma\Admin\Comments\2008\080907.doc

APPENDIX 10.8

CLIMATE CHANGE AND FPL'S GREENHOUSE GAS STRATEGY
FPL RIVIERA BEACH ENERGY CENTER

JANUARY 2009

APPENDIX 10.8
CLIMATE CHANGE AND FPL'S GREENHOUSE GAS STRATEGY

Florida Power & Light Company (FPL) is a subsidiary of FPL Group, Inc., nationally known as a high quality, efficient, and customer-driven organization focused on energy-related products and services. NextEra Energy Resources, FPL Group's energy-generating subsidiary, is a leader in producing electricity from clean and renewable fuels.

FPL Group recognizes that climate change is the most significant environmental issue facing the nation and believes that the threat of major, long-term environmental and economic damage from climate change is real. Because of this, FPL Group has taken a leadership role to address this important issue and the call for action for a national climate change policy. The decision to step into the forefront of this issue goes hand-in-hand with FPL Group's longtime commitment to managing operations with sensitivity to the environment.

Part I of this appendix discusses Florida's emerging climate change policy. Part II highlights specific actions that FPL is taking now in Florida to address climate change and how the conversion of the Riviera and Cape Canaveral Power Plants to next generation clean energy centers will be incorporated into FPL's plan for addressing global climate change. In fact, the conversion of the Riviera and Cape Canaveral Power Plants will contribute to an overall increase in efficiency of FPL's generation portfolio, thereby reducing the expected system-wide carbon-dioxide (CO_2) emissions. Part III highlights the multiple alliances that FPL Group has joined to address climate change and NextEra Energy Resources's leading role in generating electricity from renewable fuels.

PART I. FLORIDA'S EMERGING CLIMATE CHANGE POLICY

In July 2007, Governor Charlie Crist signed Executive Order 07-127 stating Florida greenhouse gas emission reduction targets as follows: by 2017, reduce greenhouse gas emissions to 2000 levels; by 2025, reduce greenhouse gas emissions to 1990 levels; by 2050, reduce greenhouse gas emissions by 80 percent of the 1990 levels. Governor Crist also signed Executive Order 07-128, establishing a Climate Action Team on Energy and Climate Change to review alternatives for reducing greenhouse gas emissions in Florida. This team issued its Phase 1 report on November 1, 2007. The report recognizes that new, clean, low-carbon emitting natural gas-fired generation will remain an important part of Florida's near term electric generation. The Climate Action Team and its associated technical work groups published their final report in October 2008. The Action Team's final report provided

comprehensive recommendations for the development of greenhouse gas emissions reduction regulations in Florida.

In 2008, the state legislature passed a comprehensive Energy Bill, HB 7135, authorizing the Florida Department of Environmental Protection (FDEP) to establish greenhouse gas reduction rules and allow reimbursement to electric utilities for investments in research and development of carbon capture and sequestration technologies. The legislation also directs FDEP to establish a cap and trade program to reduce greenhouse gas emissions in accordance with targets established in Executive Order 07-127. The greenhouse gas reduction rules are expected to be adopted sometime in early 2010 for submittal to the state legislature for ratification.

PART II. FPL'S COMMITMENT TO REDUCING GREENHOUSE GAS EMISSIONS IN FLORIDA

Consistent with Florida's emerging policy, FPL is committed to addressing global climate change. FPL's plan for addressing climate change has been formulated by considerable experience, including:

- Renewable energy, including significant investments in the construction of solar thermal and photovoltaic facilities. FPL is also attempting to obtain siting approval for wind power facilities.
- New nuclear generation at the existing Turkey Point power plant site in south Miami-Dade County and additional generation at two existing nuclear plants (Turkey Point and St. Lucie Power Plants) – which have an impressive record of both clean energy and safety.
- Energy efficiency in electricity generation, continuing to utilize energy-efficient combustion turbine technology to reduce fleet-wide greenhouse gas emissions and use less fuel.
- Power plant modifications, converting older FPL oil-fired facilities into cleaner combined-cycle technology.
- Energy efficiency in electricity usage, where in partnership with FPL customers, realizing cost-effective demand-side reductions in electric usage, particularly at peak times.

INCORPORATING THE RIVIERA BEACH ENERGY CENTER AND CAPE CANAVERAL ENERGY CENTER INTO FPL'S COMMITMENT TO ADDRESS GLOBAL CLIMATE CHANGE

In assessing the proposed conversion projects, FPL has taken into account the CO_2 emissions that would be emitted from the Riviera Beach Energy Center (RBEC) and Cape Canaveral Energy Center (CCEC) in order to meet customers' energy needs, as well as the reduction in total CO_2 emissions

from the FPL system after the RBEC and CCEC projects are completed. Use of natural gas as the primary fuel, along with the most efficient combined cycle technology, will result in one of the lowest CO_2 emission rates on a pound-per-megawatt-hour (lb/MW-hr) basis of any fossil fuel-fired power plant in the country. The post-conversion CO_2 emission rate will be about one-half the CO_2 emission rate prior to the conversion. Moreover, the converted units will be among the most efficient natural gas fired generating units in FPL's system. As a result, the electricity generated by the converted units will displace generation produced by less efficient units in FPL's system and concomitantly reduce the amount of CO_2 emissions. The increased efficiency can be shown by the CO_2 emission rate in lb/MW-hr. Figure 10.8-1 shows the lb/MW-hr emission rates before and after the conversions for the Riviera and Cape Canaveral Plants to combined cycle technology. As shown in this figure, the CO_2 emission rate for the new combined cycle units will be about 750 lb/MW-hr, while the CO_2 emission rates for the existing FPL Riviera and Cape Canaveral Plant are about 1,500 lb/MW-hr, or twice as much.

The RBEC and CCEC Projects were analyzed together and jointly submitted to the Florida Public Service Commission for approval of a determination of need. The total impact of the two conversion Projects is a projected reduction in FPL's system emissions of CO_2 by 15.7 million tons from 2013 through 2040. Figure 10.8-2 shows the cumulative 2013 through 2040 FPL system CO_2 emissions reductions with both conversions. As shown in the figure, there will be significant reductions in CO_2 emissions in FPL's system as a direct result of the conversion of the Riviera and Cape Canaveral Plants.

Highly efficient generating facilities such as CCEC and RBEC will assist Florida and FPL in achieving the CO_2 reduction goals stated by Governor Crist and maintaining electric generation reliability. As previously stated, in addition to the CCEC and RBEC, FPL has committed to building new zero-emitting solar thermal and photovoltaic facilities in Florida, and is also pursuing wind power facilities. These new facilities combined with base load electric generation from CCEC and RBEC will provide low and zero-emitting electric generation and help to achieve fuel efficiency and diversity in Florida. For the future, FPL is committed to helping meet CO_2 emissions reduction goals that may be established by the State of Florida.

FPL RENEWABLE ENERGY ACTIVITIES IN FLORIDA

In an effort to add new renewable energy resources, FPL is pursuing several initiatives in Florida. FPL's Renewable Energy Strategy Team is actively evaluating and pursuing renewable energy

technologies that may be suitable for the State. FPL believes that greater use of conservation and cost-effective renewable resources is good for our customers and the environment and that ongoing evaluation and implementation of emerging clean energy technologies is a necessary pursuit. The following renewable energy activities are underway in Florida:

- FPL is currently involved in activities to maintain and add renewable resources produced by generators that produce electricity from biomass and municipal waste. At the time of the filing for approval for the CCEC and RBEC Projects, FPL anticipated that 143 megawatts (MW) of renewable purchase contracts currently set to expire in the 2009 to 2011 timeframe will be extended or otherwise continued. In addition, FPL projected that 126 MW of new renewable capacity will be provided in the 2008 to 2017 timeframe from FPL's own development efforts, responses to FPL's 2008 Renewable Request for Proposals, and/or unsolicited proposals from renewable energy sources.
- FPL is currently looking to develop and construct projects in solar photovoltaic and solar thermal technologies throughout the State, helping to provide platforms to refine the technology and reduce its cost. Currently, FPL is planning to build three Next Generation Solar Energy Centers, consisting of the world's largest photovoltaic solar plant and the first "hybrid" energy center that will combine solar thermal technology with an existing combined-cycle generation unit. For the latter, FPL has sought and obtained authorization from FDEP to construct the Martin Solar Energy Center (MSEC). This facility will consist of about 180,000 mirrors over about 500 acres at the Martin Plant site and generate about 154,000 MW-hr of electricity from solar energy. FPL will also build a solar photovoltaic facility in Kennedy Space Center, forging a unique public-private partnership with NASA that will leverage engineering, design, and operating expertise, and the nation's largest solar photovoltaic facility on FPL's land in DeSoto County.
- FPL is proposing to construct a wind generation project on the east coast of Florida at our St. Lucie power plant site.
- Through alliances with Florida universities, such as Florida Atlantic University, FPL is exploring technologies that produce electricity from ocean current, ocean thermal, and hydrogen commercial technologies.

In another commitment to renewable fuels, FPL will replace select corporate passenger vehicles with hybrid-powered vehicles. FPL also has been at the forefront of a national industry program to develop a line of hybrid trucks capable of running in pure electric or conventional mode, or a combination of both, and has committed to an all-hybrid service fleet as soon as those vehicles become commercially available.

FPL deployed three prototype diesel-electric bucket trucks in 2006, deployed an additional five in 2007, and by the end of 2008, will add 12 more. These trucks can produce up to 25 kilowatts (kW) of electricity and have reduced the fuel consumption (when compared to a standard gasoline-powered truck in FPL's fleet) by an average of 55 percent. In addition, FPL will soon also have the nation's very first plug-in hybrid bucket truck in service this year. FPL signed on to become one of Azure Dynamics' "key fleet" partners in the development and testing of hybrid conversion vans.

FPL has been using a B20 biodiesel mix in increasing amounts since 2001. During the last 12 months, FPL has used 2 million gallons of biodiesel made from soybean oil. This has reduced CO_2 emissions by 20 percent per truck.

FPL CUSTOMER ENERGY CONSERVATION PROGRAMS

FPL is the nation's leader among electric utilities for our partnership with customers in conservation and No. 3 in load management (based on 2006 U.S. Department of Energy data, the latest available). With FPL facing continued customer growth and growth in usage among existing customers, cost-effective conservation and load management programs are integral to helping keep customer rates stable while providing reliable service. To the extent these measures help to reduce FPL's energy requirements, they help reduce overall CO_2 emissions.

Since 1981, customers have participated more than 5.2 million times in FPL's industry-leading conservation and energy management programs. For example, more than 2.4 million have had a Home Energy Survey and many have participated in multiple programs. FPL's nationally recognized leadership in the implementation of demand side management (DSM) within its system has avoided the need to build the equivalent of 12 mid-sized power plants. The results through year-end 2007 include:

Residential:

- 2,420,000 energy surveys performed;
- 748,000 Building Envelope Program participants;
- 1,127,000 high-efficiency air conditioning program participants;
- 436,000 duct tests and repairs; and
- 761,000 On Call® participants.

Business:

- 117,000 energy surveys performed;

- 263 MW of efficient lighting;
- 307 MW of high-efficiency air conditioning/heating; and
- 57 MW of Building Envelope retrofits.

From 1998 through 2008, FPL's investment in customer programs to reduce energy demand will exceed $1.7 billion. In 2007 alone, FPL invested more than $114 million on conservation and load management incentives. The company expects that savings from these programs through 2014 will enable us to forego the building of at least another two power plants – in addition to the 12 mid-sized plants we have already avoided constructing due to these efforts.

FPL is also evaluating solar technologies in order to potentially begin offering incentives to residential customers.

FPL received approval from the Florida Public Service Commission to implement a pilot of programmable thermostat options for the On Call® program. FPL started a small scale test program (400 customers) in August 2007 that evaluated the benefits of a new generation of programmable communicating thermostats to help put residential customers in charge of decisions that could lower energy costs. In return for a free thermostat, participants agreed to allow FPL to cycle off their air conditioning equipment during system peaks.

In July 2007, FPL began offering a new Online Business Energy Evaluation as a quick, easy-to-use, and free way to help business customers control electricity usage. The do-it-yourself interactive energy survey offers practical, energy-saving recommendations customized to each customer's business and building type.

In addition, FPL provides optional load management programs that help reduce power usage by predictable and specific levels during times when energy demands are highest. These On Call® programs allow participating residential and business customers to receive a credit on their electric bills for allowing FPL to occasionally "interrupt" major appliances.

FPL has also embarked upon an initiative to install advanced electronic meters that utilize internet protocol to provide remote meter communications on all customer homes and small businesses. Part of this plan included an initial evaluation phase, which included the installation of 50,000 advanced meters in select customer homes and small businesses in 2007 and an additional 50,000 in 2008. Pending final successful evaluation of this technology, the remaining residential and small business customers should be receiving "smart meters" in the coming years. The new technology will allow

FPL to remotely collect and analyze electricity-related data, help customers be able to better monitor and manage their energy usage, as well as provide opportunities to improve customer services and employee safety. The initiative may also allow FPL to improve its own operating effectiveness in systems planning, load management and increase the ability to identify, and correct electric service issues once the system is fully activated.

THE ROLE OF UTILITIES AND HOW FPL COMPARES

FPL has invested significantly in making its existing Florida power plants more efficient and building new, highly efficient next generation energy centers to meet the current needs of FPL customers and future growth in energy demand. These new energy centers will represent FPL's sustainable, clean energy commitment and a continued course of a diversified, clean fuel mix.

Electric utilities did not single-handedly create the problem of climate change, nor will FPL be able to solve the problem alone. FPL recognizes that voluntary action, by itself, in the energy industry will not be enough. It is also necessary to ensure that system reliability is maintained and that electricity rates remain stable for utility customers. FPL does not believe the solution is to outlaw certain fuels or to mandate a reduction in electricity usage. Rather, the answer is a combination of solutions, including cost-effective conservation and load management programs, generation from renewable fuels, nuclear and cleaner fossil generation.

FPL'S RECORD OF AIR EMISSIONS REDUCTIONS

Over the past decade, FPL Group has voluntarily made significant reductions in power plant emissions. Today, FPL Group's emission rates of CO_2 are among the lowest of all power generators in the United States (Figure 10.8-3). Since 1990, FPL Group has increased generation by an additional 104 million MW-hr – a 218 percent increase – while reducing CO_2 emission rates by 24 percent.

FPL is also the nation's leader in converting older oil-burning power plants to modern highly efficient natural gas operations, which significantly increases the efficiency of the plants and reduces emissions. The conversions of the existing Cape Canaveral and Riviera Power Plants will further exemplify FPL's commitment to environmental sustainability.

FPL'S EXISTING NUCLEAR GENERATION HAS AVOIDED GREENHOUSE GAS EMISSIONS

FPL's generating fleet includes considerable nuclear generating capacity and nuclear additions are planned for the future. The operation of FPL's existing nuclear units has resulted in a significant amount of air emissions being avoided as compared to the same amount of electric generation being produced using fossil fuels.

To place these avoided CO_2 emissions in perspective, it is important to consider the magnitude of such emissions in Florida. FDEP has estimated that in 2003 the CO_2 emissions from all sources in Florida including electrical generation and transportation were about 250 million tons. FPL's nuclear units in 2003 avoided an amount equivalent to about 6 to 10 percent of Florida's total CO_2 emissions. The avoided emissions from FPL's nuclear units are considerable by any measure.

FPL Groups overall emissions profile, when all generation facilities are considered, is one of the lowest in the country (Figure 10.8-4). Although FPL has one of the cleanest fossil fuel-fired fleets, FPL's nuclear units have further served to significantly decrease FPL's air emissions profile when all sources of generation are considered. FPL's nuclear units have, in effect, reduced emissions across FPL's system with an overall air emissions reduction of about 30 percent.

FPL'S PLANNED ADDITION OF NUCLEAR GENERATION WILL HELP MEET FLORIDA'S GREENHOUSE GAS REDUCTION GOALS

FPL future generation plans include nuclear extended power uprates and two new nuclear units. FPL's nuclear uprate projects involve improvements at the existing Turkey Point Units 3 and 4 and St. Lucie Units 1 and 2 to add about 100 MW per unit or 400 MW total in 2011 and 2012. Each of the two nuclear uprate projects will result in avoided CO_2 emissions of approximately 0.6 million tons per year.

The proposed new nuclear units, Turkey Point 6 and 7 would add at least 1,100 MW per unit beginning in the 2018 to 2020 timeframe. These nuclear units combined will result in avoided CO_2 emissions of approximately 7 to 17.6 million tons per year.

PART III. FPL GROUP'S COMMITMENT TO ADDRESS GLOBAL CLIMATE CHANGE

In June 2007, FPL Group Chairman and Chief Executive Officer Lew Hay testified before the Senate Committee on Environment and Public Works about how utilities can be part of the solution to the

challenge of global warming. On Capitol Hill, he proposed that the simplest and most effective solution that protects the economy:

- Sets a market price for carbon that is reflected in the price of every good and service consumed throughout the economy.
- Applies the carbon fee to all industry sectors, as well as import- and export-sensitive industries.
- Allows companies to avoid paying the carbon fee by not emitting carbon - exactly the behavior that FPL wants to encourage.

FPL Group has analyzed the issues and has published a report on its conclusions: "U.S. Climate Policy: Pricing Carbon, Preserving the Environment, Protecting the Economy" (2007).

In 2003, FPL Group was the first electric company to join the Environmental Protection Agency's "Climate Leaders" program. As a participant, FPL Group committed to achieving an 18 percent reduction in its CO_2 emissions rate – the main greenhouse gas blamed by scientists for warming the Earth – by 2008, compared to a 2001 baseline. FPL Group has already achieved and in fact, surpassed that goal.

FPL Group is also a Pioneer Partner in the World Wildlife Fund's "PowerSwitch®" program, which is designed to reduce greenhouse gas emissions through the use of cleaner fuels and more efficient electricity generation. FPL Group has committed to a 15 percent improvement in the efficiency of our power plants by 2020, from a 2000 baseline. This will avoid 19 million tons of CO_2 emissions annually.

What FPL Group is doing out of respect for the environment has not gone unnoticed. In February 2007, FPL Group was named by Corporate Knights, Inc., a Canadian media company, as one of the most sustainable companies in the world – one of only two utility companies in the United States. In addition, in September 2007, FPL Group was named "Best in Class" in the prestigious Climate Leadership Index and honored among Fortune 500 companies for our approach to climate change in a report issued by the Carbon Disclosure Project.

FPL GROUP'S PARTNERS IN ADDRESSING CLIMATE CHANGE

FPL Group has joined multiple alliances to strengthen the call for action on a comprehensive approach to climate change, including the following:

The Climate Group – FPL Group has joined the Climate Group, an independent, nonprofit organization dedicated to advancing business and government leadership on climate change. Proactive companies, states and cities around the world are demonstrating that cuts in greenhouse gases required to stop climate change can be achieved while growing the bottom line.

The Carbon Disclosure Project – The Carbon Disclosure Project (CDP) is an independent not-for-profit organization that seeks information on the business risks and opportunities presented by climate change and greenhouse gas emissions data from the world's largest companies. Each year, FPL Group voluntarily provides information to the CDP for disclosure on their website to facilitate the activities of policymakers, consultants, accountants and marketers. CDP has become the gold standard for carbon disclosure methodology and process and is the largest repository of corporate greenhouse gas emissions data in the world.

United States Climate Action Partnership (USCAP) – In January 2007, FPL Group joined a diverse group of United States-based businesses and leading environmental organizations calling upon the federal government to quickly enact mandatory economy-wide legislation to achieve significant reductions of greenhouse gas emissions. USCAP members believe any delay today in action to control emissions increases the risk of unavoidable consequences that could require even steeper reductions in the future.

In January 2007, USCAP issued a landmark set of principles and recommendations to highlight the urgent need for a policy framework on climate change. The solutions-based report, titled A Call for Action, lays out a blueprint for a mandatory economy-wide, market-driven approach to climate protection.

Global Roundtable on Climate Change – FPL Group has also endorsed the Joint Statement of the Global Roundtable on Climate Change (GROCC). GROCC brings together more than 150 critical stakeholders from all regions of the world – including senior executives from the private sector and leaders of international governmental and non-governmental organizations – to discuss and explore areas of consensus regarding core scientific, technological, and economic issues critical to shaping sound public policies on climate change.

The statement lays out a proactive framework for global action to decrease climate change risks and impacts, while also meeting the need for energy, economic growth, and sustainable development around the world. It outlines cost-effective technologies that exist today and others that could be

developed and implemented to improve energy efficiency and to help reduce emissions of CO_2 and other greenhouse gases in major sectors of the global economy.

Those endorsing the Joint Statement represent the fields of energy, government, air transport, manufacturing, banking, insurance, technology, religious organizations, and many others.

The Clinton Global Initiative (CGI) – CGI is a non-partisan organization that brings together a community of global leaders from various backgrounds to devise and implement innovative solutions to some of the world's most pressing challenges. The organization is reaching even more leaders in diverse regions, including future leaders from college campuses and global citizens through a community of projects evolving from CGI's unique model that focuses on taking action. FPL Group's Clean Energy 2007 Commitment at the Clinton Global Initiative in September 2007 included a commitment to build new solar generation facilities over the next 7 years totaling 300 megawatts in Florida and 500 megawatts in the United States, representing a total capital cost of approximately U.S. $1.5 billion.

FPL GROUP'S CALL TO ACTION

Over the past decade, FPL Group has voluntarily made significant reductions in power plant emissions. This puts FPL Group in a unique position to advocate for meaningful policy to help slow, stop, and reverse greenhouse gas emissions such as CO_2.

FPL Group believes that voluntary programs will not be enough to realize meaningful and necessary reductions throughout the economy and world-wide. Unfortunately, getting the United States economy on a path of reduced carbon emissions will not be cost-free.

It is important for FPL and the United States that the right policies be put in place to address this long-term issue – policies that will be effective in reducing emissions without imposing unacceptable costs or needlessly shocking the global economy. Unfortunately, bad policy can be just as damaging as no policy at all.

FPL Group is uniquely positioned at the forefront of a comprehensive plan to address climate change, as well as leading a dynamic commitment to environmental stewardship. FPL Group is committed to complying with all environmental laws, regulations, and standards – but more than that, committed to leading the charge for real change. To demonstrate this commitment, FPL Group pledged $2.4 billion

in renewable energy and energy-efficiency technologies of the future, including solar power, consumer renewable-energy programs, and an advanced metering initiative to give more control over energy efficiency to consumers, FPL Group's partners in fighting climate change.

NextEra ENERGY RESOURCES – OUT IN FRONT ON RENEWABLE ENERGY

Long before serious discussions about moving toward energy independence in America, NextEra Energy Resources has been leading the way in generating electricity from renewable fuels. Harnessing the power of the sun, wind, and water to produce electricity is environmentally friendly – and NextEra Energy Resources is a leading electricity producer using all three technologies. NextEra Energy Resources is also on the forefront of developing new, clean, and affordable sources of power generation.

Today, NextEra Energy Resources has power generation facilities in operation in 26 states and Canada, and more than 90 percent of the electricity generated is by clean fuels such as natural gas, wind, nuclear, water, and the sun.

Solar – Today NextEra Energy Resources is the largest generator of solar thermal power in the world. NextEra Energy Resources co-owns and operates seven solar plants in California's Mojave Desert, collectively known as the world's largest solar site. In all, NextEra Energy Resources operates 310 MW of solar power, which is capable of meeting the energy needs of about 230,000 homes.

Wind – World-wide, wind is the fastest growing renewable energy resource. NextEra Energy Resources is the nation's number-one producer of wind power. Currently, NextEra Energy Resources owns and operates nearly 60 wind facilities in 16 states and has a capacity of nearly 5,100 MW. In addition, in 2007, NextEra Energy Resources wind farms were estimated to have offset the production of:

- Nearly 9 million tons of CO_2,
- Over 21,000 tons of sulfur dioxide, and
- More than 13,000 tons of nitrogen oxide.

Hydro – NextEra Energy Resources is a leading producer of hydroelectric power in Maine. These power plants convert the force of moving water into electricity to generate approximately 1.6 million MW-hr of power annually.

CONCLUSION

FPL Group has taken a leadership role to address climate change and the call for action for a national climate change policy. The decision to step into the forefront of this issue goes hand-in-hand with FPL Group's longtime commitment to managing operations with sensitivity to the environment.

FPL is taking action now in Florida to address climate change. FPL is the nation's leader among electric utilities for its partnership with customers in conservation and No. 3 in energy management. FPL's nationally recognized leadership in the implementation of cost-effective conservation and load management programs within its system has avoided the need to build the equivalent of 12 mid-sized power plants. FPL is also the nation's leader in conversions, significantly increasing the efficiency of many of its existing power plants while reducing emissions. The conversion of the existing Cape Canaveral and Riviera Power Plants to next generation clean energy centers exemplifies FPL's commitment to efficient, clean energy, utilizing state of the art technology. In addition, FPL's future generation plans include nuclear uprates and two new nuclear units. Additional nuclear energy will result in a significant amount of air emissions being avoided as compared to the same amount of electric generation being produced using fossil fuels.

On a lb/MW-hr basis, the CO_2 emission rates for the Cape Canaveral and Riviera Beach Energy Centers will be among the lowest of any fossil fuel-fired power plant in the country. The conversions will also reduce FPL's system emissions of CO_2 by 15.7 million tons from 2013 through 2040. Highly efficient generating facilities such as the Cape Canaveral and Riviera Beach Energy Centers will greatly assist Florida and FPL in achieving the CO_2 reduction goals stated by Governor Crist and maintaining electric generation reliability.

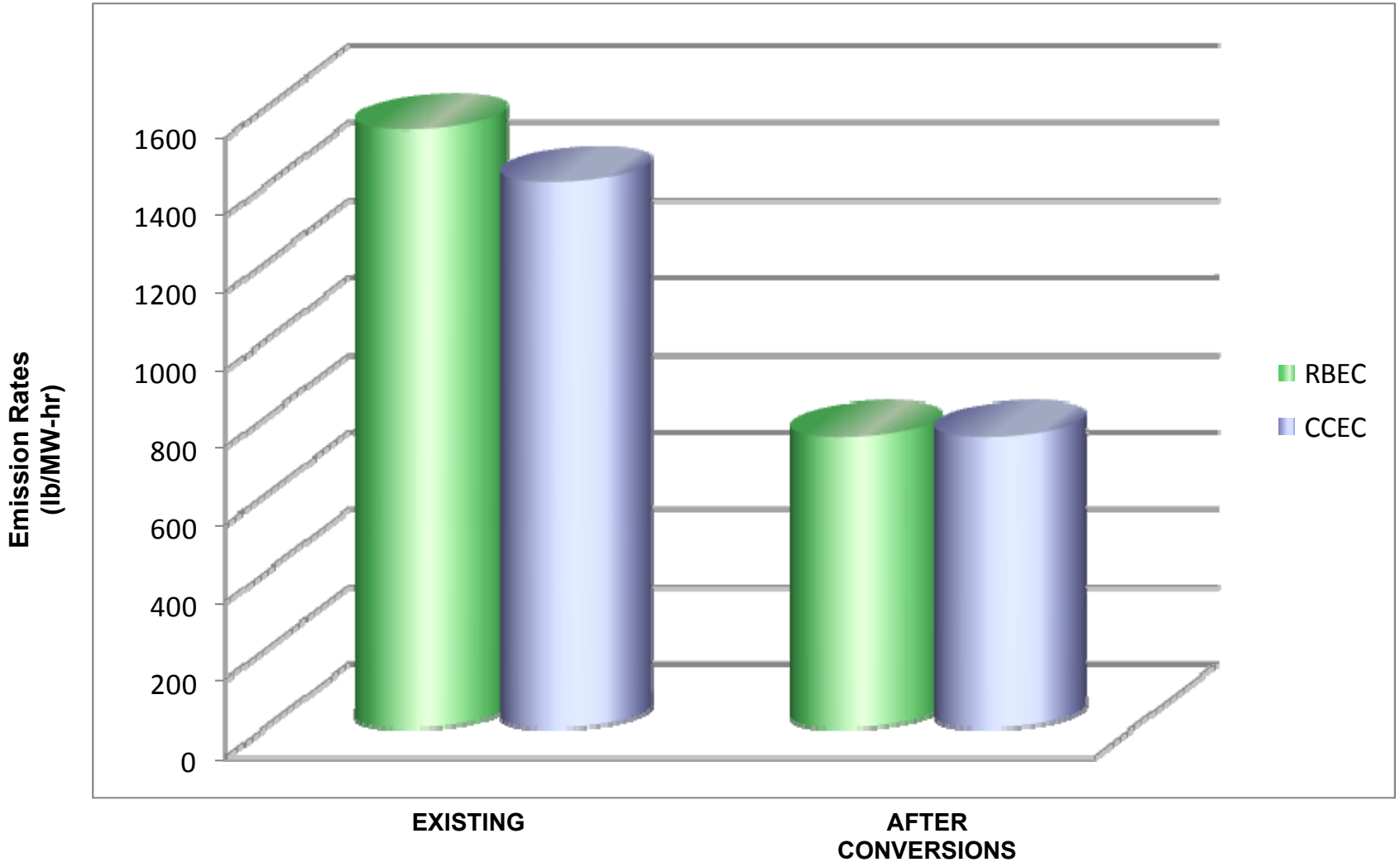


Figure 10.8-1
Comparison of CO_2 Emissions for CCEC and RBEC

Source: Golder, 2008.

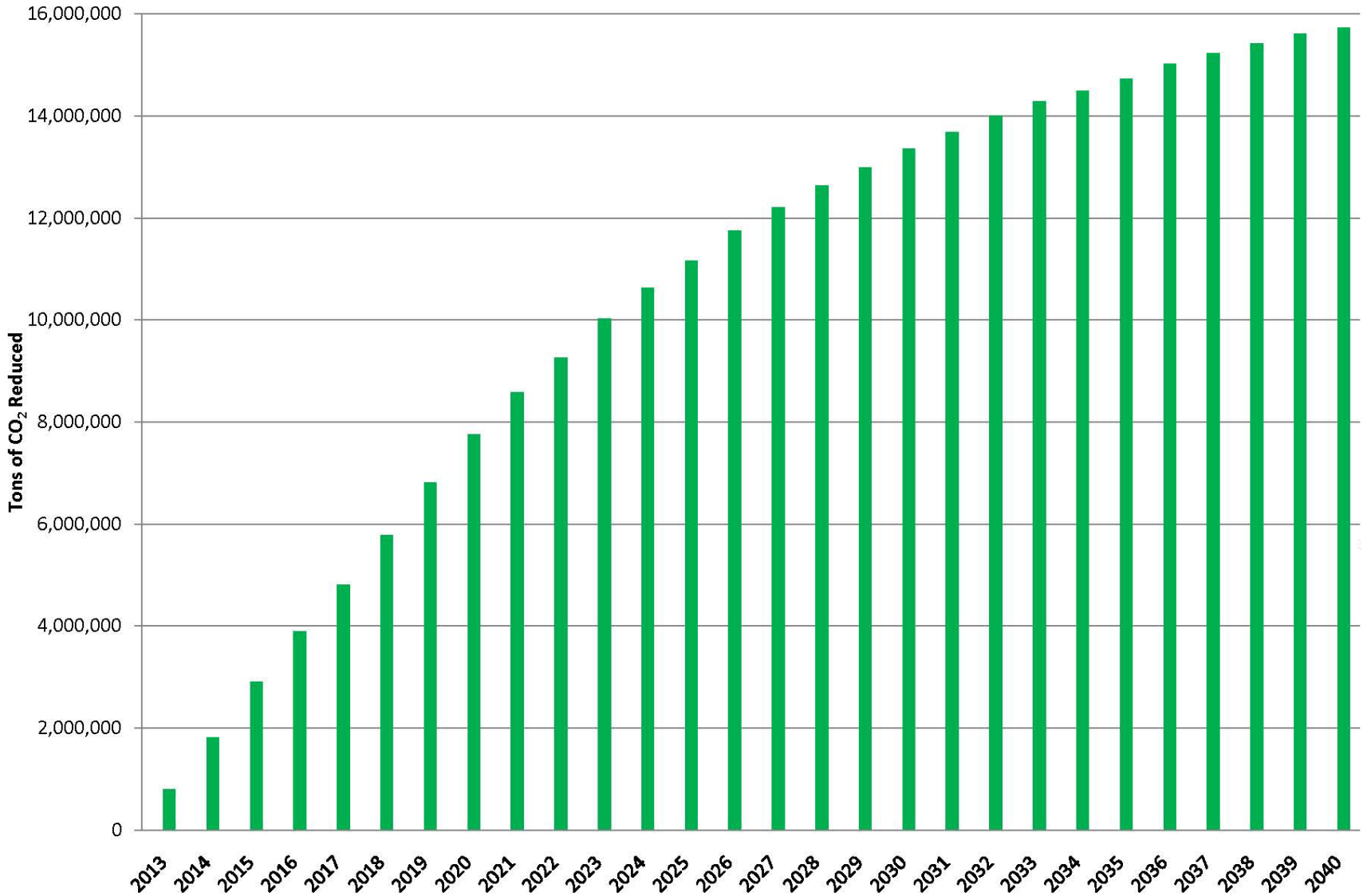


Figure 10.8-2
Cumulative CO_2 Reductions for FPL Conversions

Source: Golder, 2008.

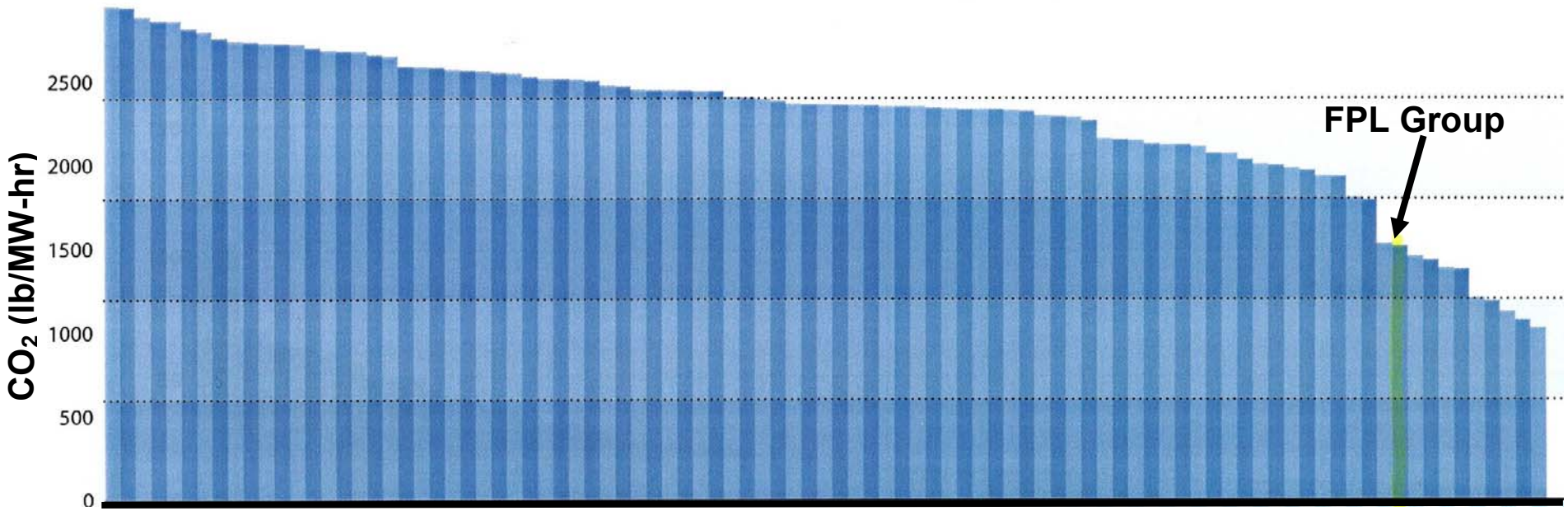


Figure 10.8-3
Fossil Fuel – CO_2 Emission Rates (lb/MW-hr) from U.S. Electric Generators.

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Source: Ceres, NRDC, PSEG, April 2006; Golder, 2007.

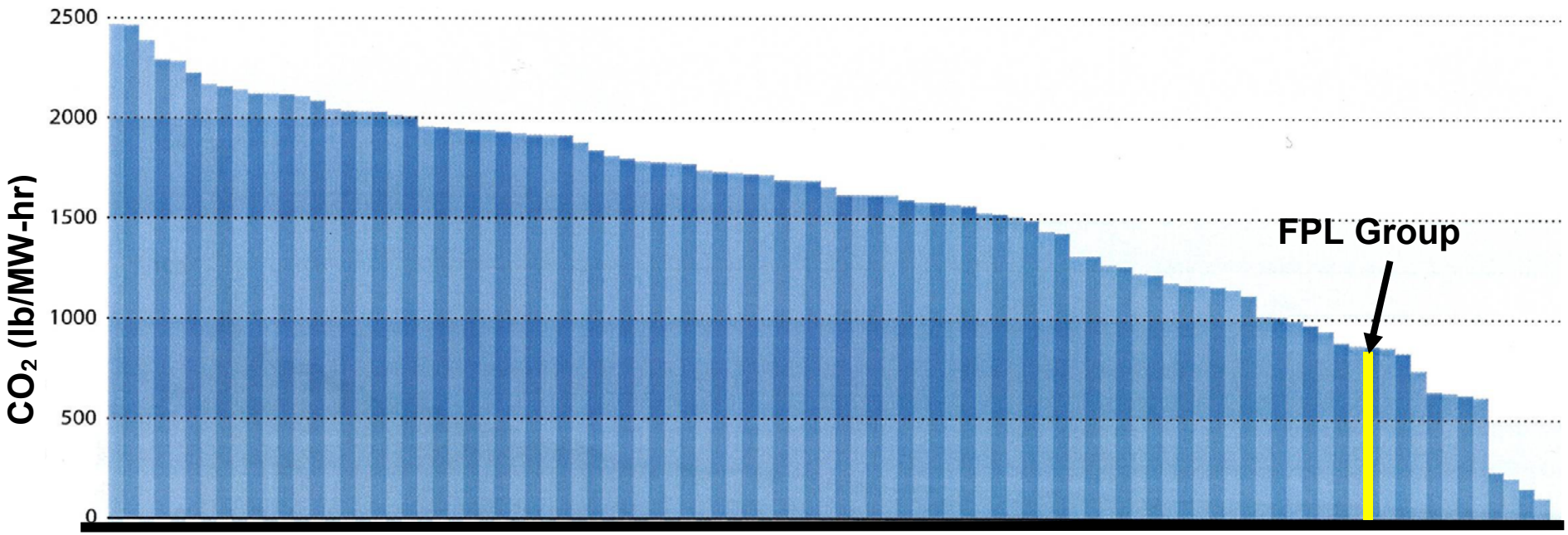

Figure 10.8-4
All Generation Sources – CO_2 Emission Rates (lb/MW-hr) from U.S. Electric Generators.

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Source: Ceres/NRDC/PSEG, April 2006 ("Benchmarking Air Emissions"); Golder, 2007.

THERMAL MODELING ANALYSIS

FPL RIVIERA BEACH ENERGY CENTER

February 2009

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1.0 INTRODUCTION

Florida Power & Light Company (FPL) is proposing to convert the existing Riviera Plant, which is located in the City of Riviera Beach with a small portion in the City of West Palm Beach, Palm Beach County, Florida, into a modern, highly efficient, lower-emission, clean energy center using the latest combined cycle technology. A Site location map and aerial photo of the existing Plant Site are presented in Figures 10.9-1 and 10.9-2, respectively. The Plant Site is located on the western shore of Lake Worth Lagoon, southwest of the Lake Worth Inlet and Peanut Island, and immediately south of the Port of Palm Beach. The converted Plant will be significantly more efficient than the existing Plant, using less fuel to produce the same amount of electricity. The converted Plant will be renamed the Riviera Beach Energy Center (RBEC).

The existing Riviera Plant consists of two nominal 300-megawatt (MW) units with conventional dual-fuel fired steam boilers and steam turbine generators. Each of these conventional steam boilers is permitted to burn No. 6 fuel oil, No. 2 fuel oil, and natural gas. Unit 3 entered service in 1962 and Unit 4 entered service in 1963. Units 1 and 2 were retired.

FPL intends to convert the existing Plant into a modern, highly efficient, lower-emission, clean energy center using the latest combined cycle technology. The converted Plant, which will be renamed the Riviera Beach Energy Center (RBEC), will include a 3-on-1 combined cycle unit consisting of three new advanced combustion turbines (CTs) with heat recovery steam generators (HRSGs) and one steam turbine/electric generator. The converted Plant will be capable of producing a nominal 1,250 MW of electricity. The existing Plant will be dismantled with the exception of a portion of the once-through cooling water intake and discharge systems. RBEC will be connected to the existing intake and discharge systems.

A comparative analysis of the extent of the full-load thermal plume for both the existing Plant and RBEC was performed using a computerized mathematical thermal model. Analyses have also been performed for an electric heating system proposed by FPL to maintain a thermal refuge for manatees after the existing Plant is removed from service and until the RBEC begins operation. This report describes the assumptions, details, and results of the analyses that were performed.

2.0 METHODOLOGY

2.1 Plant Operation

2.1.1 Models

The existing Riviera Plant has two separate types of discharges of cooling water: a sub-surface multi-port diffuser that conveys the majority of the cooling water to a location offshore near the Port of Palm Beach ship channel; and a shoreline surface discharge that releases the remainder of the cooling water into an area known as the "manatee embayment". The manatee embayment is the rectangular area to which Units 1 and 2 formerly discharged cooling water and which now receives a small portion of the once-through cooling water discharge from Units 3 and 4. These two discharge locations are shown on Figure 10.9-3. Because the two discharges are physically different, two different thermal discharge models have been used to estimate their thermal plume characteristics.

2.1.1.1 *Model for Off-shore Subsurface Multi-port Discharge*

Golder Associates Inc. (Golder) used the near-field model MULDIF to simulate the thermal performance of the off-shore thermal discharge from the Riviera Plant. MULDIF is a well-known [Koh, R.C.Y. and L.N. Fan, Mathematical Models for the Prediction of Temperature Distributions Resulting from the Discharge of Heated Water, Report for the U.S. Environmental Protection Agency (EPA), Water Quality Office, October, 1970] submerged jet model consisting of a set of seven simultaneous differential equations including: conservation of mass, horizontal momentum flux, vertical momentum flux, density deficiency flux, and thermal energy flux, and two equations of horizontal and vertical distance. This near-field model was used to estimate the initial jet impingement temperature and width.

2.1.1.2 *Model for Shoreline Surface Discharge*

Golder used the EQuilibrium Temperature Prediction (EQTP) model to produce simulations of the thermal plume for the shoreline discharge to the manatee embayment. Input data include percent possible sunshine, ambient dry bulb and dew point temperature, wind speed, barometric pressure, heat input, and water flow rate. The output of this model includes the natural equilibrium temperature, the natural and forced surface heat exchange coefficients, and an estimated intake and discharge temperature (assuming all cooling is atmospheric and none is by dilution with ambient waters).

EQTP is a steady state energy balance computer model which simulates the expected thermal performance of a heated water body with respect to both temperature and evaporation effects. The

program assumes that heat transfer to and from a heated water body is a function of the water's equilibrium temperature. This model was originally described by Patterson, Leporati, and Scarpa ("The Capacity of Cooling Ponds to Dissipate Heat," Ebasco Services Incorporated (Ebasco), presented at the 33rd Annual Meeting of the American Power Conference, Chicago, Illinois, April 20-22, 1972).

The problem of predicting the steady-state temperatures in a heated water body reduces to a quantitative determination of the energy transfer through a boundary between the atmosphere and the water. The processes involved in the heating and cooling of a water mass can be summarized as follows:

Heating Process

1. Absorption of short-wave radiation from the sun and the sky, Hs
2. Absorption of longwave radiation from the atmosphere, Ha
3. Heat rejected to the water by the plant, Hp
4. Convection of heat through the bottom of the water body from the interior of the earth
5. Transformation of kinetic energy to heat
6. Heating due to chemical processes
7. Condensation of water vapor

Cooling Process

1. Reflection of short-wave solar radiation by the water, Hsr
2. Reflection of longwave atmospheric radiation by the water, Har
3. Longwave radiation emitted by the water, Hbr
4. Conduction of sensible heat to the atmosphere, Hc
5. Heat carried away by evaporation, He

In the heating process, terms 4 through 7 are small in comparison with terms 1 through 3 and, therefore, can be neglected. Thus the following equation is solved within the steady state model:

$$Hs + Ha + Hp - Hsr - Har - Hbr - Hc - He = 0$$

where: $Hs = Ho\,(0.61S + 0.35)$

Ho = the solar and sky short-wave radiation received on a horizontal surface of the earth during a cloudless day

S = percentage of possible sunshine

$Ha = 4.15 \times 10^{-8}\,(Ta + 460)^4\,(C + 0.031\,(e_a)^{1/2})$ Btu / ft^2 / day

Ta = the ambient air temperature, °F

C = Brunt coefficient determined from air temperature and the ratio of solar radiation and clear-sky solar radiation, dimensionless

e_a = air vapor pressure, mm Hg

$Hbr = \gamma w \sigma (Ts + 460)^4$ Btu / ft^2 / day

γw = emissivity of water = 0.97, dimensionless

σ = Stephan-Boltzman constant = 4.15×10^{-8} Btu / ft^2 / day

Ts = water surface temperature, °F

$He = (73 + 7.3W)(e_s - e_a)$ Btu / ft^2 / day

W = wind speed measured 25 feet above ground-level, mph

e_s = saturation vapor pressure determined from the water surface temperature, mm Hg

e_a = air-vapor pressure, mm Hg

$Hc = 0.26\ (73 + 7.3W)(Ts - Ta)(P / 760)$ Btu / ft^2 / day

Ta = ambient air temperature, °F

Ts = water surface temperature, °F

W = wind speed, mph

P = barometric pressure, mm Hg

To determine the distribution of temperature throughout the water body, a heat exchange coefficient which describes the rate of heat lost across the air-water interface per unit area per unit temperature increase is calculated as follows:

$Kf = Hp / [At\ (Ef\text{-}En)]$

where: Kf = the forced heat exchange coefficient, Btu / ft^2 / day / °F;

At = total effective area of the cooling pond, ft^2;

Hp = plant heat rejection rate, Btu / day;

Ef = forced equilibrium temperature, °F; and

En = natural equilibrium temperature, °F.

For an open cycle water body, the temperature at the circulating water intake is set to En. The temperature distribution within the water body can then be calculated as follows:

$T - En = \Delta T / (e^{r1})$

where: T = the temperature at any point in the pond, °F

$r_1 = KnA / \rho CpQp$

A = effective area between the circulating water discharge point and the point in question, ft^2

Kn is the natural heat exchange coefficient, Btu / day / ft^2 / °F

ρ is the density of water, lbs per cubic foot

Cp is the specific heat of water, Btu / lb / °F

Qp is the plant condensing water flow rate, cubic feet per day

The primary assumption of the model is that of the steady state energy balance. This assumption provides the limitation that the model time step has to be long enough for transient factors to be dampened out. For example, the diurnal variation in air temperature occurs too fast for a large body of water to follow; therefore, the minimum time step that is usually appropriate has been found to be 5 days. The model derivation also assumes that the only mechanisms of heat transfer into the heated water body that need to be considered are the absorption of short-wave radiation from the sun and the sky, the absorption of longwave radiation from the atmosphere, and the heat rejected to the water body by the Plant.

Because the existing Riviera plant operates in the open cycle configuration, the hot and cold water temperatures are known, and the only unknown variable is the heat exchange coefficient. Based on the same theoretical energy balance budget approach, the EPA has calculated and published the natural heat exchange coefficients for various locations throughout the U.S. ("Effect of Geographical Variation on Performance of Recirculating Cooling Ponds", Edward L. Thackston, National Environmental Research Center, EPA, Corvallis, Oregon, November, 1974, EPA-660/2-74-085). Natural heat exchange coefficients published by EPA for Jacksonville, Florida, have been used for this study because it is the station closest to the Plant Site in that publication.

2.1.2 Plant Configuration

2.1.2.1 *Off-shore Subsurface Multi-port Discharge*

The off-shore subsurface multi-port discharge conveys the majority of the cooling water flow from Units 3 and 4 to the Lake Worth Lagoon. FPL estimates that about 99 percent of the cooling water flow is discharged via the off-shore subsurface multi-port discharge. However; to ensure conservatism in the modeling results, FPL has assumed that 100 percent of the cooling water flow is discharged offshore.

The existing off-shore discharge configuration includes a separate discharge outlet for each unit's cooling water discharge through a 90-inch internal diameter buried pipe. These pipes discharge the heated water about 1,941 feet offshore near the ship's channel for the Port of Palm Beach (in the middle of Lake Worth) as shown on Figure 10.9-3. The centerline elevation of the pipes at the discharge point is -16.58 feet MSL, and the pipe centerlines are only 12 feet apart. Each pipe has a design full flow average discharge velocity of about 10.2 feet per second. The total discharge flow

rate of the existing Plant is about 415,000 gpm, with a discharge plant heat rate of about 2.78 Billion Btu per hour (BBtu/hr). This results in a full-load overall temperature rise of about 13.71°F for the existing Plant.

The converted Plant will have a steam electric generating capacity that is similar to and no greater than the existing facility, and will result in the full-load Plant heat rejection rate remaining at about 2.78 BBtu/hr. The discharge flow rate and full-load overall temperature rise for RBEC will remain virtually the same as those of the existing Plant.

2.1.2.2 *Shoreline Discharge*

Existing Units 3 and 4 have a seal well near the southwest corner of the manatee embayment. That seal well is open to the atmosphere. During full-load/full cooling water flow conditions, a small portion (estimated to be about 1 percent) of the cooling water overflows the side of the seal well and is discharged to the water surface of the manatee embayment. When the units are operating at less than full-load/full cooling water flow, water level in the seal well may not be high enough to cause overflow. Siphon pipes have been installed from the interior of the seal well to allow the surface discharge to the manatee embayment to occur during those conditions (see Figure 10.9-4) in accordance with the existing Plant's Manatee Protection Plan (see Section 2.2 below).

2.1.3 Receiving Body of Water Characteristics

The existing Plant is situated on the western shore of Lake Worth, south of Port of Palm Beach (see Figures 10.9-1, 10.9-2, and 10.9-3). Two key receiving body of water (RBW) characteristics that determine which thermal model is most appropriate are the depth of the water body and the ambient water temperature.

The nearest long-term water temperature monitoring station unaffected by the Plant, identified from the NOAA National Data Buoy Center website, is Station LKFW1- Lake Worth, Florida (see Figure 10.9-5 for location). Over the 17-year Period of Record between July 1, 1984, through December 31, 2001, the following ambient water temperatures were determined:

Maximum	91.6°F
Average	78.8°F
Minimum	58.5°F

Based on the temperature analysis, two cases were selected for modeling: a summer case during which the maximum surface heat transfer is expected to occur; and a winter case during which the minimum surface heat transfer is expected to occur. The ambient temperatures selected for modeling the two cases are 91.6°F for summer and 58.5°F for winter. Because the heat rejection rate will not change with the converted Plant, only one model run for each case was required.

2.1.3.1 *Off-shore Subsurface Multi-port Discharge*

Based on review of the navigation charts of the area (U.S. C.&G.S. Nautical Chart 291, Lake Worth Inlet and Palm Beach, and NOAA NOS Nautical Chart 11472, Palm Shores to West Palm Beach), and the original design drawing (Ebasco drawing number G-164033), it is concluded that the RBW at the subsurface discharge location is relatively deep, with a Turning Basin depth listed as 30 feet at mean low water (MLW, about 1.66 feet below MSL). The Plant discharge is at elevation −22.66 feet MSL. Based on these depths, it is projected that there is sufficient mixing with ambient water from beneath or beside the thermal plume to use the MULDIF model. Applied Biology, Inc. (ABI) (Ecological Parameter Monitoring at the Riviera Plant, September 1976) reported that no perceptible thermal plume from Units 3 and 4 could be detected during studies they performed. This is because the tidal currents in and out of Lake Worth Inlet are relatively strong, leading to rapid dilution by mixing. However, for the purpose of this analysis, which is to document pre-existing and post-project isotherms under "worst-case" conditions, the modeling has been done assuming slack tidal current. Thus, the results reflect a worst-case condition unlikely to ever actually occur.

2.1.3.2 *Shoreline Surface Discharge*

The bathymetric map presented in SCA Subsection 3.3.4.1 indicated that the water depth within the manatee embayment is less than 1 foot; however, measurements taken by FPL in support of proposed maintenance dredging indicate the water depth is, or has been, 4 to 6 feet in this area. Subsequent to the proposed dredging, the 4 to 6 feet of depth will be restored. Because the manatee embayment is set back from the shoreline, ambient currents within it are considered negligible.

2.2 Thermal Refuge

As part of the existing plant's NPDES permit (Industrial Wastewater Facility Permit FL0001546), FPL is required under its Manatee Protection Plan (see Appendix 10.2 for a copy of the Manatee Protection Plan) to "endeavor to operate in a manner that maintains the water temperature in an adequate portion of the Unit 1 and 2 'discharge area' at or above 68°F," if the ambient water temperature falls below 61°F between November 15 and March 31. The Unit 1 and 2 'discharge

area' is also known as the manatee embayment. In order to be able to maintain such water temperature during the period between shutdown of the existing Riviera Plant and startup of the RBEC, FPL proposes to install an electric heater system of 30 million Btu/hr capacity. That electric heater system will withdraw water from the existing Units 1 and 2 intake structure, heat it, and release it to the manatee embayment adjacent to the Unit 3 and 4 discharge seal well.

2.2.1 Model

Golder used the EQTP model described in Subsection 2.1.1 above to produce simulations of the thermal plume for the proposed electrical heater system intended to provide a thermal refuge. By locating the intake for the proposed electrical heating system close enough to that system's discharge to allow recirculation of the heated water, the system will behave as if it is a closed cycle system.

For a closed cycle water body, the temperature at the cooling water intake is predicted, as well as the discharge temperature. The temperature distribution within the water body can then be calculated as follows:

$$T\text{-}En = \Delta T/(e^{r1})$$

where: T = the temperature at any point in the pond, °F;

r_1 = $KnA/\rho CpQp$; and

A = effective area between the circulating water discharge point and the point in question, ft^2.

2.2.2 Configuration

FPL currently endeavors to provide a warm water refuge for the manatees during the period from November 15 through March 31 of each year, in the event the ambient water temperature falls below 61°F.

During construction of RBEC, FPL proposes using a 30-million Btu per hour electric heater system to provide warm water during these conditions. The modeled flow rate and temperature rise for this system are 3,884 gpm and 15°F, respectively. Water will be pumped from the intake location through a temporary inlet pipe, through the heater system where it will undergo the temperature rise, and back through a discharge pipe (Figure 10.9-6).

2.2.3 Receiving Body of Water Characteristics

The electric heater system has been located to discharge adjacent to the existing Units 3 and 4 seal well, which is where the existing Plant discharges heated water for manatee protection, where the

water depth will be approximately 4 to 6 feet deep. The intake is located approximately 500 feet north of the discharge, in the existing Units 1 and 2 intake structure.

The minimum ambient water temperature case as described in Subsection 2.1.3 above was used to identify the appropriate meteorological parameters for modeling the thermal refuge conditions. These meteorological conditions, coincident with the minimum temperature of 58.5°F, which occurred on February 1, 1996, were obtained from the same data source as the water temperatures. The EQTP model was used to estimate the steady state conditions, which would have occurred if those meteorological conditions persisted until equilibrium was achieved.

Based on the Manatee Protection Plan, an area with a water temperature of 68°F or above is targeted whenever the ambient water temperature drops below 61°F at the measurement point.

3.0 MODELING RESULTS

3.1 Plant Operation

As described in Section 2 above, modeling was performed for two meteorological cases: summer and winter.

3.1.1 Off-shore Subsurface Multi-Port Discharge

Although the MULDIF model will accommodate multiple discharge ports, it requires they be separated by more than two initial jet diameters. As a result, inputting the actual configuration resulted in a failed run. In order to facilitate the modeling, an equivalent pipe was assumed with twice the area of each of the 90-inch internal diameter pipes. This pipe, with a diameter of 10.61 feet, results in the same discharge velocity as the two 90-inch pipes. Model input parameters are shown in Table 10.9-1.

The results of the runs are shown in Table 10.9-2 for summer and Table 10.9-3 for winter. Plots of the two plume centerline temperatures vs. horizontal distance are shown on Figures 10.9-7 and 10.9-8. The plumes reach the water surface after a horizontal distance of about 142 feet for the summer case and 163 feet for the winter case. The summer plume has been diluted down to about 3.3°F above ambient when it reaches the surface; the winter plume about 2.9°F. The maximum areal extent of the plumes, projected to the water surface, is shown in yellow on Figure 10.9-9, with an aerial photo as background, and in Figure 10.9-10, with the USGS quadrangle as background.

3.1.2 Shoreline Surface Discharge

Once the natural heat exchange coefficient was determined for each meteorological case, it was used to calculate the area enclosed within each isotherm above the ambient water temperature. Based on best engineering judgment, the calculated areas were distributed over the Lake Worth Lagoon as they would occur during slack tide. This approach provides the best estimate of the enclosed areas under assumed worst-case mixing conditions. It should be noted that in this context, worst case means the largest areal extent attainable, which is a worst case for thermal impacts but not necessarily for manatee protection. In comparison with measured data, ABI reported that a small, quickly dissipated (< 8.0 meters from the discharge structure) thermal plume was detectable during studies in 1974 from the discharge of Units 1 and 2. Units 1 and 2 were capable of generating 45 and 73 MW, respectively, nominal net summer peak capability, or about one-third the capacity of Unit 3 or 4. Thus, Units 1 and 2 were capable of rejecting significantly more heat than the present estimated heat rejected by the seal well overflow/manatee siphon (1 percent of Units 3 and 4).

The resultant predicted surface temperature isotherms are presented in Figures 10.9-11 and 10.9-12 for winter and summer, respectively. The areal extent of the isotherms is trivial in both cases; for example, the 5°F above ambient isotherm during winter (absolute temperature of 63.5°F) encompasses about 10 acres, during summer that acreage (for absolute temperature of 93.6°F) drops to about 8 acres.

3.2 Thermal Refuge Provided by Manatee Heating System

Meteorology used to model the thermal refuge that would be provided by the proposed electrical heater system included the following:

% Sunshine – 75 percent
Ambient Dry Bulb Temperature – 34.9°F
Wind speed – 14.6 mph
Barometric Pressure – 766.8 mm Hg
Ambient Dew Point – 33°F

The model predicted that the natural equilibrium water temperature that would occur if these meteorological conditions persisted is 36.7°F. The temporary intake and discharge locations, shown in Figure 10.9-6, were located such that the thermal plume would cover approximately 4.5 acres and

recirculate, and the discharge temperature would be 71.7°F. The predicted surface isotherms are shown on Figure 10.9-13.

4.0 CONCLUSIONS

As expected, the size of the off-shore thermal plume for both the existing Plant and RBEC is minimal in both summer and winter, even assuming worst-case conditions of tidal flushing. Because of the high velocity of the subsurface discharge, mixing with ambient water is maximized.

The RBEC shoreline surface discharge will continue to provide a wintertime thermal refuge for manatees.

During construction, the proposed electric heating system will provide a thermal refuge for manatees if the ambient water temperature falls below 61°F. During these conditions, the heating system is predicted to provide a warm water refuge (approximately 0.9 acres) at or above 68°F consistent with the Manatee Protection Plan for the Riviera Plant.

Table 1. MULDIF- Multiport Diffuser Input Parameters

Parameter	Run 1	Run 2	Units	Definition	Note
NC	2	2	none	Number of layers	Assume 2 layers at same temp and density
DO	10.61000	10.61000	Ft	Jet diameter	
UO	10.16	10.16	Ft/Sec	Discharge velocity per jet	
TO	105.7	72.6	Deg F	Discharge Temperature	36.7 Degrees C (Worst-case from water quality data)
DEN1	1.018666	1.024311	g/cm^3	Discharge density	Calculated
THETAO	0	0	none	Angle of discharge with respect to horizontal	0
DJ	16.58	16.58	Ft	Depth of discharge	Depth of discharge
SPACJ	52	52	Ft	Spacing between jet centers	2 jets
D	16.58	16.58	Ft	Depth of discharge	Depth of discharge - set relative to MLW
TA	91.7	58.5	Deg F	Ambient River temperature	
Dena	1.02312800	1.02716346	g/cm^3	Ambient River density	
GRAVAC	32.2	32.2	Ft/Sec^2	Gravitational constant	Gravitational constant
BLDR	448.73	448.73	cfs	Discharge flow	
RIVR	0	0		River flow (0 for slack tide)	Assume slack tide

Run 1 = existing PRV summertime

Run 2 = existing PRV wintertime

MULTIPORT SUBAQUEOUS DIFFUSER IN AN ARBITRARILY DENSITY STRATIFIED ENVIRONMENT

```
                    1------AA------1
                                   1
                 *--A--*        *     *
***************     **********     **********
                                            *
                                            *
*******************************************
```

AA= 52.00 FEET

A= 10.61 FEET

JET DISCHARGE ANGLE= .00 DEGREES W/HORIZ

JET DISCHARGE VELOCITY= 10.16 FT/SEC

JET DISCHARGE TEMPERATURE= 106.80 F
JET DISCHARGE DENSITY= 1.018594 GRAM/CC
JET DISCHARGE DEPTH= 16.58 FEET

X	Y	JET WIDTH	DILUTION	JET TEM	JET DENS	AMB DEN	AMB TEM	DELTA T	ALLOW T
65.94780	.00004	21.29691	1.00362	104.81340	1.01919	1.02313	91.70000	13.11336	17.00000
107.98820	3.77804	40.56328	1.93044	98.51757	1.02108	1.02313	91.70000	6.81757	17.00000
128.46430	9.29564	49.58009	2.40270	97.17753	1.02148	1.02313	91.70000	5.47753	17.00000

TRANSITION POINT ONE
TRANSITION POINT TWO
THIS IS FREE SURFACE

Table 3. MULDIF Output - Winter Case

MULTIPORT SUBAQUEOUS DIFFUSER IN AN ARBITRARILY DENSITY STRATIFIED ENVIRONMENT

```
                 1------AA------1
                                1
              *--A--*        *     *
***************     **********     **********
                                            *
                                            *
*******************************************
```

AA= 52.00 FEET

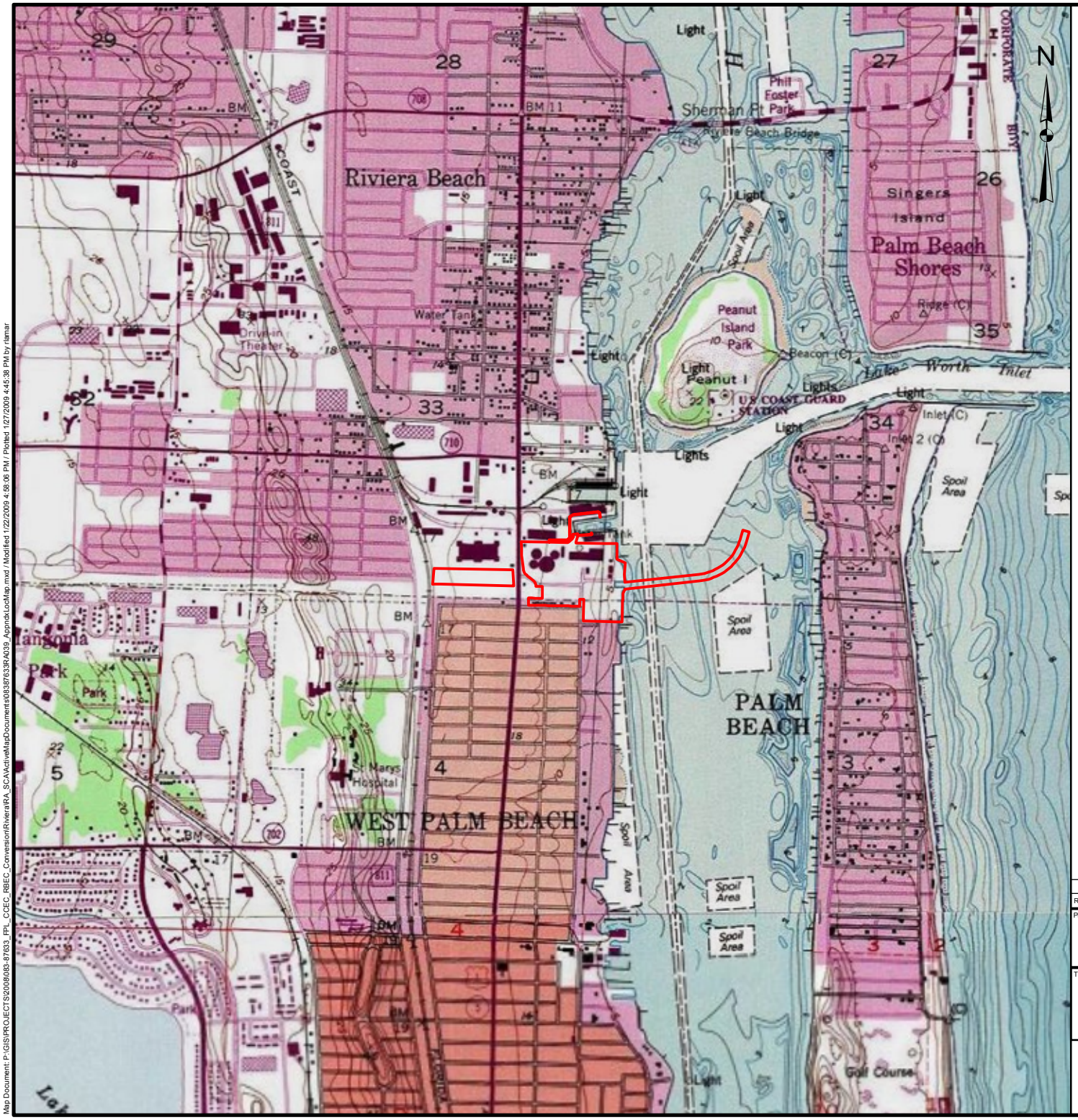
A= 10.61 FEET

JET DISCHARGE ANGLE= .00 DEGREES W/HORIZ

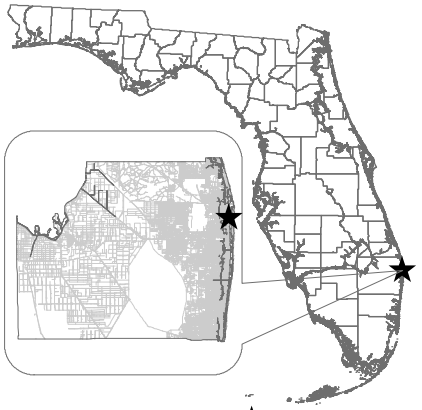
JET DISCHARGE VELOCITY= 10.16 FT/SEC

JET DISCHARGE TEMPERATURE= 72.60 F
JET DISCHARGE DENSITY= 1.024311 GRAM/CC
JET DISCHARGE DEPTH= 16.58 FEET

X	Y	JET WIDTH	DILUTION	JET TEM	JET DENS	AMB DEN	AMB TEM	DELTA T	ALLOW T
65.94780	.00003	21.29691	1.00362	70.74492	1.02469	1.02717	58.50000	12.24492	17.00000
108.13140	2.38867	40.76932	1.92887	64.87125	1.02588	1.02717	58.50000	6.37125	17.00000
129.04500	5.95421	50.25935	2.39618	63.62871	1.02613	1.02717	58.50000	5.12871	17.00000
TRANSITION POINT ONE									
149.54480	11.41725	62.39162	2.91983	61.91465	1.02648	1.02717	58.50000	3.41465	17.00000
TRANSITION POINT TWO									
THIS IS FREE SURFACE									



AREA MAP



★ RBEC Site Location

LEGEND

Plant

REFERENCES

1. Topographic Imagery, Quad name, Riviera Beach. Quad number, 2301. Date 1983. Quad name, Palm Beach. Quad number 2201. Date 1983. USGS.
2. Plant, FPL, 2009.

2,000 1,000 0 2,000 Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
RIVIERA POWER PLANT

TITLE

LOCATION OF THE FPL RIVIERA PLANT
IN PALM BEACH COUNTY, FLORIDA

FPL

PROJECT No.		083-87633	FILE No.	08387633RA039
DESIGN	KK	1/22/2009	SCALE: AS SHOWN	REV. 2
GIS	NRL	1/22/2009		
CHECK	RCM	1/22/2009	FIGURE 10.9-1	
REVIEW	KFK	1/27/2009		

Map Document: P:\GIS\PROJECTS\2008\083-87633_FPL_CCEC_RBEC_Conversion\RivieraRA_SCA\ActiveMapDocuments\08387633RA039_ApprndxLocMap.mxd / Modified 1/22/2009 4:56:06 PM / Plotted 1/27/2009 4:45:38 PM by ramar

LEGEND

RBEC_Site

NOTES

REFERENCE

1. Imagery, National Image Mosaics, WMS Service, http://iq.usgs.gov/cgi-bin/nuiwms.exe?

0 45 90 180 270 360 Feet

SCALE AS SHOWN

PROJECT

FPL
RIVIERA POWER PLANT

TITLE

FPL Riviera Power Plant
Aerial Photo

PROJECT No. 083-87633			File No.	REV. 0
DESIGN	KK	12/18/2008	FIGURE 10.9-2	
GIS	KK	12/18/2008		
CHECK				
REVIEW				

FPL

Project: Q:\GIS\FPL\Riviera_Report\PROJECTS\Fig_10_9_2.mxd Plot: Q:\GIS\FPL\Riviera_Report\PLOTS\Fig_10_9_2.pdf

LEGEND

- Point of Discharge - Shoreline
- Point of Discharge - Offshore

NOTES

REFERENCE

1. Imagery, National Image Mosaics, WMS Service, http://iq.usgs.gov/cgi-bin/nuiwms.exe?

0 250 500 1,000 Feet

SCALE AS SHOWN

PROJECT
FPL
RIVIERA POWER PLANT

TITLE
Discharge Locations

FPL

PROJECT No. 083-87633			File No.	REV. 0
DESIGN	KK	12/18/2008	FIGURE 10.9-3	
GIS	KK	12/18/2008		
CHECK				
REVIEW				

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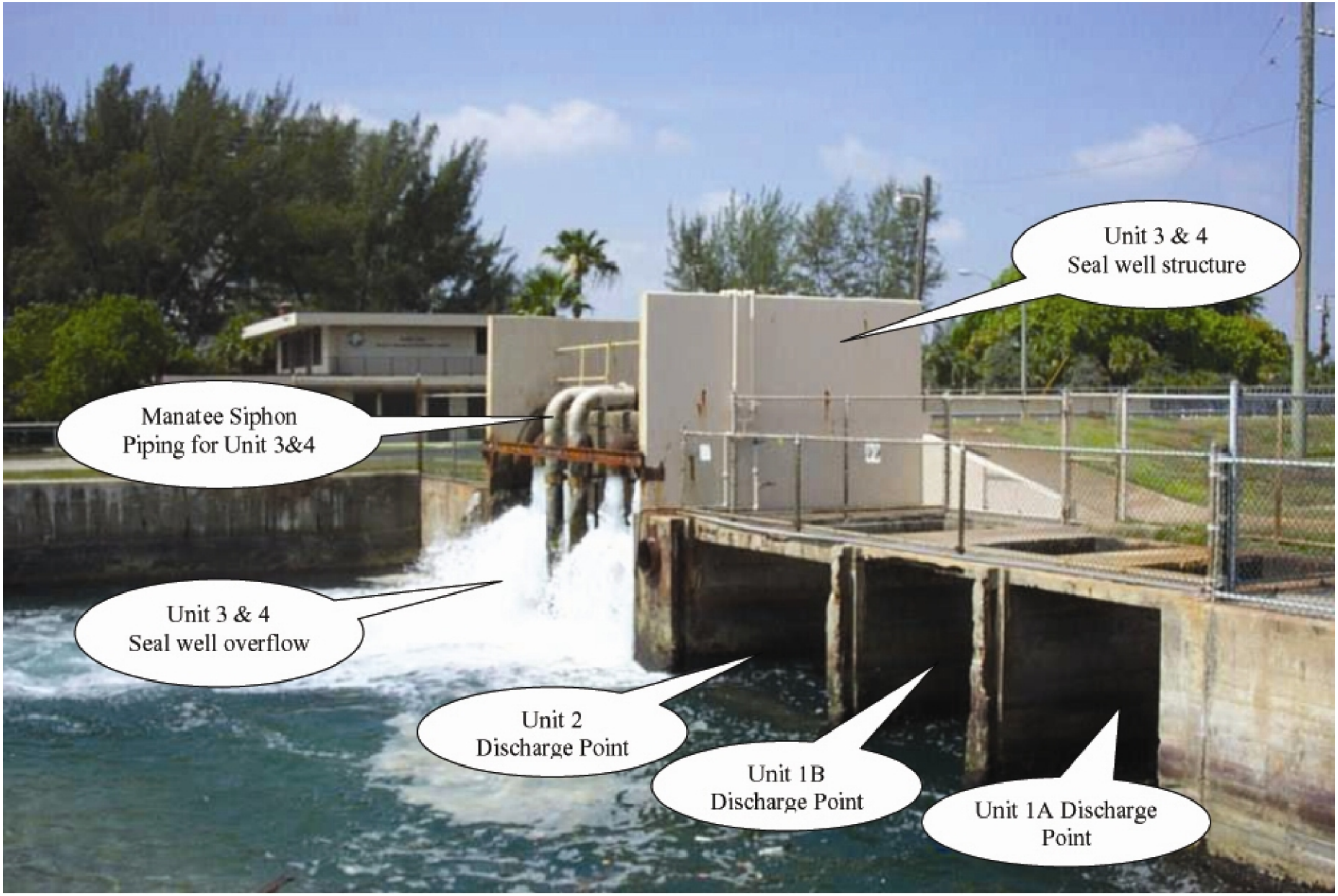
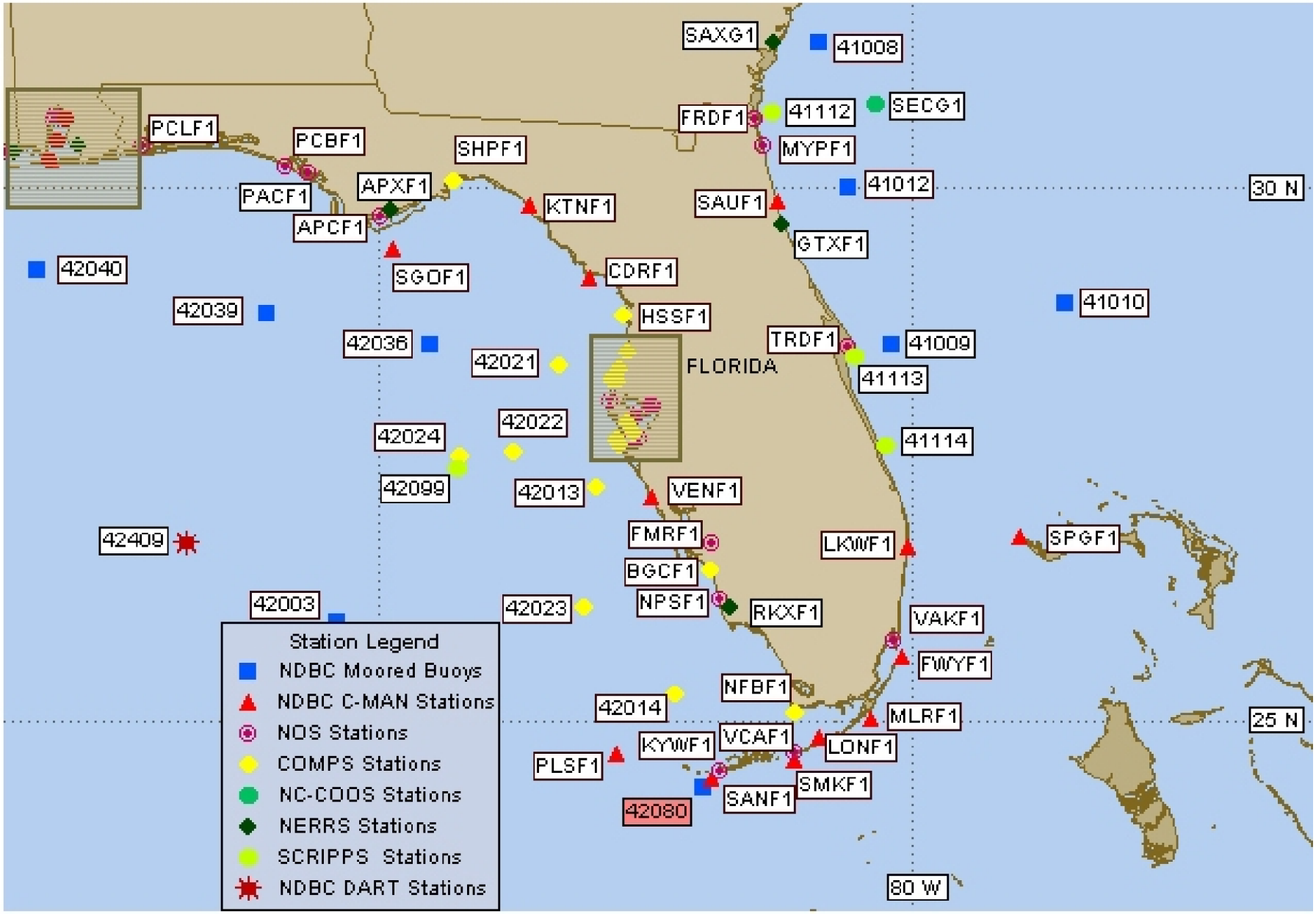


PROJECT
FPL
RIVIERA POWER PLANT

TITLE
Surface Shoreline Discharge to Manatee Embayment

FPL	PROJECT No. 083-87633		File No.	REV. 0
	DESIGN	KK	12/18/2008	FIGURE 10.9-4
	GIS	KK	12/18/2008	
	CHECK			
	REVIEW			



PROJECT

FPL
RIVIERA POWER PLANT

TITLE

Location of NOAA NDBC Station LKFW1

PROJECT No. 083-87633			File No.	REV. 0
DESIGN	KK	12/18/2008		
GIS	KK	12/18/2008		
CHECK				
REVIEW				

FIGURE 10.9-5

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LEGEND

- Heater System Discharge
- Heater System Intake

NOTES

REFERENCE

1. Imagery, National Image Mosaics, WMS Service, http://iq.usgs.gov/cgi-bin/nuiwms.exe?

0 250 500 1,000 Feet

SCALE AS SHOWN

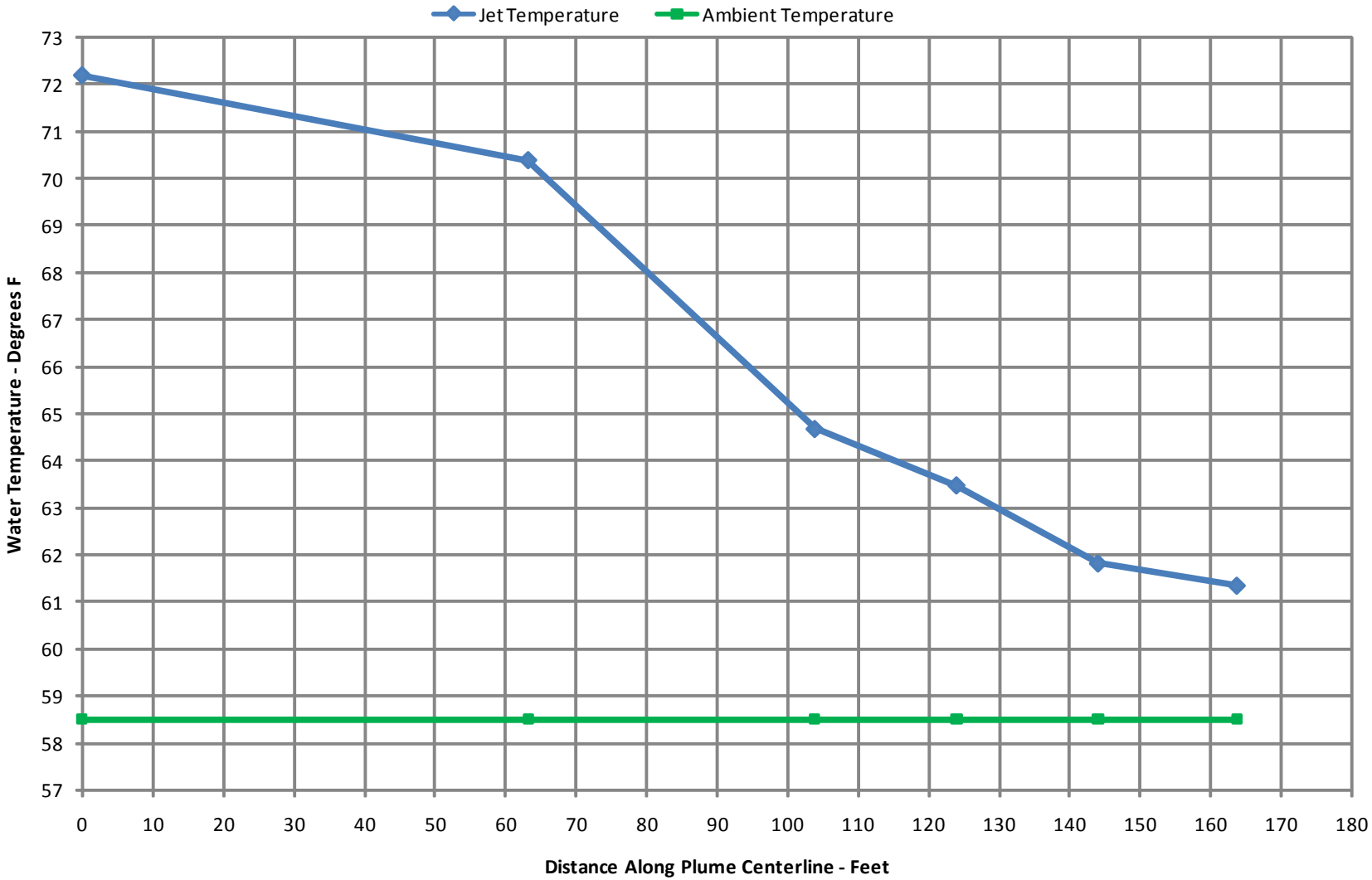
PROJECT
FPL
RIVIERA POWER PLANT

TITLE
Manatee Thermal Refuge
30 Million Btu/hr Heater System

FPL

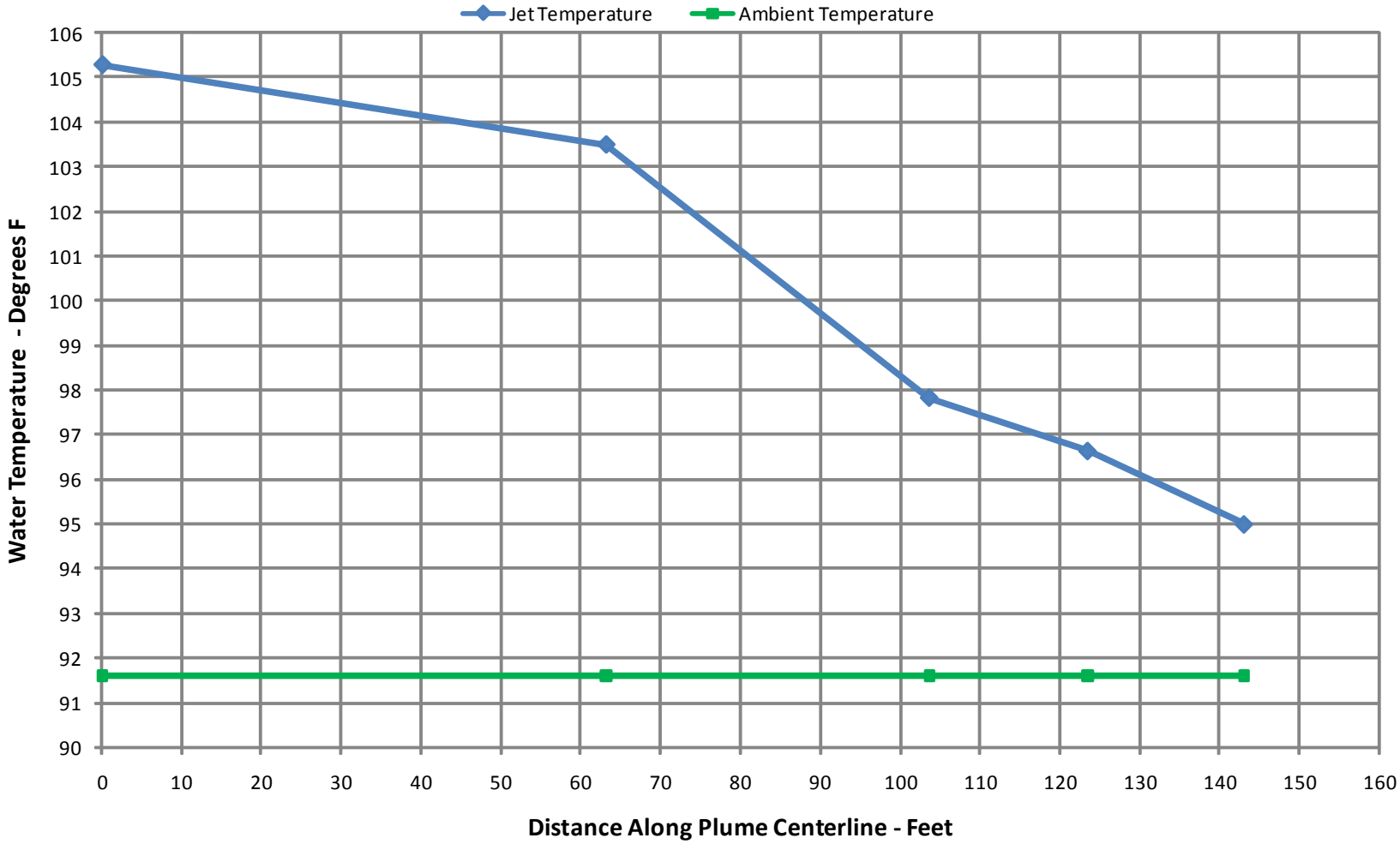
PROJECT No. 083-87633			File No.	REV. 0
DESIGN	KK	12/18/2008	FIGURE 10.9-6	
GIS	KK	12/18/2008		
CHECK				
REVIEW				

Figure 10.9-7 Offshore Discharge - Full Load Thermal Plume - Winter (Thermal Plume is Same for Existing Riviera Plant and RBEC)

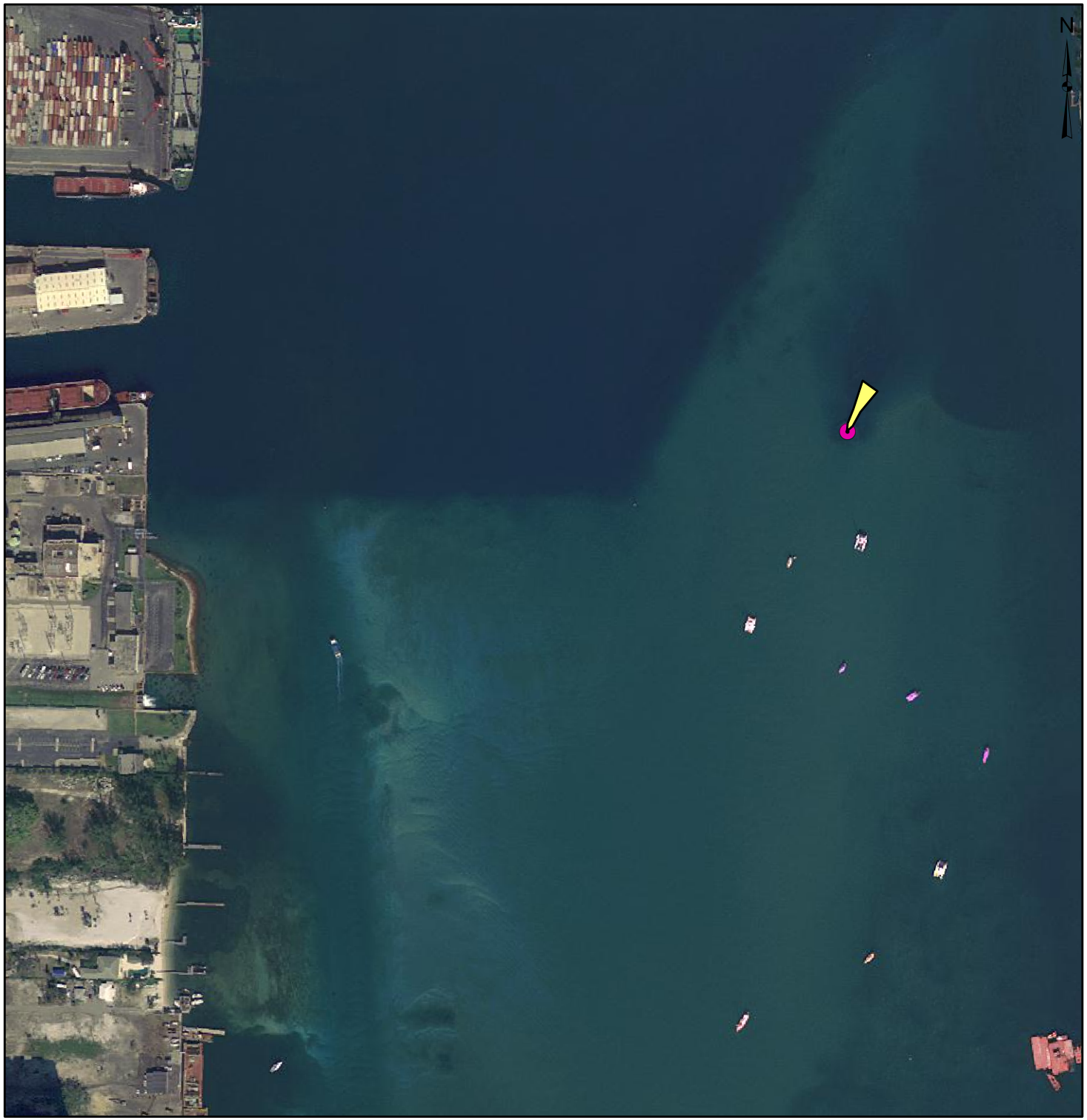


PROJECT	FPL RIVIERA POWER PLANT			
TITLE	**Offshore Discharge Full Load Thermal Plume–Winter**			
FPL	PROJECT No. 083-87633		File No.	REV. 0
	DESIGN	KK	12/18/2008	FIGURE 10.9-7
	GIS	KK	12/18/2008	
	CHECK			
	REVIEW			

Figure 10.9-8 Offshore Discharge - Full Load Thermal Plume - Summer (Thermal Plume is Same for Existing Riviera Plant and RBEC)



PROJECT	FPL RIVIERA POWER PLANT			
TITLE	**Offshore Discharge** **Full Load Thermal Plume–Summer**			
FPL	PROJECT No. 083-87633		File No.	REV. 0
	DESIGN	KK	12/18/2008	FIGURE 10.9-8
	GIS	KK	12/18/2008	
	CHECK			
	REVIEW			



LEGEND

Projected Thermal Plume Area

Point of Discharge – Offshore

NOTES

REFERENCE

1. Imagery, National Image Mosaics, WMS Service, http://iq.usgs.gov/cgi-bin/nuiwms.exe?

0 135 270 540 Feet

SCALE AS SHOWN

PROJECT

FPL
RIVIERA POWER PLANT

TITLE

Thermal Plume Area Projected to Aerial Photo

PROJECT No. 083-87633			File No.	REV. 0
DESIGN	KK	12/18/2008	FIGURE 10.9-9	
GIS	KK	12/18/2008		
CHECK				
REVIEW				

FPL

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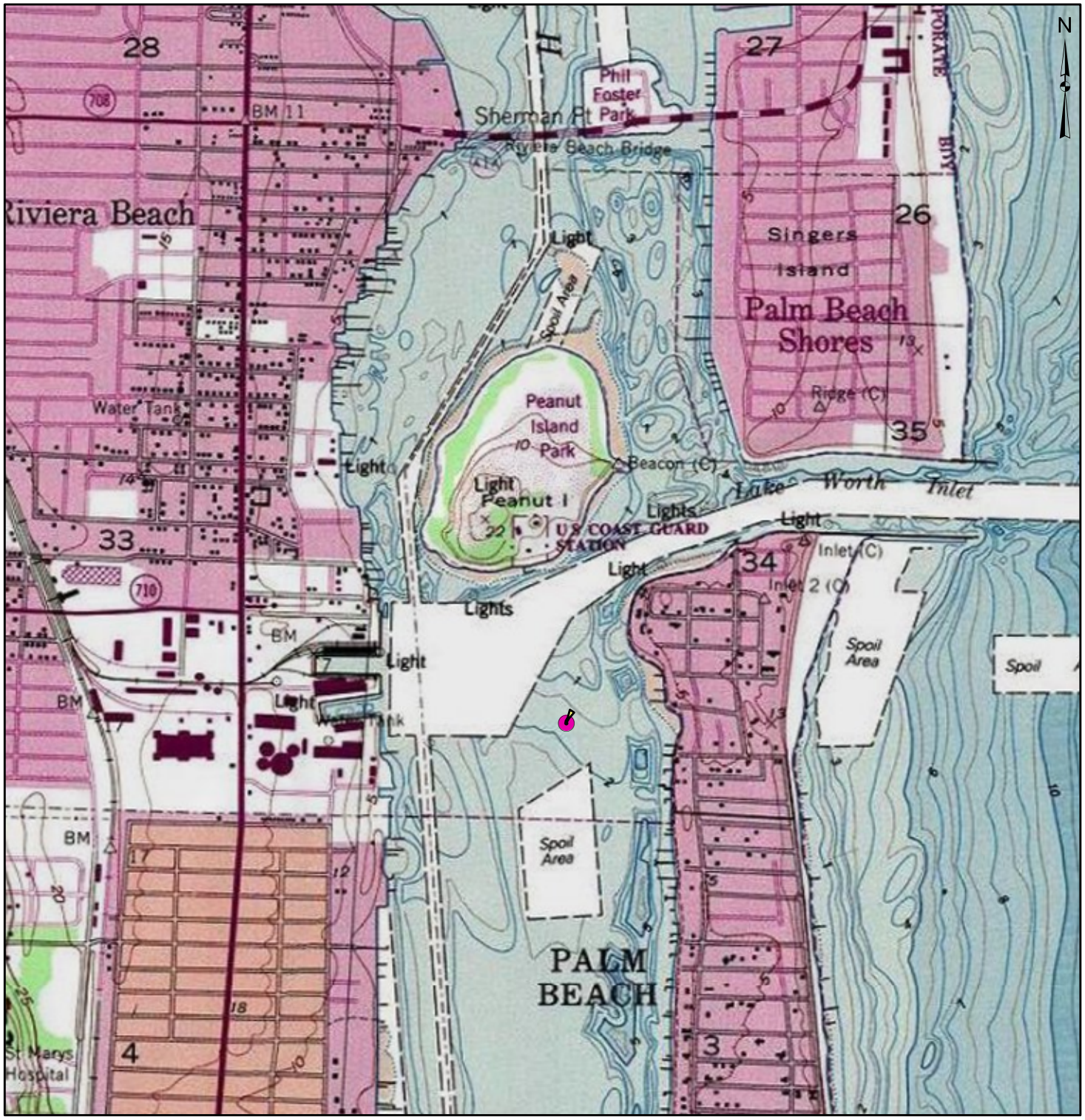

LEGEND

- Point of Discharge – Offshore
- Projected Thermal Plume Area

NOTES

REFERENCE

1. USGS Topographic Map, 7.5 min, Quadrangle Map Series
2. Contour Interval 5 Feet NGVD 1929. Bathymetric Contour Interval 1 meter with suplementary 0.5 meter contours Datum is mean low sea level.

0 500 1,000 2,000 Feet

SCALE AS SHOWN

PROJECT
FPL
RIVIERA POWER PLANT

TITLE
Thermal Plume Area Projected to USGS Quadrangle Map

PROJECT No. 083-87633			File No. REV. 0
DESIGN	KK	12/18/2008	FIGURE 10.9-10
GIS	KK	12/18/2008	
CHECK			
REVIEW			

FPL

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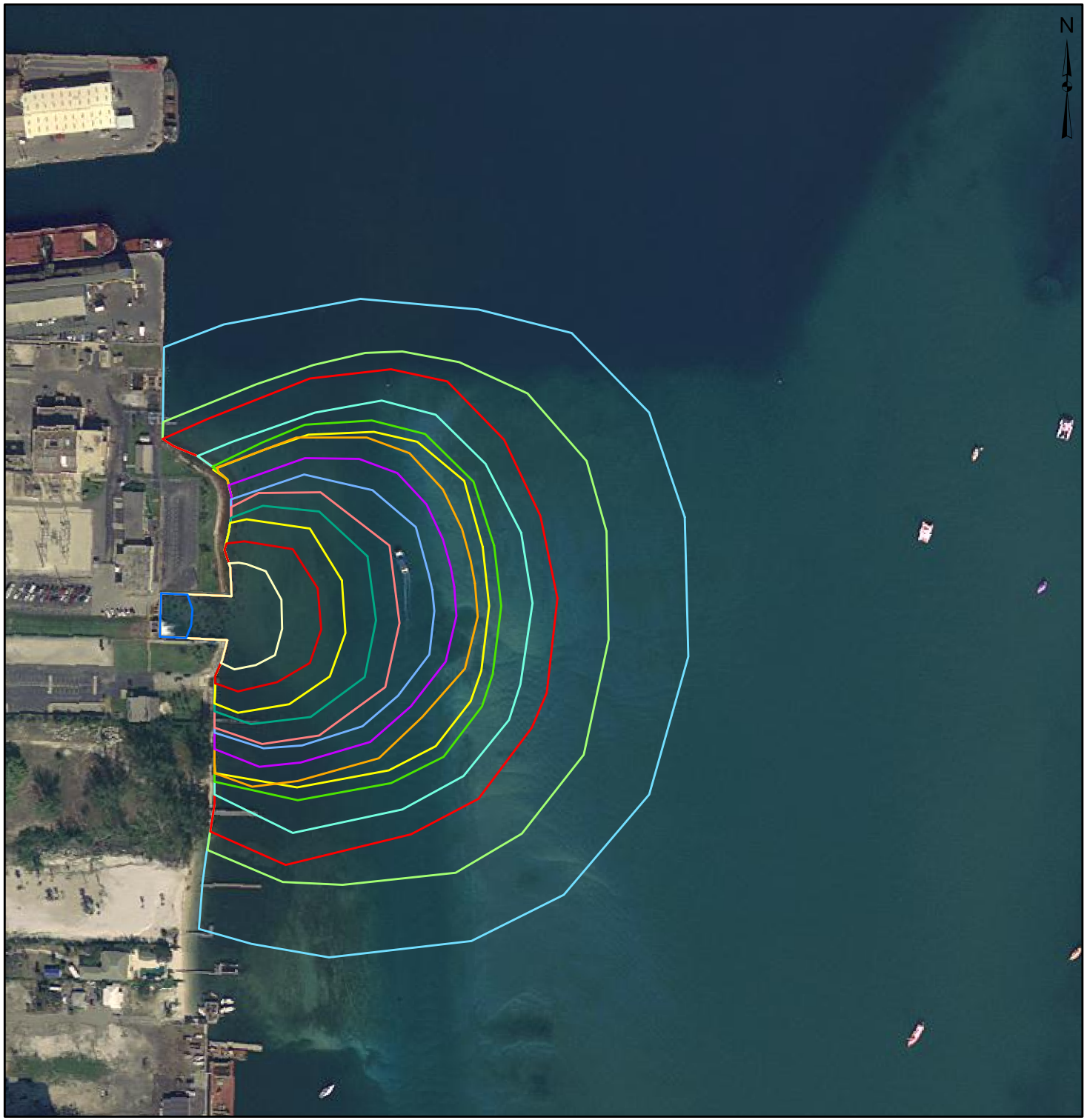

LEGEND

Enclosed Temperature (degree F)

- 59
- 60
- 61
- 62
- 63
- 63.5
- 64
- 65
- 66
- 67
- 68
- 69
- 70
- 71
- 72

NOTES

REFERENCE

1. Imagery, National Image Mosaics, WMS Service, http://iq.usgs.gov/cgi-bin/nuiwms.exe?

0 150 300 600 Feet

SCALE AS SHOWN

PROJECT

FPL
RIVIERA POWER PLANT

TITLE

Shoreline Discharge
Winter Isotherms – Full Load

FPL

PROJECT No. 083-87633			File No.	REV. 0
DESIGN	KK	12/18/2008		
GIS	KK	12/18/2008		
CHECK				
REVIEW				

FIGURE 10.9-11

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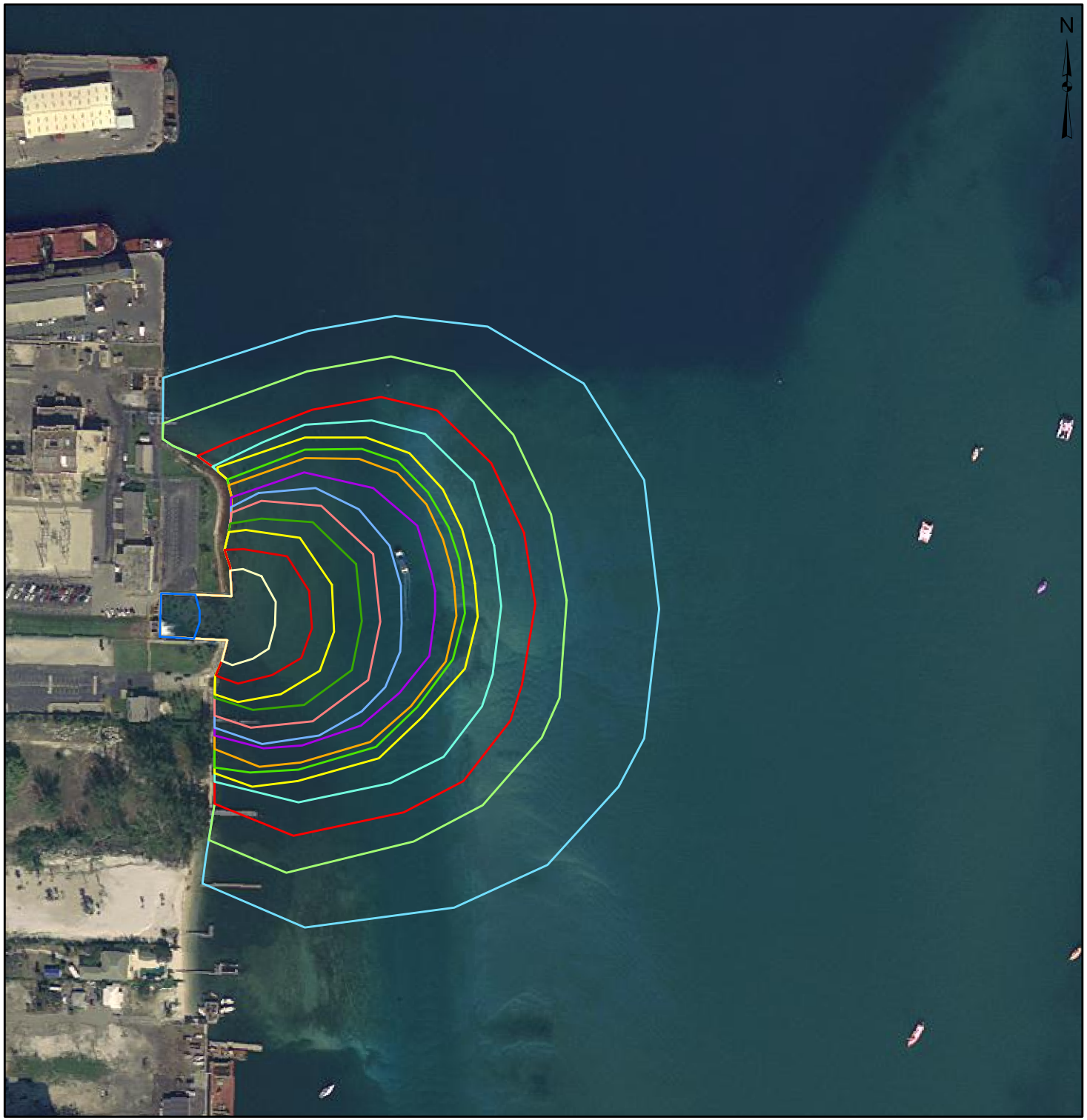


LEGEND

Enclosed Temperature (degree F)

- 92
- 93
- 94
- 95
- 96
- 96.6
- 97
- 98
- 99
- 100
- 101
- 102
- 103
- 104
- 105

NOTES

REFERENCE

1. Imagery, National Image Mosaics, WMS Service, http://iq.usgs.gov/cgi-bin/nuiwms.exe?

0 150 300 600 Feet

SCALE AS SHOWN

PROJECT

FPL
RIVIERA POWER PLANT

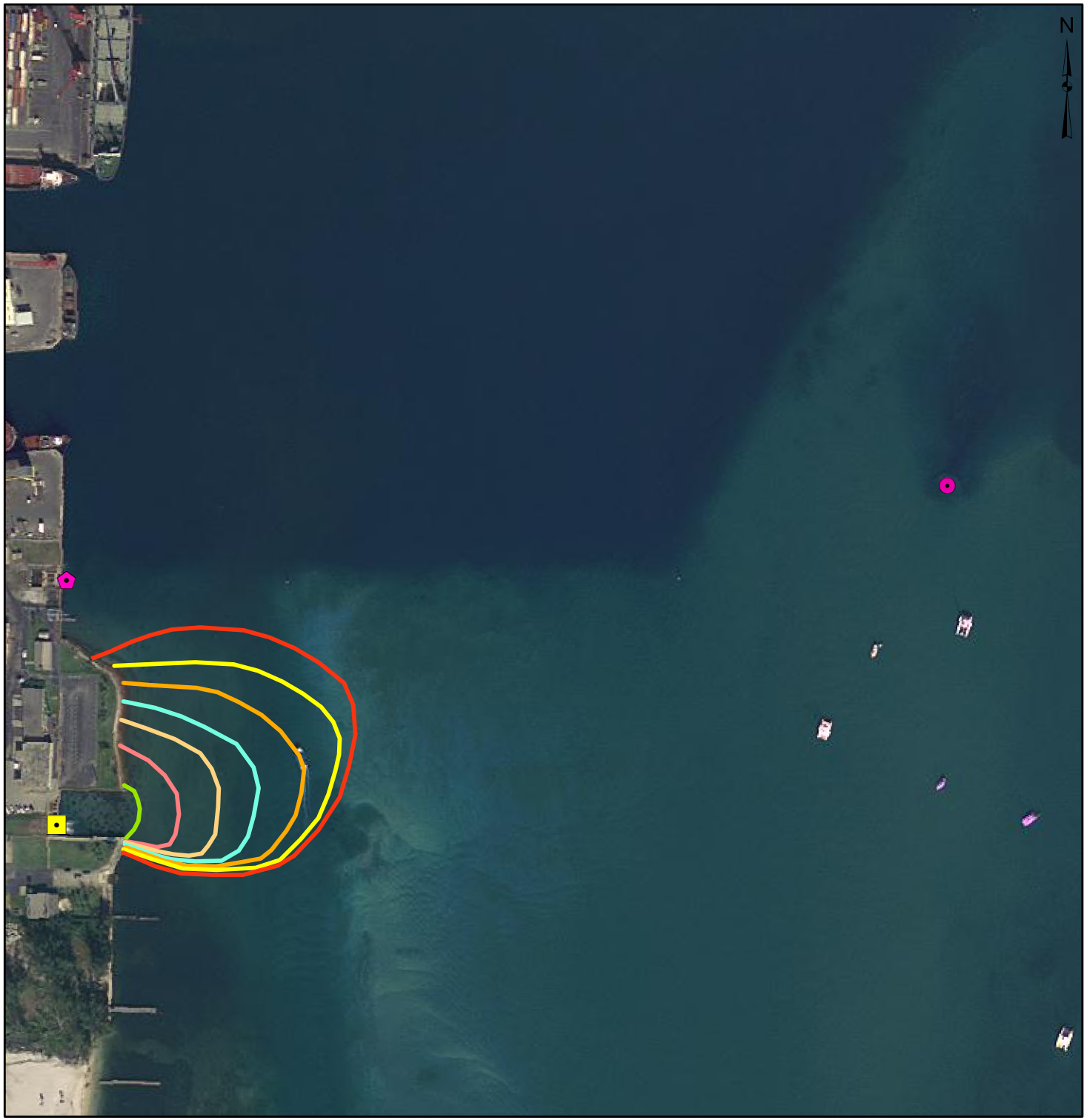
TITLE

Shoreline Discharge
Summer Isotherms – Full Load

PROJECT No. 083-87633			File No.	REV. 0
DESIGN	KK	12/18/2008		
GIS	KK	12/18/2008		
CHECK				
REVIEW				

FIGURE 10.9-12

Project: Q:\GIS\FPL\Riviera_Report\PROJECTS\Updated_01142009\Fig_10_9_12.mxd Plot: Q:\GIS\FPL\Riviera_Report\PLOTS\Updated_01142009\Fig_10_9_12.pdf



LEGEND

Enclosed Temperature (degree F)

- 58
- 60
- 62
- 64
- 66
- 68
- 70
- Discharge
- Intake
- Point of Discharge – Offshore

NOTES

REFERENCE

1. Imagery, National Image Mosaics, WMS Service, http://iq.usgs.gov/cgi-bin/nuiwms.exe?

0 150 300 600 Feet

SCALE AS SHOWN

PROJECT

FPL
RIVIERA POWER PLANT

TITLE

Predicted Surface Isotherms for the Manatee Thermal Refuge

PROJECT No. 083-87633			File No.	REV. 0
DESIGN	KK	12/18/2008	FIGURE 10.9-13	
GIS	KK	12/18/2008		
CHECK				
REVIEW				

FPL

Project: Q:\GIS\FPL\Riviera_Report\PROJECTS\Updated_01142009\Fig_10_9_13.mxd Plot: Q:\GIS\FPL\Riviera_Report\PLOTS\Updated_01142009\Fig_10_9_13.pdf

WATER SUPPLY ALTERNATIVES ANALYSIS AND WATER CONSERVATION PLAN FPL RIVIERA BEACH ENERGY CENTER

February 2009

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1.0 INTRODUCTION

Florida Power & Light Company (FPL) is proposing to convert the existing Riviera Plant, which is located in the City of Riviera Beach with a small portion in the City of West Palm Beach, Palm Beach County, Florida, into a modern, highly efficient, lower-emission, clean energy center using the latest combined cycle technology. The Plant Site is located on the western shore of Lake Worth Lagoon, southwest of the Lake Worth Inlet and Peanut Island, and immediately south of the Port of Palm Beach. The converted Plant will be significantly more efficient than the existing Plant, using less fuel to produce the same amount of electricity. The converted Plant will be renamed the Riviera Beach Energy Center (RBEC).

The existing Riviera Plant consists of two nominal 300-megawatt (MW) units with conventional dual-fuel fired steam boilers and steam turbine generators. Each of these conventional steam boilers is permitted to burn No.6 fuel oil, No. 2 fuel oil, and natural gas. Unit 3 entered service in 1962 and Unit 4 entered service in 1963. Units 1 and 2 were retired and removed from the Site.

RBEC will include a 3-on-1 combined cycle unit consisting of three new advanced combustion turbines (CTs) with heat recovery steam generators (HRSGs) and one steam turbine/electric generator. The converted Plant will be capable of producing a nominal 1,250 megawatts (MW) of electricity. The proposed water source for the RBEC cooling system is the Lake Worth Lagoon, as it is today for the existing Plant. The existing units will be dismantled with a few exceptions including the once-through cooling water intake and discharge structures. RBEC will be connected to the existing intake and discharge structures.

The Site and vicinity are described in detail in Chapter 3.0 of the SCA; the converted Plant and the proposed generating equipment are described in Chapter 4.0; and the construction and operational impacts are described in Chapters 5.0 and 6.0, respectively.

This Appendix discusses the water supply alternatives evaluated for the RBEC and the water conservation plan, as required by Sections 3.2 and 2.4.1 of the Basis of Review for Water Use Permit Applications within the South Florida Water Management District (SFWMD).

The conclusion reached by this analysis is that the only acceptable and feasible source for cooling water for RBEC is the Lake Worth Lagoon; and the only acceptable and feasible source for process and potable water for RBEC is the City of Riviera Beach. Groundwater from three existing onsite surficial aquifer wells has been used by the existing Plant for pump seal cooling water and for

irrigation supply (Water Use Permit Nos. 50-04187-W and 50-04188-W issued by SFWMD). It is proposed that RBEC will continue to use this water source for these two purposes. No additional allocation from the surficial aquifer is required.

2.0 PROJECT WATER DEMAND

In general, RBEC has four water demand requirements:

1. Cooling water to remove heat from the steam-cycle condenser and for auxiliary cooling, including cooling pump seal water and intake screen wash;
2. Process water, which is used primarily to make demineralized water for steam system makeup, evaporative cooler makeup, and for air emissions control and, secondarily, for washing operations and fire protection;
3. Potable water for use by employees; and
4. Landscape irrigation.

FPL proposes that the once-through cooling water, the auxiliary cooling water and intake screen wash water for RBEC will be taken from and returned to the Lake Worth Lagoon, as it is today. The converted Plant will have a steam generating capacity that is similar to the existing Plant and will use the existing circulating water intake and discharge structures. Therefore, the design intake and discharge flow rates will be about the same as for the existing Plant and the full-load temperature rise will remain the same.

FPL proposes that potable and process water will continue to be supplied by the City of Riviera Beach and that irrigation supply and water for cooling pump seals will continue to be supplied from existing onsite surficial aquifer wells. A water balance diagram for RBEC is presented in Section 4.5 of this SCA. The table below summarizes the water demand requirements for RBEC.

3-on-1 Combined Cycle Unit	Water Source	Annual Average [million gallons per day (MGD)]	Monthly Maximum (MG)	Maximum Daily (MGD)
Once-through Cooling Water	Lake Worth Lagoon	599.33	18,579	599.33
Pump Seal Cooling Water	Surficial Aquifer	0.0864	3.08	0.10
Process Water	Municipal Supply	0.284	26.7	0.861
Potable Water	Municipal Supply	0.001	0.13	0.004
Irrigation	Surficial Aquifer	.02	0.807	0.10

3.0 WATER CONSERVATION PLAN

Combined cycle generating technology will be used at RBEC. With this technology, steam electric generation is only about 40 percent of the total generating capacity. The remaining 60 percent is produced by combustion turbines, which do not use water for condenser cooling. Consequently, this technology significantly reduces the requirement for cooling water per megawatt of electricity generated. Because the combined cycle technology reduces the steam electric portion of the generating facility per megawatt of electricity generated, it also minimizes the amount of water required to make steam; and thus, the requirements for process water. It also provides the highest generation efficiency, with respect to conversion of fuel energy to electricity. This high efficiency minimizes fuel and water use and air emissions.

The most thermodynamically efficient cooling process for the steam cycle is once-through cooling. As discussed above, this type of cooling system will continue to be used for the converted Plant. The nominal generating capacity will increase by more than 100 percent from 600 to 1,250 MW, with no increase in the design withdrawal rate or the design intake capacity.

RBEC will utilize demineralized water for makeup to replace blowdown from the Heat Recovery Steam Generators (HRSGs) and evaporative coolers, as necessary to maintain low dissolved solids in these systems. The required makeup water will be minimized by using good engineering design and best operating practices that reduce the required blowdown and by the recovery and reprocessing of water for reuse.

All systems that involve the use of water will be designed and operated to minimize water loss. This will include an in-service leak test, inspection, or hydro-test to ensure the system is leak tight. After commissioning, procedures will be in place to ensure that the systems are inspected on a regular basis and that a repair program is in place to repair any leaks quickly.

Other features in the Plant design will include:

- Automatic shutoff valves;
- Flow restrictors;
- Low-volume sanitary facilities; and
- Drought resistant landscape design.

FPL will implement an awareness program for both construction contractors and operational employees on water conservation for the Project. The awareness program will educate employees on water conservation methods, techniques, and requirements of in-place construction and operation procedures. Procedures for conservation will be developed before commencement of construction. Procedures for water conservation during Plant operation will be developed prior to commissioning the converted Plant. Procedures will be reviewed on a periodic basis and updated as necessary.

4.0 COOLING TOWER FEASIBILITY

The use of cooling towers is not considered acceptable or feasible for RBEC, for several reasons.

First, the Site is relatively small. Cooling towers cannot be placed on the RBEC Site in a reasonable, safe, and efficient manner. Some of the specific constraints are discussed further below.

Second, the Riviera Plant is in an urban area, and cooling towers can increase the noise levels from the Plant. On this Site, cooling towers would have to be placed near the Site boundaries.

Third, surface water available at the Site for cooling purposes is essentially seawater, and groundwater from the Floridan aquifer is brackish [TDS > 1,500 milligrams per liter (mg/L)]. Consequently, the water circulating within a cooling tower would contain significant amounts of salt; typically about 1.5 times that of seawater. On this small Site, and particularly within this urban setting, salt drift could affect neighboring properties and reliability of Plant operations given the necessary proximity of the cooling towers, the switchyard, and other electrical equipment.

Fourth, air emitted by the cooling towers is heated and saturated with water vapor. Under certain meteorological conditions, mixing of that saturated air with ambient air can result in condensation of water vapor causing the formation of ground level fog. Specifically, this Site is adjacent to a major elevated roadway (U.S. Highway 1) and a major port facility; such fog could obscure visibility and impact safety.

Fifth, as discussed above, cooling towers concentrate dissolved chemical constituents by evaporation. In order to limit the dissolved solids concentrations, a portion of the cooling water must be discharged. The increase in chemical concentrations, especially for salt-water cooling towers, can result in a discharge that approaches state water quality standards.

Sixth, cooling towers require more power to run the fans that move the air and to run the pumps that lift the water. The energy cost is typically about 1 percent of the power generated by the steam cycle,

which means that at RBEC an additional 3 MW must be generated and consumed by the converted Plant. Consequently, more fuel is consumed and air emissions increase per unit of electricity produced.

Last, but not least, a once-through cooling water system has been used at the existing Plant since it was originally built. For more than 45 years of operation of Units 3 and 4, no significant adverse environmental impact to the Lake Worth Lagoon has been reported from impingement mortality or entrainment. The total design intake capacity of RBEC will be the same as the existing Plant. Consequently, impingement mortality and entrainment should not increase after conversion. Furthermore, as discussed in the Thermal Modeling Report (Appendix 10.9), the size of the thermal plume for RBEC will be minimal in both summer and winter, even assuming worst-case conditions of tidal flushing.

On the other hand, the once-through cooling water system does have a positive environmental benefit. A small portion of the warm water that is discharged from the operating plant provides a winter refuge for manatees. The endangered West Indian manatee is known to occur near the Riviera Plant. Consequently, the existing Plant's Industrial Wastewater Facility Permit requires a Manatee Protection Plan, which was renewed by the Florida Department of Environmental Protection on August 8, 2000. This Plan requires FPL to endeavor to supply a warm-water refuge for manatees.

For the above listed reasons, cooling towers are not considered acceptable or feasible for RBEC.

5.0 POTENTIAL WATER SOURCES

A description of water sources available in the area is presented in Section 3.3 of the SCA. Potential water sources for RBEC include the following:

- Groundwater from the surficial aquifer;
- Groundwater from the Floridan Aquifer System (FAS);
- Surface water from the Lake Worth Lagoon;
- Reclaimed water from local municipalities;
- Stormwater from the Site; and
- Potable water from the City of Riviera Beach.

5.1 Groundwater

There are two potential sources of groundwater at the Site: the surficial aquifer and the FAS. The FAS includes the Upper Floridan and the Lower Floridan Aquifers. The surficial aquifer is primarily composed of sands, shell beds, and sandy limestones. The surficial aquifer is unconfined and contiguous with land surface. The SAS varies in thickness in Palm Beach County from 200 to 300 feet thick. The surficial aquifer is a source of drinking water for the County. The top of the Upper Floridan Aquifer is approximately -900 ft NGVD. Between these aquifers is about 600 to 700 feet of low-permeability clay, marl, and micritic limestone that makeup the Hawthorn Group. Due to the close proximity of the Site to the coast, the surficial aquifer is marginally fresh [chlorides <250 milligrams per liter (mg/L)] and the Upper Floridan aquifer is saline [1,500 mg/L <Total Dissolved Solids (TDS) < 5,000 mg/L]. Water in the Lower Floridan Aquifer has dissolved solids concentrations close to seawater.

The surficial aquifer at the Site supplies limited quantities of water, but significant increased pumping above the permitted allocations from these wells would likely cause off-site impacts and salinity intrusion. Similarly, wells in the Upper Floridan Aquifer at this Site could produce limited quantities of saline water, but over pumping likely would cause salinity intrusion. Safe yields from either source, or both sources together, could not supply the required water for a once-through cooling system (599 MGD) and, as discussed above, saltwater cooling towers are not considered acceptable or feasible at this Site. Furthermore, due to the high salinity, these sources are not acceptable or feasible for process or potable water supply.

5.2 Surface Water

The only surface water source near the Site that could be used as a water source is the Lake Worth Lagoon. The Lake Worth Lagoon watershed is located in Palm Beach County and encompasses over 450 square miles that drain to the Lake Worth and South Lake Worth (Boynton) Inlets. The Lake Worth Lagoon is 20 miles long, averages half a mile wide, and is 6 to 10 feet deep. Mean tide ranges are about 2.7 feet and salinity at the Site near the inlet is almost that of seawater. The dredged Intracoastal Waterway channel runs parallel to the natural channel and is located a few hundred feet east of the Riviera Plant. For over 45 years of operation of Units 3 and 4, this water source has been used for once-through cooling water by the Riviera Plant and can continue to be used for the same purpose in the converted Plant. Salinities are too high to use this water for process, potable, or irrigation supply.

5.3 Reclaimed Water

Reclaimed water is not currently available for RBEC from Palm Beach County, the City of Riviera Beach, the City of West Palm Beach, the City of Lake Worth or the Town of Palm Beach. These five entities own and contribute municipal wastewater to the East Central Regional Water Reclamation Facility (ECRWRF). Palm Beach County and FPL have signed a Reclaimed Water Agreement that will provide up to 27 MGD of reclaimed water from the ECRWRF to the West County Energy Center for cooling purposes. This commitment, together with existing commitments, will use all of the reliable reclaimed water supply from these sources through at least 2012. Available supplies from these sources beyond 2012 are uncertain and will depend on future population growth.

According to the most recent Reuse Inventory Report (FDEP, 2006), there are two additional sources of reclaimed water in northeast Palm Beach County within a reasonable distance of the Site. Based on data provided in the inventory report, the Loxahatchee Environmental Control District facility currently has commitments for 90 percent of its available flow; and the Seacoast Utilities PGA facility currently has commitments for 85 percent of its available flow. Both facilities are discharging less than 1 MGD. Consequently, neither facility is currently an adequate or reliable source of water for RBEC.

If a reliable source of reclaimed water can be delivered to the Site that meets RBEC's quantity and quality requirements, FPL will evaluate the economic and technical feasibility of using the reclaimed water source. If use of the reclaimed water source should become feasible in the future, FPL will provide a plan to the appropriate regulatory agencies for implementation at that time.

5.4 Stormwater Reuse

The size of the Site does not allow for efficient reuse of onsite stormwater. First, stormwater runoff from the Site could supply at most only 10 to 12 percent of the process and irrigation water demand. Furthermore, stormwater is usually available in significant quantities only for a relatively short time. By regulation, the stormwater management system must recover the required storage volume within a specified and relatively short time. Consequently, if stormwater is to be used for process supply, a significant onsite storage capacity would be required, at least 0.5 million gallons. This supply would also require an additional treatment system. Any limited benefit does not justify the additional cost.

5.5 Potable Water from City of Riviera Beach

The existing Plant has used potable water from the City of Riviera Beach for process and potable supply for many years. While the converted Plant, on average, may use somewhat more water from this source than the existing Plant, the City of Riviera Beach has confirmed they have the water available (see attached letter from the City of Riviera Beach). Therefore, this option is feasible for both potable and process supply.

6.0 CONCLUSION

Cooling towers are not acceptable or feasible for RBEC and the only feasible source for once-through cooling water is the Lake Worth Lagoon. The only feasible source, at this time, for process and potable water is the potable supply from the City of Riviera Beach. Groundwater from existing onsite surficial aquifer wells is proposed to continue to be used for irrigation and for pump seal water. The groundwater allocation required will be the same as is currently permitted by SFWMD. Stormwater reuse is not economically feasible. Reclaimed water is not available for RBEC at this time. If a reliable source of reclaimed water can be delivered to the Site that meets RBEC's quantity and quality requirements, FPL will evaluate the economic and technical feasibility of using the reclaimed source.

CITY OF RIVIERA BEACH

600 WEST BLUE HERON BLVD. • RIVIERA BEACH, FLORIDA 33404
(561) 845-4185 FAX (561) 840-7292

OFFICE OF
EXECUTIVE DIRECTOR OF UTILITIES

January 27, 2009

Mr. Richard Merrill, P.E
Engineering Project Manager
Florida Power & Light Company
P.O. Box 14000 CPM/JB
Juno Beach, FL. 33408-0420

RE: Florida Power &Light Company
Energy Center
300 Broadway
Riviera Beach, FL. 33404

Dear Mr. Merrill:

This letter is to confirm that there is sufficient potable water as well as sewer collection to service this project located at 300 Broadway, (PCN: 56 43 42 33 00 000 5180).

If additional information is needed, please feel free to contact Mr. Richard Hager, of my staff, at 561 845-4185.

Sincerely,

Dr. Edward E. Sierra, CEP, REP
Executive Director of Utilities

ES/rh

APPENDIX 10.11

CURRENT LEASES AND EASEMENTS

OIL PIPELINE EASEMENT

EASEMENT AND FACILITIES AGREEMENT

THIS AGREEMENT, made effective as of the 12th day of December, 1978, by and between THE PORT OF PALM BEACH DISTRICT, a quasi public corporation under the laws of the State of Florida, herein referred to as "Port" and FLORIDA POWER & LIGHT COMPANY, a Florida corporation, organized and existing under the laws of the State of Florida, hereinafter referred to as "FPL".

W I T N E S S E T H:

WHEREAS, on or about January 13, 1976, pursuant to an agreement between the Port and FPL dated September 5, 1972, the Port sold and conveyed to FPL certain lands in Section 31, Township 42 South, Range 43 East, Palm Beach County, Florida, for the agreed purpose of constructing storage tanks for oil or other petroleum products; and

WHEREAS, such conveyance was made by the Port, in part, to encourage the use of waterborne transportation at the Port and is, on the part of FPL, subject to certain guarantees, in the above mentioned agreement and conveyance, of additional revenue to the Port from wharfage, dockage and other applicable tariff charges relative to oil or petroleum products being thus imported through the Port and to be stored in the storage facilities to be erected on the aforesaid real property; and

WHEREAS, in order to accomplish the performance of the purposes and obligations of the above mentioned September 5, 1972 Agreement, it is necessary that certain easements be granted and facilities be constructed, operated and maintained; and

WHEREAS, on or about August 20, 1954 and May 14, 1964, in two separate agreements, the Port granted to FPL the right to install and maintain 12-inch pipelines with supports and appurtenances and other necessary facilities for the purpose of delivering fuel oil from marine oil tankers to storage tanks of FPL located on FPL property adjacent to and south of the Port property; and

WHEREAS, the Port and FPL desire to cancel and void the above specified August 20, 1954 and May 14, 1964 Agreements in connection with the 12 inch pipelines and modify the guarantee of the September 5, 1972 Agreement and incorporate them into this Agreement, provided, however, that the aforesaid Agreements shall remain in full force and effect until such time as construction has been completed and the new facilities are placed in service.

NOW, THEREFORE, for and in consideration of the premises set forth above, the performance of the mutual covenants and promises herein contained and the sum of TEN DOLLARS ($10.00) and other good and valuable considerations to each party in hand paid by the other, the receipt of which is hereby acknowledged, it is hereby agreed by and between the parties as follows:

(1) GRANT OF EASEMENT, PIPELINES.

The Port hereby grants and conveys unto FPL an easement for the installation, maintenance, repair, improvement and operation of underground oil transfer pipelines extending from both the north and south sides of the Port's slip known as "Slip No. 2" and extending westerly and into FPL's property known as "The Riviera Plant". Such easement shall be located as more particularly depicted on Exhibit "A" attached hereto and delineated in red. The rights of FPL in the above described easement are exclusive insofar as they relate to the use of the easement for the operation of underground oil transfer pipelines, and are non-exclusive insofar as the rights of the Port and/or its tenants or utility suppliers are concerned for the crossing or other use of the property described in the easement provided however, any such use either now existing or contemplated in the future shall not unreasonably interfere with the rights granted to FPL hereunder.

Such easement shall include the rights to install, operate, maintain, repair and improve within such easement, in addition to the pipelines, all necessary appurtenances thereto, including, without limitation, reducers, expansion joints, valve pits, pumps, thrust blocks and all other appurtenant equipment useful and necessary to the installation, maintenance and operation of such pipelines. All such

pipelines within the easement shall be buried at an approved depth below the surface surrounding the easement, including subsurface manifolds, valves or other such appurtenant equipment requiring access for operation or maintenance. The easement shall be three (3) feet in width on either side of the center line of the easement described in Exhibit "A". In addition to the installation, operation and maintenance of such pipelines within the easement area, FPL shall have the right, reasonably exercised, to use the adjacent lands of the Port for the initial installation and as may be necessary from time to time, for the maintenance, operation, improvement and repair of such facilities.

(2) GRANT OF EASEMENT, VALVE PITS.

The Port further grants and conveys to FPL an easement to install, operate and maintain valve pits and unloading arm pits at the locations indicated on Exhibit "A". Such areas may be used for the installation, operation, maintenance and improvement of valves, unloading arms and related equipment used and useful for the purpose of loading and unloading marine oil tankers into the aforesaid underground oil transfer pipelines. Any mechanical arms installed in the unloading arm pit on the south side of Slip No. 2, shall be of a collapsible, retractable or a removable nature so that when the same is not in use, it will be stored at a level below the surrounding loading area or dock level on the south side of Slip No. 2. The mechanical arms to be installed on the north side of Slip No. 2 may be a fixed unloading arm and boom.

In addition to the installation, operation and maintenance of such valves, unloading arms and related equipment within the easement area, FPL shall have the right, reasonably exercised, to use on a non exclusive basis the adjacent lands of the Port, not leased to other tenants, for the initial installation, and as may be necessary from time to time, for the maintenance, operation and improvement of such facilities, such use to be coordinated with the Port.

(3) CONSTRUCTION OF FACILITIES.

All such pipelines, unloading facilities and appurtenances shall be furnished, installed, constructed and maintained at FPL's sole cost and expense. FPL shall maintain such pipelines, unloading and

transfer facilities and appurtenances in a good and safe condition of repair, and protect the same from damage, destruction or deterioration.

(4) APPROVAL OF FACILITIES.

Prior to the installation of such pipelines, unloading and transfer facilities, and appurtenant equipment, FPL's plans and specifications therefor shall be submitted to the Port's designated engineer who shall have the authority to approve or disapprove the same from the standpoint of safety and compatibility with Port operations. Port's designated engineer shall have thirty (30) days from submission of such plans and specifications to approve or disapprove the same in writing. Absent such written action within such time period, the plans and specifications shall be deemed approved. In any case, approval shall not be unreasonably withheld.

(5) BERTH ASSIGNMENT.

The ship berth on the south side of Slip No. 2 is hereby designated by the Port as the principal berth for unloading and as the transfer site for marine vessels servicing and supplying FPL.

The ship berth on the north side of Slip No. 2 is hereby designated by the Port as an additional or secondary berthing for marine vessels servicing and supplying FPL. Such principal and secondary berthing facilities shall be made available by the Port upon seventy-two hours prior notice. Such berthing availability of the Port is not alternative, but supplemental, anticipating the use, on occasion, of both berthing facilities at the same time by marine vessels servicing and supplying FPL. Reasonable effort will be made by FPL to use the north berth of slip 2 as often as possible.

Dockage and wharfage fees assessed against FPL, its contractors or its marine carriers for the delivery of petroleum products through the Port facilities shall not be more than the applicable, current, effective, published tariff. Any change in tariff rates shall not become effective until thirty (30) days after written notice to FPL by the Port.

(6) RIGHT OF INGRESS AND EGRESS.

The Port further grants to FPL, its agents, employees, representatives, contractors and assigns the non exclusive right of ingress and egress to pass upon, over and across the property of the Port at all reasonable times as may be necessary and useful for the complete and full

enjoyment of the rights and privileges granted hereunder. FPL shall conduct its operations on the property of the Port so as to not interfere unreasonably with the business or operations of the Port or other users of the Port's property, subject however, at all times to the exercise of the rights herein granted by the Port.

(7) ASSIGNABILITY.

This Agreement shall not be assignable by FPL or the Port without the written consent of the other party, provided, however, such consent shall not be unreasonably withheld as to any proposed assignee with reasonable financial ability, experience and reputation. The nonassignability of this Agreement shall not apply to, nor prevent nor prohibit FPL from employing under its responsibility, an independent contractor or agent to operate all or part of the facilities described under this Agreement. This Agreement shall be assignable by FPL to any wholly owned subsidiary of FPL.

(8) PRODUCT TRANSMITTED.

It is agreed that, while fuel oil is the commodity presently anticipated to be delivered by marine tanker or barge and transmitted through the pipelines, the berthing facilities and pipeline facilities and related appurtenances may also be used for the delivery, transmission and handling of other fuels or commodities of any type or character now known or hereafter discovered and used for fuel in the generation of electricity, save for nuclear products, provided written consent from the Port has been obtained, which consent shall not be unreasonably withheld.

(9) REPAIRS AND CHANGES.

The rights hereinabove granted for the installation, construction and maintenance of the facilities described herein include the right, at FPL's expense, to make changes, alterations, removals, replacements and improvements in the facilities and appurtenances, subject to prior approval of the Port engineer. Such approval shall not be unreasonably withheld by the Port.

(10) NON-INTERFERENCE.

The Port shall not permit any other user of its facilities to conduct any operations which would unreasonably restrict the use,

operation and maintenance of the facilities of FPL herein described.

(11) QUIET ENJOYMENT.

The Port further covenants and agrees that FPL shall and will, upon fully observing and performing the covenants and agreements herein provided to be observed and performed by FPL, quietly and peacefully possess and enjoy the use, rights and privileges contained herein.

(12) PERSONAL PROPERTY OWNERSHIP.

All pipelines, transfer facilities, valve facilities, unloading arms and other equipment and appurtenances thereto shall be the personal property of FPL and title shall remain vested in FPL and FPL shall be liable for personal property taxes and all other taxes imposed thereon.

(13) TERMINATION.

FPL shall have the right to terminate this Agreement by giving the Port at least six (6) months prior written notice of a termination date. Upon such termination, FPL shall have the right to remove, at its expense, within six (6) months following such termination, all of its personal property, fixtures and equipment from the premises, except fixtures of masonry construction. Such removal shall result in the freehold estate of the Port affected thereby being restored to its natural condition as existed upon the date of execution of this Agreement. Such masonry fixtures shall become the property of the Port upon termination of the Agreement, except at the election of Port, any or all of the fixtures, masonry or otherwise, shall be removed within such time period after the termination date by FPL at its expense upon demand of the Port made at termination. All underground pipes may be abandoned in place.

(14) CONDITION OF BERTHS.

The Port agrees to provide and maintain in good state of repair the two (2) berths of Slip No. 2 for use in the receipt of large marine vessels including an adequate fendering system to accomodate such vessels. Port further agrees to notify and demand that the Army Corps of Engineers and U. S. Coast Guard provide and maintain adequate navigational aids, a ship channel and turning basin of adequate depth, and the Port agrees to provide and maintain an adequate ~~water~~ depth at dock side all depths to be at a minimum depth of thirty-three (33) feet at Mean Low Water (MLW).

(15) RELOCATION.

The Port reserves the right to hereafter cause the said pipelines and appurtenances to be relocated when such relocation shall be necessary to provide for the efficient operation of the Port or the needs of other users of the Port, or changing conditions; provided the expense of such relocation shall be paid by the Port and FPL shall be held harmless from any loss or damage resulting from the relocation of the same; and provided the schedule for and location of such relocation of pipelines and appurtenances shall not be in such manner as will unreasonably hinder the pumping, unloading or transfer of petroleum fluids to the storage facilities.

(16) PERFORMANCE BY FPL.

FPL shall pursue with due diligence all requirements hereof; however, neither Port nor FPL shall be liable for any loss or damage for delay or for nonperformance due to causes not reasonably within their control, including but not limited to, acts of civil or military authority (including but not limited to courts or administrative agencies), act of God, war, riot or insurrection, inability to obtain any required permits or licenses, blockades, embargoes, sabotage, epidemics, fires, floods, strikes, lockouts or other labor disputes or difficulties.

(17) GUARANTEE.

During the term of this Agreement FPL agrees to guarantee to transport a minimum of five hundred thousand (500,000) short tons of fuel as allowed under paragraph eight (8) hereof, upon which the Port will derive wharfage, dockage and any other applicable tariff charges relative thereto, commencing with the first full twelve (12) month period immediately following the first day of commercial operation of FPL's Martin Plant. During the period of time in which Martin Plant Unit 1 is in commercial operation and until Martin Plant 2 is placed in commercial operation, FPL will guarantee fifty (50%) percent of the full minimum. If Martin Plant Unit 2 goes into commercial operation during any part of a twelve (12) month period then FPL will guarantee a prorata portion of the full minimum based on the actual months in operation for each unit. The full minimum will then be effective beginning the first full twelve (12) month period in which FPL's Martin Plant Unit 1 and Unit 2 are both in commercial operation. In the event FPL fails to meet the applicable

minimum guarantee during any twelve (12) month period, then within thirty (30) days following the applicable twelve (12) month period, the Port will invoice FPL for the amount of revenue not received applicable to the minimum guarantee. Failure by FPL to make payment within thirty (30) days from receipt of invoice shall allow the Port to cancel this Agreement upon six (6) months written notice to FPL. In the event that FPL disputes the invoice, FPL will immediately notify the Port of such dispute so that the differences may be resolved and payment made as soon as practicable. FPL's obligation, notwithstanding the foregoing, under this guarantee shall abate to the extent its usage of Martin Plant Units 1 and 2 or the pipeline is restricted or becomes uneconomical due to causes beyond FPL's reasonable control, including, but not limited to, (a) any action or failure to act by a governmental authority or court, (b) act of God, fire or explosion, or (c) labor disturbance, strike or work stoppage.

(18) NOTICES.

All written notices pertaining to or affecting the provisions of this Agreement shall be delivered in person or sent by registered or certified mail to the parties at the following addresses:

Correspondence to FPL:

Mailed:

Florida Power & Light Company
P. O. Box 529100
Miami, Florida 33152

Delivered:

Florida Power & Light Company
9250 West Flagler Street
Miami, Florida 33174

Correspondence to Port:

Mailed:

Port of Palm Beach District
P. O. Box 9935
Riviera Beach, Florida 33404
Attention: Port Director

Delivered:

Port of Palm Beach District
151 Port Road - State Road 710
Riviera Beach, Florida 33404
Attention: Port Director

All correspondence to FPL pursuant to this Agreement shall be mailed or delivered to FPL's Director of Fuels with copy to FPL's Division General Manager - Eastern Division. Either of the parties shall be entitled to specify as its proper address, any other address, upon written notice to the other party.

(19) INSURANCE.

FPL shall self-insure bodily injury liability insurance and property damage insurance and furnish evidence of such insurance to Port. Such self insurance shall be in amounts of not less than Two Hundred Thousand ($200,000.00) Dollars per person and Five Hundred Thousand ($500,000.00) Dollars per accident for bodily injury and not less than One Hundred Thousand ($100,000.00) Dollars in the aggregate for property damage. FPL shall also provide evidence that it is an authorized self-insured in the State of Florida for automobile/vehicle and Workmen's Compensation coverage to the extent that such coverage is required by the State of Florida.

FPL shall indemnify and save Port harmless from and against any and all claims, actions, damages, liability and expense, including reasonable attorneys' fees and litigation expenses, in connection with loss of life, personal injury, and damage to property occurring in connection with the use of any facility of Port and the performance of any service on the property of Port caused in whole or in part by FPL, without regard to fault. This indemnification shall not exceed the sum of Five Hundred Thousand ($500,000.00) Dollars per occurrence for bodily injuries or death(s) or One Hundred Thousand ($100,000.00) Dollars property damage per occurrence.

(20) TERM.

This Agreement shall be for an initial term of twenty (20) years, with an option on the part of FPL to renew for an additional fifteen (15) year term upon the same conditions as set forth herein, upon six (6) months prior written notice to the Port, prior to the termination of the first period.

(21) LIABILITY.

Neither FPL nor the Port shall be liable (in contract or in tort including negligence) to each other, or their contractors or suppliers for incidental or consequential damages, including but not limited to, interest or carrying charges on their investment, expenses arising from cost of capital, loss of profits on facilities not utilized, or loss of use of equipment or facilities of either, their contractors or suppliers resulting from either party's performance, non-performance or delay in performance of their obligations under the Agreement or their termination

of this Agreement.

(22) NON WAIVER.

Failure of either party to insist upon strict performance of any of the provisions hereof, or failure or delay in exercising any rights or remedies provided herein or by law, shall not release the other party of any of its obligations under this Agreement and shall not be deemed a waiver of any rights to insist upon strict performance hereof, nor shall any purported oral modification or rescission of this Agreement by an employee or agent of the parties operate as a waiver of any of the provisions hereof.

(23) EFFECT OF SECTION HEADINGS.

Section headings appearing in this Agreement are inserted for convenience of reference only, and shall in no way be construed to be interpretations of text.

(24) APPLICABLE STATE LAW.

The rights, obligations and remedies of the parties as specified under this Agreement shall be interpreted and governed in all respects by the laws of the State of Florida, and jurisdiction of any action commenced by either party hereunder shall be in Palm Beach County.

(25) COMPLETE AGREEMENT.

This written Agreement is intended as the final, complete, and exclusive statement of the terms of agreement between the parties. The parties agree that parol or extrinsic evidence may not be used to vary or contradict the express terms of this Agreement and that recourse may not be had to alleged prior dealings, usage of trade, course of dealing, or course of performance to explain or supplement the express terms of this Agreement. This Agreement shall not be amended or modified, and no waiver of any provision hereof shall be effective, unless set forth in a written instrument authorized and executed with the same formality as this Agreement.

(26) FEDERAL MARITIME COMMISSION APPROVAL.

This Agreement shall be submitted to the Federal Maritime Commission for approval or determination that the Federal Maritime Commission has no jurisdiction in the matter, and the Agreement shall not become effective until the Federal Maritime Commission gives its approval or determines that it does not have jurisdiction in the matter.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed by their duly authorized officers effective as of the date first above written.

Signed and sealed in the presence of:

PORT OF PALM BEACH DISTRICT
By its Board of Commissioners

By: _____
LEE K. SPENCER, CHAIRMAN

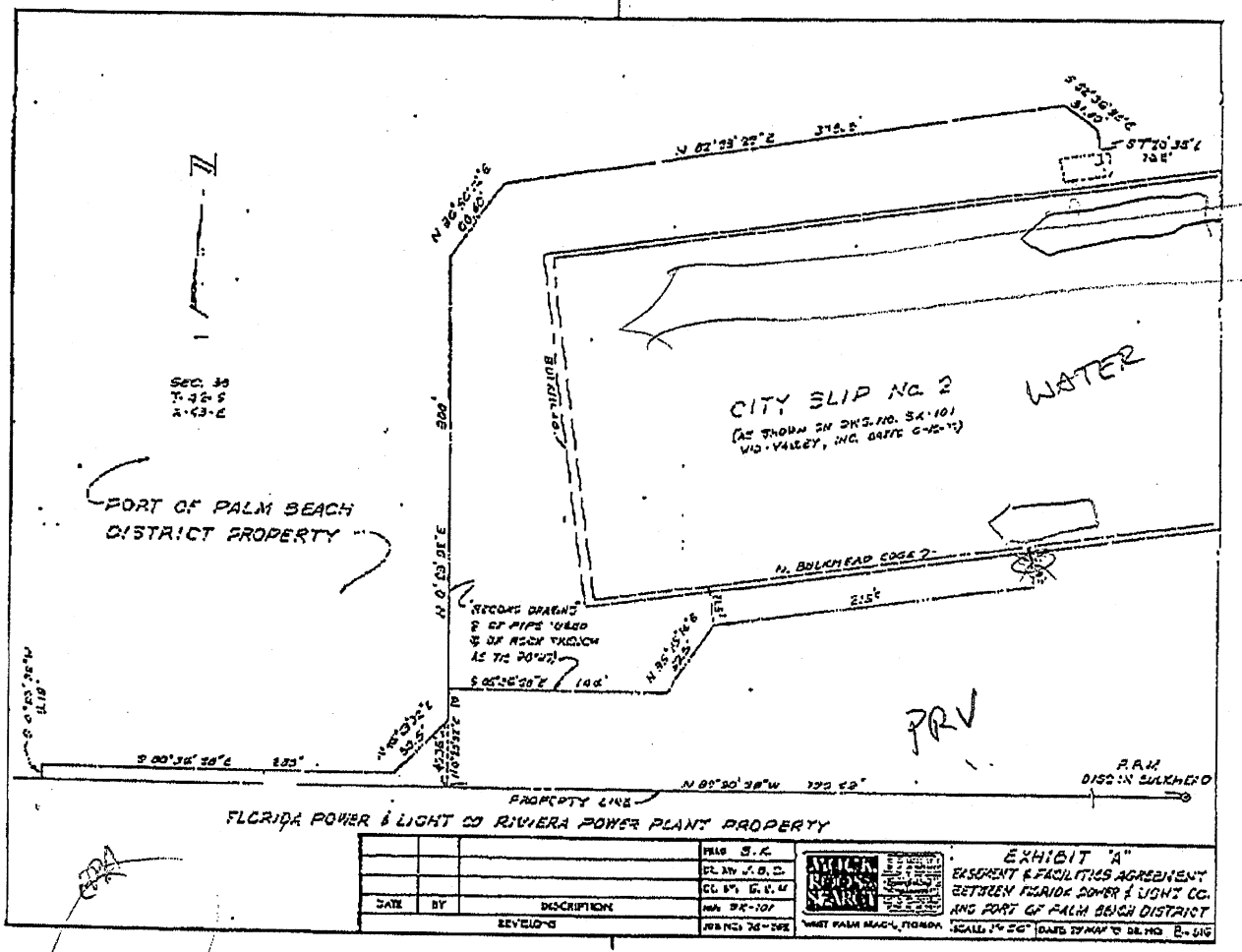
By: _____
BLAIR J. CIKLIN, SECRETARY

Signed and sealed in the presence of:

FLORIDA POWER & LIGHT COMPANY

By: _____
As its VICE PRESIDENT

Attest: _____
As its Secretary


CITY SLIP No. 2
WATER
PORT OF PALM BEACH DISTRICT PROPERTY
PRV
N. BULKHEAD EDGE
PROPERTY LINE
FLORIDA POWER & LIGHT CO RIVIERA POWER PLANT PROPERTY
EXHIBIT "A"
EASEMENT & FACILITIES AGREEMENT
BETWEEN FLORIDA POWER & LIGHT CO.
AND PORT OF PALM BEACH DISTRICT

DOT

INTAKE CULVERT EASEMENT

5-22-61

KNOW ALL MEN BY THESE PRESENTS:

THAT PORT OF PALM BEACH DISTRICT, a public corporation organized and existing under the laws of the State of Florida (hereinafter referred to as the District), acting through its Board of Commissioners, for and in consideration of the sum of Ten Dollars ($10.00) and other valuable considerations, to it in hand paid by Florida Power & Light Company, a Florida corporation (hereinafter called the Company), whose post office address is P. O. Box 3100, Miami, Florida, receipt of which is hereby acknowledged, does hereby give and grant unto the Company, its successors and assigns, the right and privilege to construct, install, operate, replace, repair and maintain an Intake Structure in, under and across the property of the District outlined in red on the print hereto attached, made a part hereof and marked Exhibit A (which property is hereinafter referred to as the premises) and at the locations shown on said Exhibit A. The term "Intake Structure" shall include for the purposes of this grant additions to or enlargements of the original installation within the said premises, it being agreed that all such additions and enlargements shall be subject to the terms and conditions of this grant.

Construction and installation of the Intake Structure and all appurtenances thereto shall be in accordance with plans and specifications approved by a duly authorized representative of the District, which approval will be evidenced by such representative of the District and a representative of the Company initialing and dating two copies of print showing such plans and specifications and the details of construction and copy of approved print filed with both the District and the Company. All cost and expense of construction, additions, enlargement, repair, replacement, operation and maintenance shall be borne by the Company and under no circumstances shall such cost and expense or any part thereof be borne by the District or be chargeable to the District. The Intake Structure and all appurtenances thereto shall be constructed, replaced, added to, enlarged, repaired, operated and maintained in accordance with established construction and engineering practices and standards with respect to the construction, replacement, repair, adding to, enlargement, operation and maintenance of such an Intake

Structure. The Company will make or suffer to be made no waste, unlawful, improper or offensive use of the premises. The Company will so conduct its work and operations on the premises during periods of construction or maintenance so as not to unreasonably interfere with the business or operations of the District or any of the other users of the property owned by the District. The District shall not permit any marine vessels to utilize the slip area in front of the Company's intake in such a manner as to deposit sand, gravel, cement or other similar material on the slip bottom where it may block the free flow of water into the intake. The Company will, at its own cost and expense, assume all liability for the acts of its agents, employees and representatives while such agents, employees and representatives are engaged in the performance of or carrying on of the Company's aforesaid granted rights and privileges, or any of them. The Company will save the District harmless from all loss, damage or liability caused by a misuse of the premises covered by this grant, and by any nuisance made or suffered on such premises, and from injury, loss or damage to any person or property in or on said premises or anywhere in connection with the use and occupation of the Intake Structure and premises covered hereunder, or arising from any failure of the Company to complete or perform any or all of the Company's covenants herein contained.

The Company, by the acceptance of this instrument and the exercise of the rights and privileges herein granted, agrees for itself and its successors and assigns, with District, its successors and assigns, as follows:

1. The Intake Structure, or any other structure constructed under this grant, shall be limited to an elevation of plus 4.5 feet mean low water with the result that the top of the Intake Structure or any other structure shall be approximately 4 feet below ground surface.

2. Any work done hereunder and any additions to or enlargements of the original installed Intake Structure shall be limited to those shown on the aforesaid approved and filed plans and specifications.

3. Representatives of the District shall have the continuing right and privilege to inspect at any time and from time to time any

work performed under this grant in order to ascertain if the work is being carried out in conformity with the aforesaid approved and filed plans and specifications. Any work found by the representatives of the District not to be in such conformity shall be made so forthwith by the Company at its sole cost and expense and at no cost and expense to the District.

4. The Company shall complete the original installation not later than June 1, 1962. Additions to and enlargements of the original installation shall be completed not later than the date specified in a work schedule or schedules to be filed with the District prior to the commencement of any work on such additions and enlargements.

5. The District and its users shall at all times during the period any construction work is carried on hereunder have ingress and egress over a strip of land within the aforesaid property at least forty (40) feet in width so as to allow the Port and its users to have access at all times to the south side of the slip shown on Exhibit A for vehicular and rail traffic.

6. The roof of the Intake Structure and any additions to and enlargements of the original installation shall be so constructed and maintained at all times during the period of this grant so that the same will be of sufficient thickness and of suitable and recognized reinforcement as to permit fully loaded railroad cars and other vehicles to pass over the structures similar to railroad crossings and bridges.

7. The Company shall have no right, title or interest hereunder in and to the surface of the property of the District shown on Exhibit A or any other property of the District except the right and privilege to use the surface of the property in constructing, operating and maintaining its original installation and any additions to or enlargements of the original installation.

8. The Company shall restore the property and all improvements located thereon, including the sea walls, in as equally good condition as existed at the time of the commencement of work by the Company; to dredge or cause to be dredged at its cost and expense and at no cost

and expense to the District, a channel in the slip to the intake structure entrance to a depth of 27 feet mean low water as shown on the aforesaid approved and filed plans and specifications; to reconstruct at its cost and expense and at no cost and expense to the District the west wall of Slip No. 2 as shown on the aforesaid approved and filed plans and specifications; to restore at its cost and expense and at no cost and expense to the District any paving and railroad tracks in the event it is necessary for the Company in operating and maintaining the original installation and any additions to or enlargements thereof to disturb or interfere with such paving or railroad tracks; and to maintain during the term of this grant at its cost and expense and at no cost and expense to the District the sea wall structure shown on the aforesaid approved and filed plans and specifications in as equally good condition as it existed prior to the commencement of work hereunder by the Company, ordinary wear and tear, damage by persons or corporations other than the Company, its successors and assigns, and damage resulting from acts of God or cause or causes beyond the control of the Company, being expressly excepted from the obligations of the Company in this particular covenant.

9. The District or its users may use the surface and subsurface of the property covered by this grant and shown on Exhibit A except as so granted to the Company or except as might interfere with the Company's right and privileges and the Company's use, occupation or enjoyment thereof and, in this connection, the District may construct, operate and maintain railroad tracks, roads, pipelines and other equipment on, under or across such surface which do not so interfere. However, no construction of any kind shall be made by the District which shall extend over, across or below the manholes shown on aforesaid approved and filed plans and specifications or which shall prevent or impair access through such manholes.

10. Notwithstanding any other provision of this grant, the Company will notify the District in writing at least five (5) days prior to performing any construction or major maintenance requiring

work on the surface of the property shown on Exhibit A under this grant; however, in the event of an emergency, such five (5) days period shall not apply and such work may be carried on at any time after written notice to the District of the emergency is actually delivered in person to the District's manager or other District operating executive and that any such notice (emergency or otherwise) shall state the time of commencement and the nature of the work to be performed, provided, however, an entry or entries may be made into the manhole at any time or from time to time without any emergency or other notice being given by the Company to the District and provided, further, that the work schedule or work schedules provided for in 4 and showing a time for commencing work five (5) days after filing with the District shall constitute the written notice provided for above in this paragraph.

11. The Company at its cost and expense and at no cost and expense to the District shall, as soon as practical after the completion of any work under this grant, restore the surface of the property shown on Exhibit A to the condition it existed prior to the commencement of the work, and in this connection the Company, at its cost and expense and at no cost and expense to the District, shall at all times during the progress of the work and also after the completion of the work, keep the work area free of debris and objectionable material.

12. Any debris or material collected in the settlement pit of the Company's structures and removed therefrom by the Company shall be expeditiously and so removed at the Company's cost and expense and at no cost and expense to the District away from the property of the District.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed in their respective names by their duly authorized officers on the 22nd day of May, 1961.

PORT OF PALM BEACH DISTRICT, by its duly elected, qualified and acting Board of Commissioners

Attest: Gleason N Stambaugh
Secretary

Bill B. Burns
Chairman-Commissioner

Signed, sealed and delivered in the presence of:

Commissioner

E. L. Elliott III
As to District

Gleason N Stambaugh
Commissioner

FLORIDA POWER & LIGHT COMPANY

By George Kinsman
Vice President

Attest: W. F. Klaylock
Secretary

Signed, sealed and delivered
in the presence of:

Suzanne J. Thacker
Diane B. McElroy
As to Company

STATE OF FLORIDA)
COUNTY OF PALM BEACH) ss:

Before me personally appeared Billy B. Burns and Hansen W. Stanbrough, to me well known and known to me to be the Chairman and Secretary, respectively, of PORT OF PALM BEACH DISTRICT, a public corporation of the State of Florida, and who did acknowledge before me that the foregoing instrument is the free act and deed of said District by them respectively executed as such officers for the purposes therein expressed and that the seal thereunto attached is its corporate seal by them in like capacity affixed.

WITNESS my hand and official seal at West Palm Beach, County of Palm Beach and State of Florida, this 22d day of May, 1961.

E. L. Elwood II
Notary Public, State of Florida at Large

My commission expires: Notary Public, State of Florida at Large
My Commission Expires Nov. 3, 1961
Bonded ~~by American Surety Co. of N. Y.~~

STATE OF FLORIDA)
COUNTY OF DADE) ss:

Before me personally appeared George Kinsman and W. F. Klaylock, to me well known and known to me to be the Vice President and Secretary of FLORIDA POWER & LIGHT COMPANY, a Florida corporation, and who did acknowledge before me that the foregoing instrument is the free act and deed of said Company by them respectively executed as such officers for the purposes therein expressed and that the seal thereunto attached is its corporate seal by them in like capacity affixed.

WITNESS my hand and official seal at Miami, County of Dade and State of Florida, this 9 day of May, 1961.

Diane B. McElroy
Notary Public, State of Florida at Large

My commission expires: Notary Public, State of Florida at Large
My Commission Expires Aug. 27, 1963
Bonded By American Ins & Casualty Co.

DRAWN BY	RCJ
TRACED "	
CHECKED "	
CORRECT	

NO.	DATE	REVISION	BY	CH.	CORR.	APP.

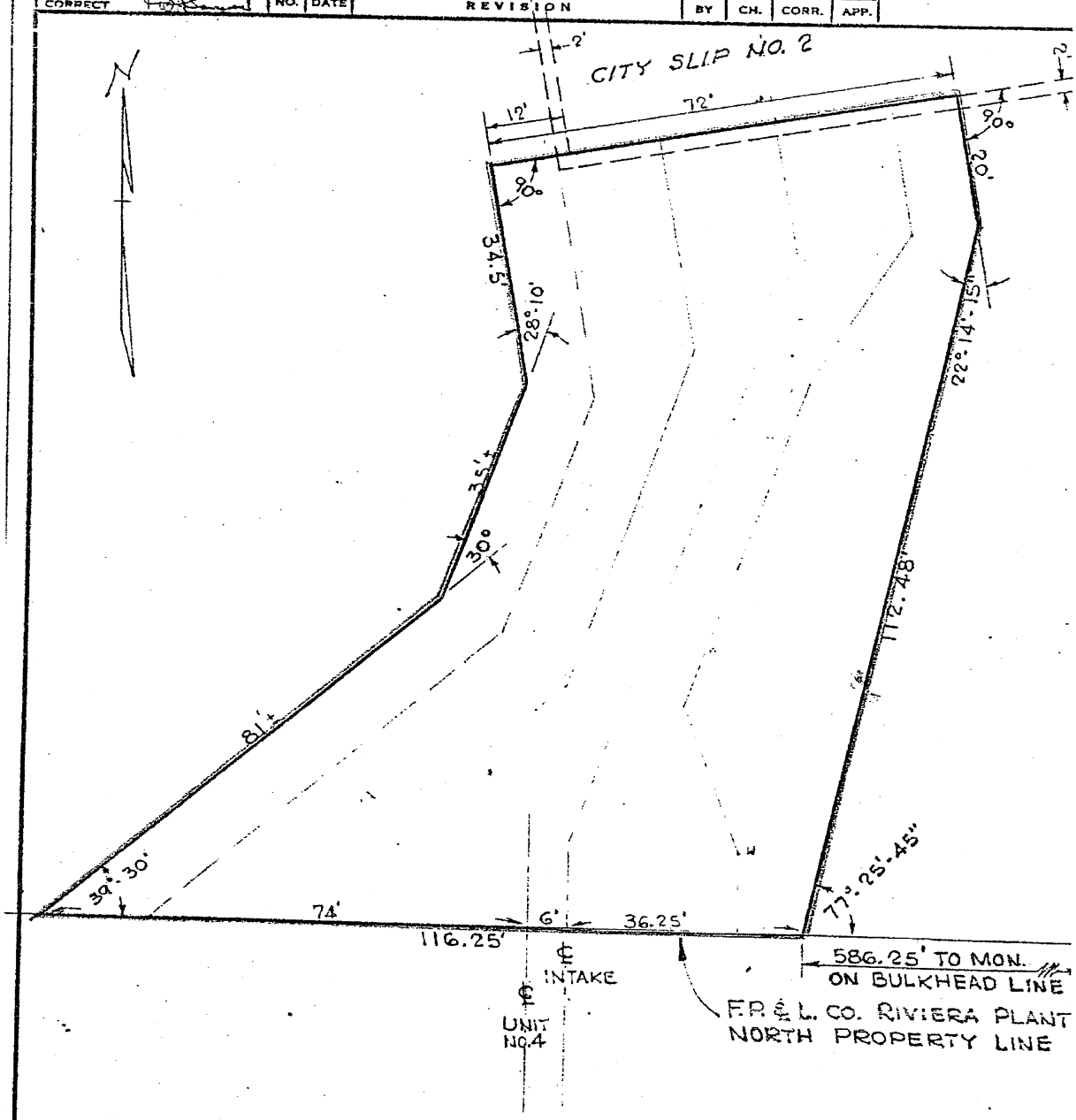


Exhibit A

RIVIERA PLANT

INTAKE STRUCTURE EASEMENT ACROSS PORT OF PALM BEACH PROPERTY AT SLIP NO. 2. RIVIERA BEACH, FLA.

FLORIDA POWER & LIGHT COMPANY

DATE: JUNE 13, 1960 SCALE: 1" = 20'

APPROVED:

CHIEF ENGINEER

L-28106

C E R T I F I C A T E

I, GLEASON N. STAMBAUGH, hereby certify that I am the Secretary of the Port of Palm Beach District, and as such, custodian of its records; that the foregoing is a true copy of an Agreement wherein the Port of Palm Beach District grants unto the Florida Power & Light Company certain rights and privileges as stated therein to become effective the 22nd day of May, 1961.

Gleason N. Stambaugh
Secretary

SEAL

SOVEREIGN SUBMERGED LAND

Legal Description

FPL sub-aqueous pipeline, Lake Worth, Palm Beach County, Florida Power & Light Company Riviera Power Plant

A 100 foot-wide strip of submerged land, in Section 33, Township 42 South, Range 43 East, in Palm Beach County, Florida and being more particularly described as follows:

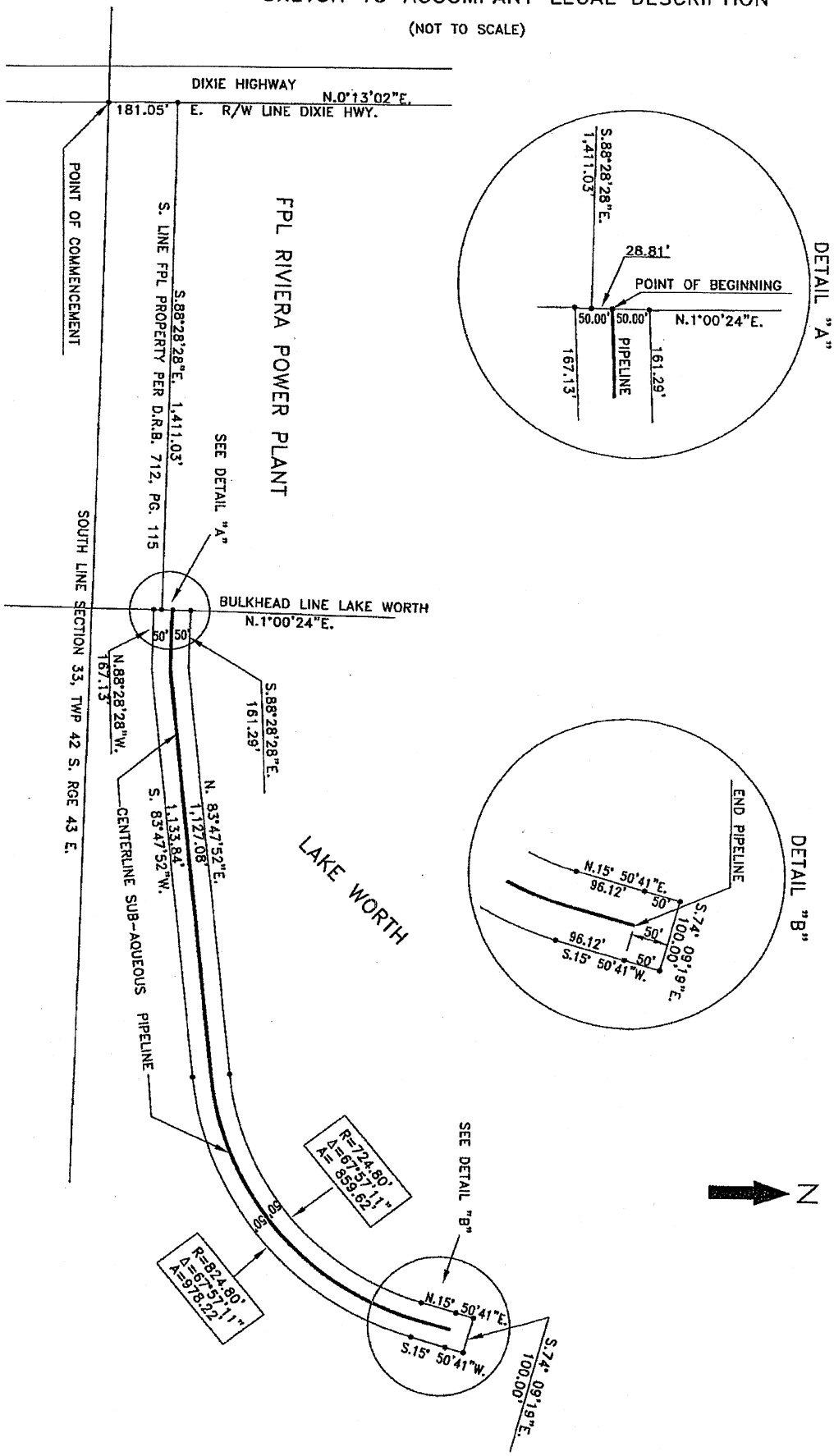
Commence at the point of intersection of the easterly right-of-way line of Dixie Highway [State Highway 5] with the south line of Section 33, Township 42 South, Range 43 East; thence North 0° 13' 02" East along said easterly right-of-way line of Dixie Highway for 181.05 feet to the Southwest corner of that certain parcel of land owned by Florida Power & Light Company and described in Deed Records Book 712, Page 115, of the Public Records of Palm Beach County, Florida; thence South 88° 28' 28" East along the south line of said parcel of land for 1,411.03, feet more or less, to the bulkhead line on the westerly edge of Lake Worth; thence North 1° 00' 24" East along said bulkhead line for 28.81 feet to the center of an existing discharge structure and to the POINT OF BEGINNING of said 100 foot-wide strip of submerged land; thence continues North 1° 00' 24" East along said bulkhead line for 50.00 feet; thence along a line 50 feet northwesterly of, and parallel to centerline of an existing sub-aqueous pipeline for the following 4 courses; 1) South 88° 28' 28" East for 161.29 feet; 2) North 83° 47' 52" East for 1,127.08 feet to the point of curvature of a circular curve concave to the northwest; 3) Northeasterly along the arc of said circular curve having as its elements a radius of 724.80 feet and a central angle of 67° 57" 11" for an arc distance of 859.62 feet to a point of tangency; 4) North 15° 50" 41" East for 96.12 feet; thence continues North 15° 50" 41" East along a line 50 feet northwesterly of and parallel to the northeasterly projection of the centerline of said pipeline for 50.00 feet; thence South 74°09'19" East for 100.00 feet; thence South 15° 50" 41" West along a line 50 feet southeasterly of, and parallel to the northeasterly projection of the centerline of said pipeline for 50.00 feet; thence along a line 50 feet southeasterly of, and parallel to the centerline said pipeline for the following 4 courses; 1) thence South 15° 50" 41" for 96.12 feet to the point of curvature of a circular curve concave to the northwest; 2) Southwesterly along the arc of said circular curve having as its elements a radius of 824.80 feet and a central angle of 67° 57" 11" for an arc distance of 978.22 feet to a point of tangency; 3) South 83° 47' 52" West for 1,33.84 feet; 4) South 88° 28' 28" West for 167.13 feet to the point of intersection with the bulkhead line on the westerly edge of Lake Worth; thence North 1° 00' 24" East along said bulkhead line for 50.00 feet to the Point of Beginning. all of the above in Palm Beach County, Florida and containing 235,971 square feet more or less.

See page 2 of 2 for Sketch of Legal Description

Date: Dec 29, 2008
I. S.

SKETCH TO ACCOMPANY LEGAL DESCRIPTION

(NOT TO SCALE)



FLORIDA GAS TRANSMISSION COMPANY LEASE

19782

This instrument was prepared by.
T. P. McPeake, General Superintendent
Land Department - Florida Gas Transmission Co.
Post Office Box 44, Winter Park, Florida 32789

ORIGINAL

Riviera Beach Lateral
615-PALM-41
5.00

APR 30 11 58 AM '68

METER SITE LEASE

This relates to that certain Meter Site Lease dated May 5, 1959, where in FLORIDA POWER & LIGHT COMPANY granted to the FLORIDA GAS TRANSMISSION COMPANY the right to construct, operate and maintain a meter and regulator facility on certain lands of the Florida Power & Light Company system in the County of Palm Beach and State of Florida.

In view of a change in location of said meter and regulator facility on certain property of the Florida Power & Light Company, said lease is hereby amended so as to read in full as follows:

A parcel commencing at a nail marking the intersection of the centerline of State Road 5 with the South line of Section 33, Township 42 South, Range 43 East; thence N 00° 23' E along the centerline of State Road 5, a distance of 844.19 feet; thence S 88° 25' E a distance of 40 feet to an iron pipe marking the East right of way line of State Road 5; thence S 88° 25' E a distance of 18 feet to the point of beginning; thence S 88° 25' E a distance of 110 feet; thence S 00° 23' W a distance of 80 feet; thence N 88° 25' W a distance of 110 feet; thence N 00° 23' E a distance of 80 feet to the point of beginning and being located in Palm Beach County, Florida.

The Florida Gas Transmission Company joins in this agreement for the purpose of designating the proper description.

Except as provided herein said Meter Site Lease dated May 5, 1959, shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be signed in its respective names by its proper officers, this 16 day of April, 1968.

Signed, sealed and delivered in our presence.

Barbara H. Kennedy

Ruth A. Spencer

FLORIDA POWER & LIGHT COMPANY

By _____
Executive Vice President

ATTEST: _____
Secretary

Juanita Burgeson

Jeanne Ogilvie

FLORIDA GAS TRANSMISSION COMPANY

By _____
Vice President

FORM APPROVED
Legal Dept.

ATTEST: _____
Assistant Secretary

RECEIVED
APR 1 3 1968
Florida Gas Transmission Co.
LAND DEPT.

3.30

02263

OFFICIAL RECORDS 1651 PAGE 1507

STATE OF FLORIDA)
COUNTY OF DADE)

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledments, personally appeared R. C. Fullerton and W. F. Blaylock, to me known and known to be the persons described in and who executed the foregoing instrument as its Executive Vice President and Secretary, respectively, of the corporation named therein, and severally acknowledged before me that they executed the same as such officers in the name and on behalf of said corporation.

WITNESS my hand and official seal in the State and County last aforesaid this 16 day of April, 1968.

Fern L. Bentley
Notary Public

My commission expires:
NOTARY PUBLIC, STATE OF FLORIDA AT LARGE
MY COMMISSION EXPIRES SEPT. 7, 1968

STATE OF FLORIDA)
COUNTY OF ORANGE)

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared W. B. Sprow and N. J. Aberwald, to me known and known to be the persons described in and who executed the foregoing instrument as its Vice President, and Assistant Secretary, respectively, of the FLORIDA GAS TRANSMISSION COMPANY, and severally acknowledged before me that they executed the same as such officers in the name and on behalf of said corporation.

WITNESS my hand and official seal in the State and County last aforesaid this 23rd day of April, 1968.

Julian M. Mer
Notary Public

My commission expires:
Notary Public, State of Florida at Large
My Commission Expires: July 16, 1968

NOTARY PUBLIC STATE OF FLORIDA AT LARGE

RECEIVED
APR 24 1968
Florida Gas Transmission Co.
LAND DEPT.

Recorded In Official Record Book
Of Palm Beach County, Florida
John B. Dunkle
Clerk of Circuit Court