Appendix 1: Air Construction PSD Permit PSD-FL-354

Florida Department of Environmental Protection

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FPL West County Energy Center
DEP File No. 0990646-001-AC
Permit No. PSD-FL-354
SIC No. 4911
Expires: December 31, 2011

PROJECT AND LOCATION

This permit authorizes the construction of two nominal 1,250 megawatt combined cycle units at the proposed Florida Power and Light Company (FPL) West County Energy Center.

The proposed project will be located at 20505 State Road 80, Loxahatchee, Florida 33470. This site encompasses 220 acres of which approximately 40 acres will be used for two combined cycle units.

UTM coordinates are Zone 17; 562.19 km E; 2953.04 km N.

STATEMENT OF BASIS

This PSD construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The project was processed in accordance with the requirements of Rule 62-212.400, F.A.C., the preconstruction review program for the Prevention of Significant Deterioration (PSD) of Air Quality. Pursuant to Chapter 62-17, F.A.C. and Chapter 403 Part II, F.S., the project is also subject to Electrical Power Plant Siting. The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

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Joseph Kahn, Director (Date)
Division of Air Resource Management

1/10/2007

FACILITY DESCRIPTION

The FPL West County Energy Center will be a nominal 2,500 megawatt (MW) greenfield power plant. The initial phase is the construction of two nominal 1,250 MW gas-fired combined cycle units that will use ultralow sulfur (ULS) fuel oil as backup fuel. The two combined cycle units are designated as Unit 1 and Unit 2.

Each combined cycle unit will consist of: three nominal 250 megawatt Model 501G gas turbine-electrical generator sets with evaporative inlet cooling systems; three supplementary-fired heat recovery steam generators (HRSG's) with SCR reactors; one nominal 428 mmBtu/hour (LHV) gas-fired duct burner located within each of the three HRSG's; three 149 feet exhaust stacks; one 26 cell mechanical draft cooling tower; and a common nominal 500 MW steam-electrical generator.

Additional ancillary equipment will include: four emergency generators; two natural gas fired fuel heaters; two diesel fuel storage tanks; two auxiliary steam boilers; and other associated support equipment.

{Note: Throughout this permit, the electrical generating capacities represent nominal values for the given operating conditions.}

NEW EMISSIONS UNITS

This permit authorizes construction and installation of the following new emissions units.

ID	Emission Unit Description
001	Unit 1A – one nominal 250 MW gas turbine with supplementary-fired heat recovery steam generator
002	Unit 1B – one nominal 250 MW gas turbine with supplementary-fired heat recovery steam generator
003	Unit 1C – one nominal 250 MW gas turbine with supplementary-fired heat recovery steam generator
004	Unit 2A – one nominal 250 MW gas turbine with supplementary-fired heat recovery steam generator
005	Unit 2B – one nominal 250 MW gas turbine with supplementary-fired heat recovery steam generator
006	Unit 2C – one nominal 250 MW gas turbine with supplementary-fired heat recovery steam generator
007	Two nominal 6.3 million distillate fuel oil storage tanks*
008	Two 26 cell mechanical draft cooling towers
009	Two nominal 85,000 lb/hr (99.8 MMBtu/hr) auxiliary boilers
010	Two nominal 10 MMBtu/hr gas-fired process heaters
011	Four nominal 2,250 KW (~ 21 MMBtu/hr) emergency generators
012	One emergency diesel fire pump engine (< 300 hp) and 500 gallon fuel oil storage tank

* This capacity will allow approximately 108 hours of on-site oil storage

REGULATORY CLASSIFICATION

Title III: This facility will be major for hazardous air pollutants (HAPs).

Title IV: The facility will operate emissions units subject to the acid rain provisions of the Clean Air Act.

Title V: Because potential emissions of at least one regulated pollutant exceed 100 tons per year, the new facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

PSD: The facility is located in an area designated as "attainment," "maintenance," or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. The facility is considered a "fossil fuel fired steam electric plant of more than 250 million BTU per hour of heat input", which is one of the 28 PSD source categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a PSD-major source of air pollution with respect to Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) of Air Quality.

NSPS: This project is subject to applicable requirements of 40 CFR 60, NSPS-Subpart KKKK (Standards of Performance for Stationary Combustion Turbines for Which Construction is Commenced After February 18, 2005). This project is also subject to applicable requirements of 40 CFR 60, NSPS-Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units) and to 40 CFR 60, NSPS-Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (ICE).

NESHAPs: This project is subject to applicable requirements of 40 CFR 63, Subpart YYYY, National Emissions Standards for Hazardous Air Pollutants for Stationary Combustion Gas Turbines. This project is also subject to applicable requirements of 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Reciprocating Internal Combustion Engines (RICE); and to 40 CFR 63, Subpart DDDDD National Emissions Standards for Industrial, Commercial, or Institutional Boilers and Process Heaters.

Siting: The facility is subject to Electrical Power Plant Siting in accordance with Chapter 62-17, F.A.C. and Chapter 403, Part II, F.S.

PERMITTING AUTHORITY

All documents related to applications for permits to construct, operate or modify an emissions unit shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP) at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Copies of all such documents shall also be submitted to the Compliance Authority.

COMPLIANCE AUTHORITY

All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department of Environmental Regulation Southeast District office (DEP-SED), 400 North Congress Avenue, Suite 200, West Palm Beach, FL 33401.

APPENDICES

The following Appendices are attached as part of this permit.

Appendix A: Subparts A from NSPS 40 CFR 60 and NESHAP 40 CFR 63; Identification of General Provisions.

Appendix BD: Final BACT Determinations and Emissions Standards.

Appendix Dc: NSPS Requirements for Small Steam Generating Units, 40 CFR 60, Subpart Dc.

Appendix DDDDD: NESHAP Requirements for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD.

Appendix GC: General Conditions.

Appendix IIII: NSPS Requirements for Compression Ignition Internal Combustion Engines (ICE).

Appendix KKKK: NSPS Requirements for Gas Turbines, 40 CFR 60, Subpart KKKK.

Appendix SC: Standard Conditions.

Appendix XS: Semiannual NSPS Excess Emissions Report.

Appendix YYYY: NESHAP Requirements for Gas Turbines, 40 CFR 63, Subpart YYYY.

Appendix ZZZZ: NESHAP Requirements for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ.

RELEVANT DOCUMENTS

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action and are on file with the Department.

- Permit application received on April 14, 2005;
- Department PSD Application Sufficiency comments dated June 13, 2005;
- Sufficiency Responses received August 12, 2005;
- Letter from FPL to DEP dated December 29, 2005 regarding equipment selection, capacities, etc.;
- Draft permit package issued on March 1, 2006;
- FPL's comments on the Draft Permit and TEPD received March 31, 2006;
- Public Meeting comments received at the Royal Palm Beach Cultural Center on April 19, 2006 and by e-mails, telephone and letters;
- The Final Order of the Siting Board approving Certification dated December 26, 2006; and
- Final Determination distributed concurrently with Final PSD Permit.

SECTION II. ADMINISTRATIVE REQUIREMENTS

1. General Conditions: The permittee shall operate under the attached General Conditions listed in Appendix GC of this permit. General Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

2. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and the Title 40, Parts 51, 52, 60, 63, 72, 73, and 75 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
[Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

3. Construction and Expiration: The permit expiration date includes sufficient time to complete construction, perform required testing, submit test reports, and submit an application for a Title V operation permit to the Department. Approval to construct shall become invalid for any of the following reasons: construction is not commenced within 18 months after issuance of this permit; construction is discontinued for a period of 18 months or more; or construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. In conjunction with an extension of the 18-month period to commence or continue construction (or to construct the project in phases), the Department may require the permittee to demonstrate the adequacy of any previous determination of Best Available Control Technology (BACT) for emissions units regulated by the project. For good cause, the permittee may request that this PSD air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, 62-210.300(1), and 62-212.400(6)(b), F.A.C.]

4. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

5. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Chapters 62-210 and 62-212, F.A.C.]

6. Application for Title IV Permit: At least 24 months before the date on which the new units begin serving an electrical generator greater than 25 MW, the permittee shall submit an application for a Title IV Acid Rain Permit to the Department's Bureau of Air Regulation in Tallahassee and a copy to the Region 4 Office of the U.S. Environmental Protection Agency in Atlanta, Georgia. [40 CFR 72]

7. Application for Title V Permit: The permittee shall submit an application, pursuant to Chapter 62-213, F.A.C, for a Title V air operation permit at least 90 days before the expiration of this permit, but no later than 180 days after commencing operation of the new units. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, a Compliance Assurance Monitoring Plan (as necessary), and such additional information as the Department may by law require.

SECTION III - EMISSIONS UNITS SPECIFIC CONDITIONS

A. COMBINED CYCLE UNITS 1 AND 2 – GAS TURBINES (EUs 001, 002, 003, 004, 005, and 006)

This section of the permit addresses the following emissions units.

Combined Cycle Units 1 and 2 and associated equipment

Description: Emissions units 001, 002, 003, 004, 005, and 006. Each emission unit consists of: a Model 501G combustion gas turbine-electrical generator set with automated gas turbine control, inlet air filtration system and evaporative cooling, a gas-fired heat recovery steam generator (HRSG) with duct burner, a HRSG stack, and associated support equipment. Each combined cycle unit is comprised of three of the described emission units. The project also includes two steam turbine-electrical generators, each of which serves a combined cycle unit.

Fuels: Each gas turbine fires natural gas as the primary fuel and ultra low sulfur distillate fuel oil as a restricted alternate fuel.

Generating Capacity: Each of the six gas turbine-electrical generator sets has a nominal generating capacity of 250 MW. Each of the two steam turbine-electrical generators has a nominal generating capacity of 500 MW. The total nominal generating capacity of each of the "3 on 1" combined cycle unit is approximately 1,250 MW. The total nominal generating capacity of the proposed project is 2,500 MW.

Controls: The efficient combustion of natural gas and restricted firing of ultra low sulfur distillate fuel oil minimizes the emissions of CO, PM/PM_{10}, SAM, SO_2 and VOC. Dry Low-NO_X (DLN) combustion technology for gas firing and water injection for oil firing reduce NOx emissions. A selective catalytic reduction (SCR) system further reduces NO_X emissions.

Stack Parameters: Each HRSG has a stack at least 149 feet tall with a nominal diameter of 22 feet. The Department may require the permittee to perform additional air dispersion modeling should the actual specified stack dimensions change. The following summarizes the exhaust characteristics without the duct burners:

Fuel	Heat Input Rate (LHV)	Compressor Inlet Temp.	Exhaust Temp., °F	Flow Rate ACFM
Gas	2,333 MMBtu/hour	59° F	195° F	1,330,197
Oil	2,117 MMBtu/hour	59° F	293° F	1,533,502

Continuous Monitors: Each stack is equipped with continuous emissions monitoring systems (CEMS) to measure and record CO and NO_X emissions as well as flue gas oxygen or carbon dioxide content.

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: Determinations of the Best Available Control Technology (BACT) were made for carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter (PM/PM_{10}), sulfuric acid mist (SAM), sulfur dioxide (SO_2) and volatile organic compounds (VOC).

   See Appendix BD of this permit for a summary of the final BACT determinations.
   [Rule 62-212.400(BACT), F.A.C.]

2. NSPS Requirements: The combustion turbines shall comply with all applicable requirements of 40 CFR 60, listed below, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The Department determines that compliance with the BACT emissions performance requirements also assures compliance with the New Source Performance Standards given in 40 CFR 60, Subpart KKKK. Some separate reporting and monitoring may be required by the individual subparts.

   a *Subpart A, General Provisions*, including:

   - 40 CFR 60.7, Notification and Record Keeping
   - 40 CFR 60.8, Performance Tests

- 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
- 40 CFR 60.12, Circumvention
- 40 CFR 60.13, Monitoring Requirements
- 40 CFR 60.19, General Notification and Reporting Requirements

b *Subpart KKKK, Standards of Performance for Stationary Gas Turbines*: These provisions include standards for combustion gas turbines and duct burners.

3. NESHAP Requirements: The combustion turbines are subject to 40 CFR 63, Subpart A, Identification of General Provisions and 40 CFR 63, Subpart YYYY, National Emissions Standard for Hazardous Air Pollutants for Stationary Combustion Gas Turbines. The project must comply with the Initial Notification requirements set forth in Sec. 63.6145 but need not comply with any other requirement of Subpart YYYY until EPA takes final action to require compliance and publishes a document in the Federal Register. (Reference: Appendix YYYY and Appendix A, NESHAP Subpart A of this permit).

EQUIPMENT AND CONTROL TECHNOLOGY

4. Gas Turbines: The permittee is authorized to install, tune, operate, and maintain six Model 501G gas turbine-electrical generator sets each with a nominal generating capacity of 250 MW. Each gas turbine shall include an automated gas turbine control system and have dual-fuel capability. Ancillary equipment includes an inlet air filtration system and an evaporative inlet air-cooling system. The gas turbines will utilize DLN combustors. [Application; Design]

5. HRSGs: The permittee is authorized to install, operate, and maintain six new heat recovery steam generators (HRSGs) with separate HRSG exhaust stacks. Each HRSG shall be designed to recover exhaust heat energy from one of the six gas turbines (1A to 1C and 2A to 2C) and deliver steam to one of the two steam turbine electrical generators. Each HRSG may be equipped with a gas-fired duct burner having a nominal heat input rate of 428 MMBtu per hour (LHV).

6. Gas Turbine/Supplementary-fired HRSG Emission Controls

   a. *DLN Combustion*: The permittee shall operate and maintain the DLN system to control NO_X emissions from each gas turbine when firing natural gas. Prior to the initial emissions performance tests required for each gas turbine, the DLN combustors and automated gas turbine control system shall be tuned to achieve sufficiently low CO and NO_X values to meet the CO and NO_X limits with the additional SCR control technology described below. Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations.

   b. *Water Injection*: The permittee shall install, operate, and maintain a water injection system to reduce NO_X emissions from each gas turbine when firing distillate fuel oil. Prior to the initial emissions performance tests required for each gas turbine, the water injection system shall be tuned to achieve sufficiently low CO and NO_X values to meet the CO and NO_X limits with the additional SCR control technology described below. Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations.

   c. *Selective Catalytic Reduction (SCR) System*: The permittee shall install, tune, operate, and maintain an SCR system to control NO_X emissions from each gas turbine when firing either natural gas or distillate fuel oil. The SCR system consists of an ammonia (NH_3) injection grid, catalyst, ammonia storage, monitoring and control system, electrical, piping and other ancillary equipment. The SCR system shall be designed, constructed and operated to achieve the permitted levels for NO_X and NH_3 emissions.

   d. *Oxidation Catalyst*: The permittee shall design and build the project to facilitate possible future installation of oxidation catalyst system to control CO emissions from each gas combustion

turbine/supplementary-fired heat recovery steam generator. The permittee may install the oxidation catalyst during project construction or, after notifying the Department, at a future date as described in Specific Condition 12.h.

e. *Ammonia Storage:* In accordance with 40 CFR 60.130, the storage of ammonia shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68.

[Design; Rule 62-212.400(BACT), F.A.C.]

PERFORMANCE RESTRICTIONS

7. Permitted Capacity - Gas Turbines: The nominal heat input rate to each gas turbine is 2,333 MMBtu per hour when firing natural gas and 2,117 MMBtu per hour when firing distillate fuel oil (based on a compressor inlet air temperature of 59° F, the lower heating value (LHV) of each fuel, and 100% load). Heat input rates will vary depending upon gas turbine characteristics, ambient conditions, alternate methods of operation, and evaporative cooling. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(PTE), F.A.C.]

8. Permitted Capacity - HRSG Duct Burners: The total nominal heat input rate to the duct burners for each HRSG is 428 MMBtu per hour based on the lower heating value (LHV) of natural gas. Only natural gas shall be fired in the duct burners. [Rule 62-210.200(PTE), F.A.C.]

9. Authorized Fuels: The gas turbine shall fire natural gas as the primary fuel, which shall contain no more than 2.0 grains of sulfur per 100 standard cubic feet of natural gas. As a restricted alternate fuel, the gas turbine may fire ultra low sulfur distillate fuel oil containing no more than 0.0015% sulfur by weight. Each gas turbine shall fire no more than 500 hours of fuel oil, during any calendar year. [Rules 62-210.200(PTE) and 62-212.400 (BACT), F.A.C.]

10. Hours of Operation: Subject to the operational restrictions of this permit, the gas turbines may operate throughout the year (8760 hours per year). Restrictions on individual methods of operation are specified below.

11. Methods of Operation: Subject to the restrictions and requirements of this permit, the gas turbines may operate under the following methods of operation.

    a. *Combined Cycle Operation*: Each gas turbine/HRSG system may operate to produce direct, shaft-driven electrical power and steam-generated electrical power from the steam turbine-electrical generator as a three-on-one combined cycle unit subject to the restrictions of this permit. In accordance with the specifications of the SCR and HRSG manufacturers, the SCR system shall be on line and functioning properly during combined cycle operation or when the HRSG is producing steam.

    b. *Inlet Conditioning*: In accordance with the manufacturer's recommendations and appropriate ambient conditions, the evaporative cooling system may be operated to reduce the compressor inlet air temperature and provide additional direct, shaft-driven electrical power.

    c. *Duct Firing*: When firing natural gas, each HRSG system may fire natural gas in the duct burners to provide additional steam-generated electrical power. The total combined heat input rate to the duct burners (all six HRSGs) shall not exceed 7,395,840 MMBtu (LHV) during any consecutive 12 months.

    [Application; Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C.]

A. COMBINED CYCLE UNITS 1 AND 2 – GAS TURBINES (EUs 001, 002, 003, 004, 005, and 006)

EMISSIONS STANDARDS

12. Emissions Standards: Emissions from each gas turbine shall not exceed the following standards.

Pollutant	Fuel	Method of Operation	Stack Test, 3-Run Average		CEMS Block Average
			ppmvd @ 15% O_2	lb/hr [g]	ppmvd @ 15% O_2
CO [a]	Oil	Combustion Turbine (CT)	8.0	42.0	8.0, 24-hr 6, 12-month [h]
	Gas	CT & Duct Burner (DB)	7.6	52.5	
		CT Normal	4.1	23.2	
NO_X [b]	Oil	CT	8.0	82.4	8.0, 24-hr
	Gas	CT & DB	2.0	24.2	2.0, 24-hr
		CT Normal	2.0	20.0	
PM/PM_{10} [c]	Oil/Gas	All Modes	2 gr S/100SCF of gas, 0.0015% sulfur fuel oil		
			Visible emissions shall not exceed 10% opacity for each 6-minute block average.		
SAM/SO_2 [d]	Oil/Gas	All Modes	2 gr S/100 SCF of gas, 0.0015% sulfur fuel oil		
VOC [e]	Oil	CT	6.0	19.6	NA
	Gas	CT & DB	1.5	5.4	
		CT Normal	1.2	4.1	
Ammonia [f]	Oil/Gas	CT, All Modes	5	NA	NA

a. Compliance with the continuous 24-hour CO standards shall be demonstrated based on data collected by the required CEMS. The initial and annual EPA Method 10 tests associated with the certification of the CEMS instruments shall also be used to demonstrate compliance with the individual standards for natural gas, fuel oil, and basic duct burner modes. The stacks test limits apply only at high load (90-100% of the combustion turbine capacity).

b. Compliance with the continuous NO_X standards shall be demonstrated based on data collected by the required CEMS. The initial and annual EPA Method 7E or Method 20 tests associated with demonstration of compliance with 40 CFR 60, Subpart KKKK or certification of the CEMS instruments shall also be used to demonstrate compliance with the individual standards for natural gas, fuel oil, and duct burner modes during the time of those tests. NO_X mass emission rates are defined as oxides of nitrogen expressed as NO_2.

c. The sulfur fuel specifications combined with the efficient combustion design and operation of each gas turbine represents (BACT) for PM/PM_{10} emissions. Compliance with the fuel specifications, CO standards, and visible emissions standards shall serve as indicators of good combustion. Compliance with the fuel specifications shall be demonstrated by keeping records of the fuel sulfur content. Compliance with the visible emissions standard shall be demonstrated by conducting tests in accordance with EPA Method 9.

d. The fuel sulfur specifications effectively limit the potential emissions of SAM and SO_2 from the gas turbines and represent BACT for these pollutants. Compliance with the fuel sulfur specifications shall be determined by the ASTM methods for determination of fuel sulfur as detailed in the permit.

e. Compliance with the VOC standards shall be demonstrated by conducting tests in accordance with EPA Method 25A. Optionally, EPA Method 18 may also be performed to deduct emissions of methane and ethane. The emission standards are based on VOC measured as methane. The limits apply only at high load (90-100% of the

combustion turbine capacity). Compliance with the CO CEMS based limits at lower loads shall be deemed as compliance with the VOC limit.

f. Compliance with the ammonia slip standard shall be demonstrated by conducting tests in accordance with EPA Method CTM-027.

g. The mass emission rate standards are based on a turbine inlet condition of 59° F and may be adjusted to actual test conditions in accordance with the performance curves and/or equations on file with the Department.

h. Rolling Average. Enforcement discretion may be exercised for up to 12 months with respect to the 6 ppmvd @15% O_2 limit for any combustion turbine/supplementary-fired heat recovery steam generator upon notification by the permittee of intent to install the oxidation catalyst. The permittee shall have 12 months to complete the oxidation catalyst installation. After completing the installation of the catalyst all prior partial or complete calendar months shall be excluded from the 12-month rolling average.

{"DB" means duct burning. "SCR" means selective catalytic reduction. "NA" means not applicable}.

[Rule 62-212.400(BACT), F.A.C.]

13. Duct Burners: The duct burners are also subject to the provisions of Subpart KKKK of the New Source Performance Standards in 40 CFR 60, which are summarized in Appendix KKKK.

{Permitting Note: The BACT limits applicable during duct firing are much more stringent than the standards of NSPS Subpart KKKK for duct burners. Therefore, compliance with the BACT limits insures compliance with the emission limitations in Subpart KKKK.} [40 CFR 60, Subpart KKKK]

EXCESS EMISSIONS

{Permitting Note: The following conditions apply only to the SIP-based emissions standards specified in Condition No. 12 of this section. Rule 62-210.700, F.A.C. (Excess Emissions) cannot vary or supersede any federal provision of the NSPS, or Acid Rain programs.}

14. Operating Procedures: The Best Available Control Technology (BACT) determinations established by this permit rely on "good operating practices" to reduce emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the gas turbines, HRSGs, and pollution control systems in accordance with the guidelines and procedures established by each manufacturer. The training shall include good operating practices as well as methods of minimizing excess emissions.
[Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

15. Alternate Visible Emissions Standard: Visible emissions due to startups, shutdowns, and malfunctions shall not exceed 10% opacity except for up to ten, 6-minute averaging periods during a calendar day, which shall not exceed 20% opacity. [Rule 62-212.400(BACT), F.A.C.]

16. Definitions

a. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.
[Rule 62-210.200(245), F.A.C.]

b. *Shutdown* is the cessation of the operation of an emissions unit for any purpose.
[Rule 62-210.200(230), F.A.C.]

c. *Malfunction* is defined as any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner. [Rule 62-210.200(159), F.A.C.]

17. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure that may reasonably be prevented during startup,

shutdown or malfunction shall be prohibited. All such preventable emissions shall be included in any compliance determinations based on CEMS data. [Rule 62-210.700(4), F.A.C.]

18. 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. For each gas turbine/HRSG system, excess emissions resulting from startup, shutdown, or documented malfunctions shall not exceed two hours in any 24-hour period except for the specific cases listed below. A "documented malfunction" means a malfunction that is documented within one working day of detection by contacting the Compliance Authority by telephone, facsimile transmittal, or electronic mail.

    a. *Steam Turbine/HRSG System Cold Startup*: For cold startup of the steam turbine system, excess emissions from any gas turbine/HRSG system shall not exceed eight hours in any 24-hour period. 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. *Shutdown Combined Cycle Operation*: For shutdown of the combined cycle operation, excess emissions from any gas turbine/HRSG system shall not exceed three hours in any 24-hour period.

    c. *Gas Turbine/HRSG System Cold Startup*: For cold startup of a gas turbine/HRSG system, excess emissions shall not exceed four 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 (HP) steam drum falls below 450 psig for at least a one-hour period.

    d. *Fuel Switching*: For fuel switching, excess emissions shall not exceed 2 hours in any 24-hour period.

19. Ammonia Injection: 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.]

20. DLN Tuning: CEMS data collected during initial or other major DLN tuning sessions shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer's specifications. A "major tuning session" would occur after completion of initial construction, a combustor change-out, a major repair or maintenance to a combustor, or other similar circumstances. Prior to performing any major tuning session, the permittee shall provide the Compliance Authority with an advance notice of at least 14 days that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail.
    [Design; Rule 62-4.070(3), F.A.C.]

A. COMBINED CYCLE UNITS 1 AND 2 – GAS TURBINES (EUs 001, 002, 003, 004, 005, and 006)

EMISSIONS PERFORMANCE TESTING

21. Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
CTM-027	Procedure for Collection and Analysis of Ammonia in Stationary Source {Notes: This is an EPA conditional test method. The minimum detection limit shall be 1 ppm.}
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography {Note: EPA Method 18 may be used (optional) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions.}
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines
25A	Determination of Volatile Organic Concentrations

Method CTM-027 is published on EPA's Technology Transfer Network Web Site at www.epa.gov/ttn/emc/ctm.html
The other methods are described in Appendix A of 40 CFR 60, 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 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

22. Initial Compliance Determinations: Each gas turbine shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_X, VOC, visible emissions, and ammonia slip. The 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 each unit configuration. Each unit shall be tested when firing natural gas, when using the duct burners and when firing distillate fuel oil. Referenced method data collected during the required Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the initial CO and NO_X standards. With appropriate flow measurements (or fuel measurements and approved F-factors), CEMS data may be used to demonstrate compliance with the CO and NO_X mass rate emissions standards. CO and NO_X emissions recorded by the CEMS shall also be reported for each run during tests for visible emissions, VOC and ammonia slip. The Department may require the permittee to conduct additional tests after major replacement or major repair of any air pollution control equipment, such as the SCR catalyst, oxidation catalyst, DLN combustors, etc.
[Rule 62-297.310(7)(a)1, F.A.C. and 40 CFR 60.8]

23. Continuous Compliance: The permittee shall demonstrate continuous compliance with the 24-hour CO and NO_X emissions standards based on data collected by the certified CEMS. Within 45 days of conducting any RATA on a CEMS, the permittee shall submit a report to the Compliance Authority summarizing results of the RATA. Compliance with the CO emission standards also serves as an indicator of efficient fuel combustion and oxidation catalyst operation, which reduces emissions of particulate matter and volatile organic compounds. The Department also reserves the right to use data from the continuous monitoring record and from annual RATA tests to determine compliance with the short term CO and NO_X limits for each method of operation given in Condition 12 above. [Rule 62-212.400 (BACT), F.A.C.]

24. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), each gas turbine shall be tested to demonstrate compliance with the emission standards for visible emissions. NO_X and CO emissions data collected during the required continuous monitor Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the CO and NO_x standards. Annual testing to determine the ammonia slip shall be conducted while firing the primary fuel. NO_X emissions recorded by the CEMS shall

be reported for each ammonia slip test run. CO emissions recorded by the CEMS shall be reported for the visible emissions observation period.

{Permitting Note: After initial compliance with the VOC standards is demonstrated, annual compliance tests for VOC emissions are not required. Compliance with the continuously monitored CO standards shall indicate efficient combustion and low VOC emissions. The Department retains the right to require VOC testing if CO limits are exceeded or for the reasons given in Appendix SC, Condition 17, Special Compliance Tests.}

[Rules 62-212.400 (BACT) and 62-297.310(7)(a)4, F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

25. CEM Systems: The permittee shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) to measure and record the emissions of CO and NO_X from the combined cycle gas turbine in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this section. Each monitoring system shall be installed, calibrated, and properly functioning prior to the initial performance tests. Within one working day of discovering emissions in excess of a CO or NO_X standard (and subject to the specified averaging period), the permittee shall notify the Compliance Authority.

    a. *CO Monitors.* The CO monitors shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately considering the allowable methods of operation and corresponding emission standards.

    b. *NO_X Monitors.* Each NO_X monitor shall be certified, operated, and maintained in accordance with the requirements of 40 CFR 75. Record keeping and reporting shall be conducted pursuant to Subparts F and G in 40 CFR 75. The RATA tests required for the NO_X monitor shall be performed using EPA Method 20 or 7E in Appendix A of 40 CFR 60.

    c. *Diluent Monitors.* The oxygen (O_2) or carbon dioxide (CO_2) content of the flue gas shall be monitored at the location where CO and NO_X are monitored to correct the measured emissions rates to 15% oxygen. If a CO_2 monitor is installed, the oxygen content of the flue gas shall be calculated using F-factors that are appropriate for the fuel fired. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.

26. CEM Data Requirements:

    a. *Data Collection*: Emissions shall be monitored and recorded at all times including startup, operation, shutdown, and malfunction except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over an hour. If the CEMS measures concentration on a wet basis, the CEM system shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the owner or operator may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Final results of the CEMS shall be expressed as ppmvd corrected to 15% oxygen. The CEMS shall be used to demonstrate compliance with the CEMS emission standards for CO and NO_X as specified in this permit. For purposes of determining compliance with the CEMS emissions standards of this permit, missing (or

excluded) data shall not be substituted. Upon request by the Department, the CEMS emission rates shall be corrected to ISO conditions.

b. *Valid Hour*: Hourly average values shall begin at the top of each hour. Each hourly average value shall be computed using at least one data point in each fifteen-minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, an hourly value shall be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour). If less than two such data points are available, the hourly average value is not valid. An hour in which any oil is fired is attributed towards compliance with the permit standards for oil firing. The permittee shall use all valid measurements or data points collected during an hour to calculate the hourly average values.

c. *24-hour Block Averages*: A 24-hour block shall begin at midnight of each operating day and shall be calculated from 24 consecutive hourly average emission rate values. If a unit operates less than 24 hours during the block, the 24-hour block average shall be the average of all available valid hourly average emission rate values for the 24-hour block. For purposes of determining compliance with the 24-hour CEMS standards, the missing data substitution methodology of 40 CFR Part 75, subpart D, shall not be utilized. Instead, the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block. [Rule 62-212.400(BACT), F.A.C.]

{Permitting Note: There may be more than one 24-hour compliance demonstration required for CO and NO_X emissions depending on the use of alternate methods of operation}

d. *Data Exclusion:* Each CEMS shall monitor and record emissions during all operations including episodes of startup, shutdown, malfunction, fuel switches and DLN tuning. Some of the CEMS emissions data recorded during these episodes may be excluded from the corresponding CEMS compliance demonstration subject to the provisions of Condition Nos. 17 and 18 of this section. All periods of data excluded shall be consecutive for each such episode and only data obtained during the described episodes (startup, shutdown, malfunction, fuel switches, DLN tuning) may be used for the appropriate exclusion periods. The permittee shall minimize the duration of data excluded for such episodes to the extent practicable. Data recorded during such episodes shall not be excluded if the episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented. Best operational practices shall be used to minimize hourly emissions that occur during such episodes. Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented, shall be prohibited.

e. *Availability*: Monitor availability for the CEMS shall be 95% or greater in any calendar quarter. The quarterly excess emissions report shall be used to demonstrate monitor availability. In the event 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit, except as otherwise authorized by the Department's Compliance Authority.

[Rule 62-297.520, F.A.C.; 40 CFR 60.7(a)(5) and 40 CFR 60.13; 40 CFR Part 51, Appendix P; 40 CFR 60, Appendix B - Performance Specifications; 40 CFR 60, Appendix F - Quality Assurance Procedures; and Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

27. Ammonia Monitoring Requirements: In accordance with the manufacturer's specifications, the permittee shall install, calibrate, operate and maintain an ammonia flow meter to measure and record the ammonia

injection rate to the SCR system by the time of the initial compliance tests. The permittee shall document and periodically update the general range of ammonia flow rates required to meet permitted emissions levels over the range of load conditions allowed by this permit by comparing NO_X emissions recorded by the CEM system with ammonia flow rates recorded using the ammonia flow meter. During NO_X monitor downtimes or malfunctions, the permittee shall operate at the ammonia flow rate and, as applicable for fuel oil firing, the water-to-fuel ratio, that are consistent with the documented flow rate for the combustion turbine load condition. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

RECORDS AND REPORTS

28. Monitoring of Capacity: The permittee shall monitor and record the operating rate of each gas turbine and HRSG duct burner system on a daily average basis, considering the number of hours of operation during each day (including the times of startup, shutdown and malfunction). Such monitoring shall be made using a monitoring component of the CEM system required above, or by monitoring daily rates of consumption and heat content of each allowable fuel in accordance with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

29. Monthly Operations Summary: By the fifth calendar day of each month, the permittee shall record the following for each fuel in a written or electronic log for each gas turbine for the previous month of operation: fuel consumption, hours of operation, hours of duct firing, and the updated 12-month rolling totals for each. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request by the Department. The fuel consumption shall be monitored in accordance with the provisions of 40 CFR 75 Appendix D.
[Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

30. Fuel Sulfur Records: The permittee shall demonstrate compliance with the fuel sulfur limits specified in this permit by maintaining the following records of the sulfur contents.

    a. *Natural Gas Sulfur Limit*: Compliance with the fuel sulfur limit for natural gas shall be demonstrated by keeping reports obtained from the vendor indicating the average sulfur content of the natural gas being supplied from the pipeline for each month of operation. Methods for determining the sulfur content of the natural gas shall be ASTM methods D4084-82, D4468-85, D5504-01, D6228-98 and D6667-01, D3246-81 or more recent versions.

    b. *Distillate Fuel Oil Sulfur Limit*: Compliance with the distillate fuel oil sulfur limit shall be demonstrated by taking a sample, analyzing the sample for fuel sulfur, and reporting the results to each Compliance Authority before initial startup. Sampling the fuel oil sulfur content shall be conducted in accordance with ASTM D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, and one of the following test methods for sulfur in petroleum products: ASTM methods D5453-00, D129-91, D1552-90, D2622-94, or D4294-90. More recent versions of these methods may be used. For each subsequent fuel delivery, the permittee shall maintain a permanent file of the certified fuel sulfur analysis from the fuel vendor. At the request of a Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content.

    The above methods shall be used to determine the fuel sulfur content in conjunction with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3) and 62-4.160(15), F.A.C.]

31. Emissions Performance Test Reports: A report indicating the results of any required emissions performance test shall be submitted to the Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. and in Appendix SC of this permit. [Rule 62-297.310(8), F.A.C.].

32. Excess Emissions Reporting:

    a. *Malfunction Notification:* If emissions in excess of a standard (subject to the specified averaging period) occur due to malfunction, the permittee shall notify the Compliance Authority within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident.

    b. *SIP Quarterly Permit Limits Excess Emissions Report*: Within 30 days following the end of each calendar-quarter, the permittee shall submit a report to the Compliance Authority summarizing periods of CO and NOx emissions in excess of the BACT permit standards following the NSPS format in 40 CFR 60.7(c), Subpart A. Periods of startup, shutdown and malfunction, shall be monitored, recorded and reported as excess emissions when emission levels exceed the standards specified in this permit. In addition, the report shall summarize the CEMS systems monitor availability for the previous quarter.

    c. *NSPS Semi-Annual Excess Emissions Reports*: For purposes of reporting emissions in excess of NSPS Subpart KKKK, excess emissions from the gas turbine are defined as: a specified averaging period over which either the NO_X emissions are higher than the applicable emission limit in 60.4320; or the total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in 60.4330. Within thirty (30) days following each calendar semi-annual period, the permittee shall submit a report on any periods of excess emissions that occurred during the previous semi-annual period to the Compliance Authority.

    {Note: If there are no periods of excess emissions as defined in NSPS Subpart KKKK, a statement to that effect may be submitted with the SIP Quarterly Report to suffice for the NSPS Semi-Annual Report.}

    [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7, and 60.4420]

33. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating hours and emissions from this facility. The permittee shall also keep records sufficient to determine the annual throughput of distillate fuel oil for the fuel oil storage tank for use in the Annual Operating Report. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.

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B. DISTILLATE FUEL OIL STORAGE TANK (EU 007)

This section of the permit addresses the following emissions unit.

ID	Emission Unit Description
007	Two Nominal 6.3 million gallon distillate fuel oil storage tanks

NSPS APPLICABILITY

1. NSPS Subpart Kb Applicability: The distillate fuel oil tanks are not subject to Subpart Kb, which applies to any storage tank with a capacity greater than or equal to 10,300 gallons (40 cubic meters) that is used to store volatile organic liquids for which construction, reconstruction, or modification is commenced after July 23, 1984. Tanks with a capacity greater than or equal to 40,000 gallons (151 cubic meters) storing a liquid with a maximum true vapor pressure less than 3.5 kPa are exempt from the General Provisions (40 CFR 60, Subpart A) and from the provisions of NSPS Subpart Kb,. [40 CFR 60.110b(a) and (c); Rule 62-204.800(7)(b), F.A.C.]

   The listed emission units shall comply with 40 CFR 60, Subpart Kb only to the extent that the regulations apply to the emission unit and its operations.

EQUIPMENT SPECIFICATIONS

2. Equipment: The permittee is authorized to install, operate, and maintain two 6.3 million gallon distillate fuel oil storage tank designed to provide ultra low sulfur fuel oil to the gas turbines. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

EMISSIONS AND PERFORMANCE REQUIREMENTS

3. Hours of Operation: The hours of operation are not restricted (8760 hours per year). [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

NOTIFICATION, REPORTING AND RECORDS

4. Oil Tank Records: The permittee shall keep readily accessible records showing the dimension of each storage vessel and an analysis showing the capacity of each storage tank. Records shall be retained for the life of the facility. The permittee shall also keep records sufficient to determine the annual throughput of distillate fuel oil for each storage tank for use in the Annual Operating Report. [Rule 62-4.070(3) F.A.C]

5. Fuel Oil Records: The permittee shall keep readily accessible records showing the maximum true vapor pressure of the stored liquid. The maximum true vapor pressure shall be less than 3.5 kPa. Compliance with this condition may be demonstrated by using the information from the respective MSDS for the ultra low sulfur fuel oil(s) stored in the tanks. [62-4.070(3) F.A.C.]

   {Permitting Note: An evaluation of several Material Safety Data Sheets (MSDS) by the Department and applicant demonstrated that the vapor pressure is much less than 3.5 kPa for ultralow sulfur fuel oil.}

C. COOLING TOWER (EU 008)

This section of the permit addresses the following new emissions unit.

ID	Emission Unit Description
008	Two 26-cell mechanical draft cooling towers

EQUIPMENT

1. Cooling Tower: The permittee is authorized to install two new 26-cell mechanical draft cooling towers with the following nominal design characteristics: a circulating water flow rate of 306,000 gpm; design hot/cold water temperatures of 105° F/87° F; a design air flow rate of 1,500,000 per cell; a liquid-to-gas air flow ratio of 1.045; and drift eliminators. The permittee shall submit the final design details within 60 days of selecting the vendor. [Application; Design]

EMISSIONS AND PERFORMANCE REQUIREMENTS

2. Drift Rate: Within 60 days of commencing operation, the permittee shall certify that the cooling tower was constructed to achieve the specified drift rate of no more than 0.0005 percent of the circulating water flow rate. [Rule 62-212.400(BACT), F.A.C.]

   {Permitting Note: This work practice standard is established as BACT for PM/PM_{10} emissions from the cooling tower. Based on this design criteria, potential emissions are expected to be less than 100 tons of PM per year and less than 5 tons of PM_{10} per year. Actual emissions are expected be lower than these rates.}.

D. AUXILIARY BOILERS AND PROCESS HEATERS (EU009 – EU 010)

This section of the permit addresses the following emissions units.

ID	Emission Unit Description
014	Two limited use gas-fueled auxiliary boilers (99.8 MMBTU/h and 85,000 lb/hr)
015	Two gas-fueled 10 MMBtu/hr process heaters

NESHAP APPLICABILITY

1. NESHAP Subpart DDDDD Applicability: These emissions units are subject to Subpart DDDDD, which applies to an industrial, commercial, or institutional boiler or process heater as defined in Sec. 63.7575 that is located at, or is part of, a major source of HAP as defined in Sec. 40 CFR 63.2.

   The listed emission units shall comply with 40 CFR 63, NESHAP Subpart DDDDD only to the extent that the regulations apply to the emission unit and its operations (e.g. limited use gas-fueled or small gas-fueled categories.

   [40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, or Institutional Boiler or Process Heater]

NSPS APPLICABILITY

2. NSPS Subpart Dc Applicability: Each 99.8 MMBTU/hr (85,000 lb/hr) auxiliary boiler is subject to all applicable requirements of 40 CFR 60, Subpart Dc which applies to Small Industrial, Commercial, or Institutional Boiler. Specifically, each emission unit shall comply with 40 CFR60.48c Reporting and Recordkeeping Requirements.

   [Rule 62-204.800(7)(b) and 40 CFR 60, NSPS-Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, attached as Appendix Dc].

EMISSIONS AND TESTING REQUIREMENTS

3. Auxiliary Boiler BACT Emissions Limits:

NO_X	CO	VOC, SO_2, PM/PM_{10}
0.05 lb/MMBtu	0.08 lb/MMBtu	2 gr S/100SCF natural gas spec and 10% Opacity

4. Auxiliary Boilers Testing Requirements: Each unit shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_X and visible emissions. The 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 each combined cycle unit.

   [Rule 62-297.310(7)(a)1, F.A.C. and 40 CFR 63.7]

   Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}

5. Annual CO Performance Test for Auxiliary Boilers: Pursuant to 40 CFR 63.7515(e) permittee shall conduct an annual CO test according to Sec. 63.7520. Each annual performance test must be conducted between 10 and 12 months after the previous performance test.

   [40 CFR 63.7515 and Rule 62-204.800(11)(b)84. F.A.C.]

6. Natural Gas Fired Process Heaters BACT Emissions Limits:

NO_X	CO	VOC, SO_2, PM/PM_{10}
0.095 lb/MMBtu	0.08 lb/MMBtu	2 gr S/100SCF natural gas spec and 10% Opacity

7. Natural Gas Fired Process Heaters Testing Requirements: Each unit shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_X and visible emissions. The 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 each combined cycle unit. As an alternative, a Manufacturer certification of emissions characteristics of the purchased model that are at least as stringent as the BACT values can be used to fulfill this requirement.

   [Rule 62-297.310(7)(a)1, F.A.C. and 40 CFR 60.8]

   Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}

EQUIPMENT SPECIFICATIONS

8. Equipment: The permittee is authorized to install, operate, and maintain two auxiliary boilers with a maximum design heat input of 99.8 MMBtu/hr (85,000 lb/hr) each to produce steam during start up of the CTs and two 10 MMBtu/hr process heaters for the purpose of heating the natural gas supply to the CTs. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

PERFORMANCE REQUIREMENTS

9. Hours of Operation: The hours of operation of each limited use gas-fueled auxiliary boiler shall not exceed 500 hours per year. The gas-fueled process heaters are allowed to operate continuously (8760 hours per year). [Applicant Request; Rule 62-210.200(PTE), F.A.C. and 40 CFR 63.7575]

NOTIFICATION, REPORTING AND RECORDS

10. Notification: Initial notification is required for the two limited use 99.8 MMBtu/hr gas-fueled auxiliary boilers. Initial notification is not required for the two small gas-fueled 10 MMBtu/hr process heaters. [40 CFR 63.9, 40 CFR 63.7506(c) and Rule 62-204.800(11)(b) F.A.C.]

11. Reporting: The permittee shall maintain records of the amount of natural gas used in the heaters and auxiliary boilers. These records shall be submitted to the Compliance Authority on an annual basis or upon request. [Rule 62-4.070(3] F.A.C.]

EMERGENCY GENERATOR (011)

This section of the permit addresses the following emissions unit.

ID	Emission Unit Description
011	Four nominal 2,250 Kw Liquid Fueled Emergency Generators – Reciprocating Internal Combustion Engines

NESHAPS APPLICABILITY

1. NESHAPS Subpart ZZZZ Applicability: These emergency generators are Liquid Fueled Reciprocating Internal Combustion Engines (RICE) and are subject to 40 CFR 63, Subpart ZZZZ. They shall comply with 40 CFR 63, NESHAP Subpart ZZZZ only to the extent that the regulations apply to the emissions unit and its operations.

   [40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) and Rule 62-204.800(11)(b)80, F.A.C.]

NSPS APPLICABILITY

2. NSPS Subpart IIII Applicability: These emergency generators are Stationary Compression Ignition Internal Combustion Engines (Stationary ICE) and are subject to 40 CFR 60, Subpart IIII. They shall comply with 40 CFR 60, Subpart IIII only to the extent that the regulations apply to the emission unit and its operations (e.g. non-road, emergency, displacement, capacity, model year selected).

   [40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines]

EQUIPMENT SPECIFICATIONS

3. Equipment: The permittee is authorized to install, operate, and maintain four 2,250 Kw emergency generators. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

EMISSIONS AND PERFORMANCE REQUIREMENTS

4. Hours of Operation and Fuel Specifications: The hours of operation shall not exceed 160 hours per year per each generator. The generators are allowed to burn 0.0015% sulfur fuel oil.
   [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

5. Emergency Generators BACT Emissions Limits:

NO_X	CO	Hydrocarbons[1]	SO_2	PM/PM_{10}
6.9 gm/bhp-hr	8.5 gm/bhp-hr	1.0 gm/bhp-hr	0.0015% S F.O.	0.4 gm/bhp-hr

   Note 1. Hydrocarbons are surrogate for VOC.

   {The BACT limits are equal to the values corresponding to the Tier 1 values cited in the proposed rule 40 CFR 60, Subpart IIII}

6. Emergency Generators Testing Requirements: Each unit shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_X and visible emissions. The 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 each combined cycle unit. As an alternative, an EPA Certification of emissions characteristics of the purchased model that are at least as stringent as the BACT values and the use of ULS fuel oil can be used to fulfill this requirement.
   [Rule 62-297.310(7)(a)1, F.A.C.; 40 CFR 60.8 and 40 CFR 60.4211]

Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}

NOTIFICATION, REPORTING AND RECORDS

7. Notifications: Initial notification are required pursuant to 40 CFR 60.7, 40 CFR 63.9, and 40 CFR 63.6590 (b) (i) for the four 2,250 Kw RICE units.

8. Reporting: The permittee shall maintain records of the amount of liquid fuel used. These records shall be submitted to the Compliance Authority on an annual basis or upon request. [Rule 62-4.070(3] F.A.C.].

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

EMERGENCY FIRE PUMP (012)

This section of the permit addresses the following emissions unit.

ID	Emission Unit Description
012	One emergency diesel fire pump engine (< 300 hp) and 500 gallon fuel oil storage tank.

NSPS APPLICABILITY

1. NSPS Subpart IIII Applicability: The fire pump engine is an Emergency Stationary Compression Ignition Internal Combustion Engine (Stationary ICE) and is subject to 40 CFR 60, Subpart IIII. It shall comply with 40 CFR 60, Subpart IIII only to the extent that the regulations apply to the emissions unit and its operations (e.g. fire pumps, horsepower, model year selected).

   [40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.]

EQUIPMENT SPECIFICATIONS

2. Equipment: The permittee is authorized to install, operate, and maintain one diesel engine driven fire pump (< 300 hp) and an associated 500 gallon fuel oil storage tank.

EMISSIONS AND PERFORMANCE REQUIREMENTS

3. Hours of Operation: The fire pump may operate in response to emergency conditions and 80 non-emergency hours per year for maintenance testing.
   [Applicant Request; Rule 62-210.200 (PTE), F.A.C.]

4. Authorized Fuel: This unit shall fire low sulfur fuel oil (or superior fuel), which shall contain no more than 0.05% sulfur by weight. [Rules 62-210.200(PTE) and 62-212.400 (BACT), F.A.C.]

   Compliance with the distillate fuel oil sulfur limit shall be demonstrated by taking a sample, analyzing the sample for fuel sulfur, and reporting the results to each Compliance Authority before initial startup. Sampling the fuel oil sulfur content shall be conducted in accordance with ASTM D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, and one of the following test methods for sulfur in petroleum products: ASTM methods D5453-00, D129-91, D1552-90, D2622-94, or D4294-90. More recent versions of these methods may be used. For each subsequent fuel delivery, the permittee shall maintain a permanent file of the certified fuel sulfur analysis from the fuel vendor. At the request of a Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content.

5. Fire Pump Engine BACT Emissions Limits:

The following limits apply based on the size category of the fire pump located at the facility.

Size (hp)	CO	NMHC+NO_X	PM
175 ≤ hp < 300	2.6	7.8	0.40

Note 1. Non-Methane Hydrocarbons (NMHC) are surrogate for VOC.

{The BACT limits are equal to the values corresponding to the size class indicated above and cited in 40 CFR 60, Subpart IIII}

6. Fire Pump Engine Certification: Manufacturer certification shall be provided to the Department in lieu of actual testing. [Rule 62-212.400 (BACT), F.A.C. and 40 CFR 60.411]

Appendix 2: Air Construction PSD Permit PSD-FL-396

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

PERMITTEE:

Florida Power and Light Company (FP&L)
700 Universe Boulevard
Juno Beach, Florida 33408

Authorized Representative:
Randall R. LaBauve, Vice President

FP&L West County Energy Center
DEP File No. 0990646-002-AC
Permit No. PSD-FL-396
SIC No. 4911
Expires: December 31, 2013

PROJECT AND LOCATION

This permit authorizes the construction of the third nominal 1,250 megawatt combined cycle unit (Unit 3) and ancillary equipment at the Florida Power and Light Company (FP&L) West County Energy Center.

The proposed project will be located at 20505 State Road 80, Loxahatchee, Florida 33470. The UTM coordinates are Zone 17; 562.19 kilometers East; 2953.04 kilometers North.

STATEMENT OF BASIS

This air construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The project was processed in accordance with the requirements of Rule 62-212.400, F.A.C., the preconstruction review program for the Prevention of Significant Deterioration (PSD) of Air Quality. The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

CONTENTS

Section I. General Information
Section II. Administrative Requirements
Section III. Emissions Units Specific Conditions
Section IV. Appendices

Joseph Kahn, Director — (Date) 7/30/08
Division of Air Resource Management

FACILITY DESCRIPTION

The FP&L West County Energy Center (WCEC) was previously approved for construction as a nominal 2,500 megawatt (MW) greenfield power plant. The previously approved construction underway is for two nominal 1,250 MW gas-fired combined cycle units (Units 1 and 2) that will use ultralow sulfur diesel (ULSD) fuel oil (FO) as backup fuel.

Units 1 and 2 will each consist of: three nominal 250 megawatt (MW) Model 501G combustion turbine-electrical generators (CTG) with evaporative inlet cooling systems; three supplementary-fired heat recovery steam generators (HRSG) with selective catalytic reduction (SCR) reactors; one nominal 428 mmBtu/hour (lower heating value - LHV) gas-fired duct burner (DB) located within each of the three HRSG; three 149 feet exhaust stacks; one 26 cell mechanical draft cooling tower; and a common nominal 500 MW steam-electrical generator (STG).

Previously approved ancillary equipment under construction and installation includes: four emergency generators; two natural gas fired fuel heaters; one emergency diesel fired pump; two diesel fuel storage tanks; two auxiliary steam boilers; and other associated support equipment.

This permit authorizes construction of another 1,250 MW gas-fired combined cycle unit (Unit 3) identical to the description given above for Units 1 and 2. Additional ancillary equipment for Unit 3 will include two emergency generators, two natural gas fired fuel heaters and associated equipment. Unit 3 will use some of the infrastructure and ancillary equipment already under construction including the diesel storage tanks and auxiliary boilers.

{Note: Throughout this permit, the electrical generating capacities represent nominal values for the given operating conditions.}

NEW EMISSIONS UNITS

This permit authorizes construction and installation of the following new emissions units.

ID	Emission Unit Description
013	Unit 3A – one nominal 250 MW CTG with supplementary-fired HRSG
014	Unit 3B – one nominal 250 MW CTG with supplementary-fired HRSG
015	Unit 3C – one nominal 250 MW CTG with supplementary-fired HRSG
016	One 26 cell mechanical draft cooling tower
017	Two nominal 10 MMBtu/hr natural gas-fired process heaters
018	Two nominal 2,250 KW (~ 21 MMBtu/hr) emergency generators

REGULATORY CLASSIFICATION

The facility will be a major Prevention of Significant Deterioration (PSD) stationary source in accordance with Rule 62-212.400, Florida Administrative Code (F.A.C.). Unit 3 is subject to the PSD rules including a determination of best available control technology (BACT).

The facility will be a Title V or "Major Source" of air pollution in accordance with Chapter 213, F.A.C. because the potential emissions of at least one regulated pollutant exceed 100 tons per year (TPY) or because it is a Major Source of hazardous air pollutants (HAP). Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter ($PM/PM_{10}/PM_{2.5}$), sulfur dioxide (SO_2), volatile organic compounds (VOC) and sulfuric acid mist (SAM).

The facility under construction is subject to several subparts under 40 Code of Federal Regulations (CFR), Part 60 – Standards of Performance for New Stationary Sources (NSPS). Unit 3 is subject to 40 CFR 60, Subpart KKKK – NSPS for Stationary Combustion Turbines that Commence Construction after February 18, 2005.

This rule also applies to duct burners (DB) that are incorporated into combined cycle projects. Two additional emergency generators are subject to 40 CFR 60, Subpart IIII – NSPS for Stationary Compression Ignition Internal Combustion Engines. Two additional process heaters are subject to 40 CFR 60, Subpart Dc – NSPS Requirements for Small Industrial Commercial-Institutional Steam Generating Units.

The facility under construction is a major source of hazardous air pollutants (HAP) and is subject to several subparts under 40 CFR Part 63 - National Emission Standards for Hazardous Air Pollutants (NESHAP). Unit 3 is potentially subject to 40 CFR 63, Subpart YYYY – NESHAP for Stationary Combustion Turbines. The applicability of this rule has been stayed for lean premix and diffusion flame gas-fired CTG such as planned for this project.

The facility will operate units subject to the Title IV Acid Rain provisions of the Clean Air Act (CAA).

The facility will be subject to the Clean Air Interstate Rule (CAIR) in accordance with the Final Department Rules issued pursuant to CAIR as implemented by the Department in Rule 62-296.470, F.A.C.

The facility under construction was certified under the Florida Power Plant Siting Act, 403.501-518, F.S. and Chapter 62-17, F.A.C. The Unit 3 project is also subject to certification.

APPENDICES

The following Appendices are attached as part of this permit.

Appendix A: Subparts A from NSPS 40 CFR 60 and NESHAP 40 CFR 63; Identification of General Provisions.

Appendix BD: Final BACT Determinations and Emissions Standards.

Appendix GC: General Conditions.

Appendix Dc: NSPS Subpart Dc Requirements for Small Industrial Commercial-Institutional Steam Generating Units.

Appendix IIII: NSPS Requirements for Compression Ignition Internal Combustion Engines (ICE).

Appendix KKKK: NSPS Requirements for Gas Turbines, 40 CFR 60, Subpart KKKK.

Appendix SC: Standard Conditions.

Appendix XS: Semiannual NSPS Excess Emissions Report.

Appendix YYYY: NESHAP Requirements for Gas Turbines, 40 CFR 63, Subpart YYYY.

Appendix ZZZZ: NESHAP Requirements for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ.

RELEVANT DOCUMENTS

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action and are on file with the Department.

- Permit application and supplemental information received on December 6 and December 21, 2007;
- Department's request for additional information (RAI) January 4, 2008;
- Response to RAI received March 14, 2008; and
- Draft permit package issued on April 25, 2008.

SECTION II. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct, operate or modify an emissions unit shall be submitted to the Permitting Authority, which is the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP or the Department) at 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. Copies of all such documents shall also be submitted to the Compliance Authority. Telephone: (850)488-0114. Fax: (850)921-9533.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Southeast District Office. The mailing address and phone number of the Southeast District Office are: Department of Environmental Protection, Southeast District Office, 400 North Congress Avenue, Suite 200, West Palm Beach, Florida 33401. Telephone: (561)681-6632. Fax: (561)681-6790.

3. Appendices: The following Appendices are attached as part of this permit: Appendices A, BD, Dc, GC (General Conditions), IIII, KKKK, SC, XS, YYYY and ZZZZ.

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

6. Modifications: No emissions unit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Construction and Expiration: The permit expiration date includes sufficient time to complete construction, perform required testing, submit test reports, and submit an application for a Title V operation permit to the Department. Approval to construct shall become invalid for any of the following reasons: construction is not commenced within 18 months after issuance of this permit; construction is discontinued for a period of 18 months or more; or construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. In conjunction with an extension of the 18-month period to commence or continue construction (or to construct the project in phases), the Department may require the permittee to demonstrate the adequacy of any previous determination of BACT for emissions units regulated by the project. For good cause, the permittee may request that this PSD air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, 62-210.300(1), and 62-212.400(6)(b), F.A.C.]

8. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Bureau of Air Regulation with copies to the Compliance Authority.
[Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

SECTION III - EMISSIONS UNITS SPECIFIC CONDITIONS

A. COMBINED CYCLE UNIT 3 – COMBUSTION TURBINE GENERATORS (EU 013, 014, and 015)

This section of the permit addresses the following emissions units.

Combined Cycle Unit 3 and associated equipment

Description: Combined Cycle Unit 3 will be comprised of emissions units (EU) 013, 014, and 015. Each EU will consist of: a Model M501G CTG with automated control, inlet air filtration system and evaporative cooling, a gas-fired HRSG with DB, a HRSG stack, and associated support equipment. The project also includes one STG that will serve the combined cycle unit.

Fuels: Each CTG fires natural gas as the primary fuel and ULSD fuel oil as a restricted alternate fuel.

Generating Capacity: Each of the three CTG has a nominal generating capacity of 250 MW. The STG has a nominal generating capacity of 500 MW. The total nominal generating capacity of the "3 on 1" combined cycle unit is approximately 1,250 MW. The total nominal generating capacity of the facility is 3,750 MW.

Controls: The efficient combustion of natural gas and restricted firing of ULSD fuel oil minimizes the emissions of CO, PM/PM_{10}, SAM, SO_2 and VOC. Dry Low-NO_X (DLN) combustion technology for gas firing and water injection for oil firing reduce NO_X emissions. A SCR system further reduces NO_X emissions.

Stack Parameters: Each HRSG has a stack at least 149 feet tall with a nominal diameter of 22 feet. The Department may require the permittee to perform additional air dispersion modeling should the actual specified stack dimensions change. The following summarizes the exhaust characteristics without the DB:

Fuel	Heat Input Rate (LHV)	Compressor Inlet Temp.	Exhaust Temp., °F	Flow Rate ACFM
Gas	2,333 MMBtu/hour	59° F	195° F	1,330,197
Oil	2,117 MMBtu/hour	59° F	293° F	1,533,502

Continuous Monitors: Each stack is equipped with continuous emissions monitoring systems (CEMS) to measure and record CO and NO_X emissions as well as flue gas oxygen or carbon dioxide content.

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: Determinations of the Best Available Control Technology (BACT) were made for carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter (PM/PM_{10}), sulfuric acid mist (SAM), sulfur dioxide (SO_2) and volatile organic compounds (VOC).

   See Appendix BD of this permit for a summary of the final BACT determinations.
   [Rule 62-212.400(BACT), F.A.C.]

2. NSPS Requirements: The CTG shall comply with all applicable requirements of 40 CFR 60, listed below, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The Department determines that compliance with the BACT emissions performance requirements also assures compliance with the New Source Performance Standards given in 40 CFR 60, Subpart KKKK. Some separate reporting and monitoring may be required by the individual subparts.

   a. *Subpart A, General Provisions*, including:
      - 40 CFR 60.7, Notification and Record Keeping
      - 40 CFR 60.8, Performance Tests
      - 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
      - 40 CFR 60.12, Circumvention
      - 40 CFR 60.13, Monitoring Requirements

- 40 CFR 60.19, General Notification and Reporting Requirements

b. *Subpart KKKK, Standards of Performance for Stationary Gas Turbines*: These provisions include standards for CTG and DB.

3. NESHAP Requirements: The combustion turbines are subject to 40 CFR 63, Subpart A, Identification of General Provisions and 40 CFR 63, Subpart YYYY, National Emissions Standard for Hazardous Air Pollutants for Stationary Combustion Gas Turbines. The project must comply with the Initial Notification requirements set forth in Sec. 63.6145 but need not comply with any other requirement of Subpart YYYY until EPA takes final action to require compliance and publishes a document in the Federal Register. (Reference: Appendix YYYY and Appendix A, NESHAP Subpart A of this permit).

EQUIPMENT AND CONTROL TECHNOLOGY

4. Combustion Turbines-Electrical Generators (CTG): The permittee is authorized to install, tune, operate, and maintain three Model 501G CTG each with a nominal generating capacity of 250 MW. Each CTG shall include an automated control system and have dual-fuel capability. Ancillary equipment includes an inlet air filtration system and an evaporative inlet air-cooling system. The CTG will utilize DLN combustors. [Application and Design]

5. Heat Recovery Steam generators (HRSG): The permittee is authorized to install, operate, and maintain three new HRSG with separate exhaust stacks. Each HRSG shall be designed to recover exhaust heat energy from one of the three CTG (3A to 3C) and deliver steam to the steam turbine-electrical generator (STG). Each HRSG may be equipped with a gas-fired duct burner (DB) having a nominal heat input rate of 428 MMBtu per hour (LHV).

6. CTG/Supplementary-fired HRSG Emission Controls

a. *Dry Low NO_X (DLN) Combustion*: The permittee shall operate and maintain the DLN system to control NO_X emissions from each CTG when firing natural gas. Prior to the initial emissions performance tests required for each CTG, the DLN combustors and automated control system shall be tuned to achieve sufficiently low CO and NO_X values to meet the CO and NO_X limits with the additional SCR control technology described below. Thereafter, each turbine shall be maintained and tuned in accordance with the manufacturer's recommendations.

b. *Wet Injection (WI)*: The permittee shall install, operate, and maintain a WI system (water or steam) to reduce NO_X emissions from each CTG when firing ULSD fuel oil. Prior to the initial emissions performance tests required for each CTG, the WI system shall be tuned to achieve sufficiently low CO and NO_X values to meet the CO and NO_X limits with the additional SCR control technology described below. Thereafter, each turbine shall be maintained and tuned in accordance with the manufacturer's recommendations.

c. *Selective Catalytic Reduction (SCR) System*: The permittee shall install, tune, operate, and maintain an SCR system to control NO_X emissions from each CTG when firing either natural gas or distillate fuel oil. The SCR system consists of an ammonia (NH_3) injection grid, catalyst, ammonia storage, monitoring and control system, electrical, piping and other ancillary equipment. The SCR system shall be designed, constructed and operated to achieve the permitted levels for NO_X and NH_3 emissions.

d. *Oxidation Catalyst*: The permittee shall design and build the project to facilitate possible future installation of an oxidation catalyst system to control CO emissions from each CTG/supplementary-fired HRSG. The permittee may install the oxidation catalyst during project construction or, after notifying the Department, at a future date as described in Specific Condition 12.h.

e. *Ammonia Storage:* In accordance with 40 CFR 60.130, the storage of ammonia shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68.

[Design and Rule 62-212.400(BACT), F.A.C.]

PERFORMANCE RESTRICTIONS

7. Permitted Capacity – Combustion Turbine-Electric Generators (CTG): The nominal heat input rate to each CTG is 2,333 MMBtu per hour when firing natural gas and 2,117 MMBtu per hour when firing distillate fuel oil (based on a compressor inlet air temperature of 59° F, LHV of each fuel, and 100% load). Heat input rates will vary depending upon CTG characteristics, ambient conditions, alternate methods of operation, and evaporative cooling. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(PTE), F.A.C.]

8. Permitted Capacity - HRSG Duct Burners (DB): The total nominal heat input rate to the DB for each HRSG is 428 MMBtu per hour based on the LHV of natural gas. Only natural gas shall be fired in the duct burners. [Rule 62-210.200(PTE), F.A.C.]

9. Authorized Fuels: The CTG shall fire natural gas as the primary fuel, which shall contain no more than 2.0 grains of sulfur per 100 standard cubic feet (gr S/100 SCF) of natural gas. As a restricted alternate fuel, the CTG may fire ULSD fuel oil containing no more than 0.0015% sulfur by weight. Each CTG shall fire no more than 500 hours of fuel oil, during any calendar year.
[Rules 62-210.200(PTE) and 62-212.400 (BACT), F.A.C.]

10. Hours of Operation: Subject to the operational restrictions of this permit, the CTG may operate throughout the year (8760 hours per year). Restrictions on individual methods of operation are specified below.
[Rules 62-210.200(Definitions - PTE) and 62-212.400 (BACT), F.A.C.]

11. Methods of Operation: Subject to the restrictions and requirements of this permit, the CTG may operate under the following methods of operation.

    a. *Combined Cycle Operation*: Each CTG/HRSG system may operate to produce direct, shaft-driven electrical power and steam-generated electrical power from the steam turbine-electrical generator as a three-on-one combined cycle unit subject to the restrictions of this permit. In accordance with the specifications of the SCR and HRSG manufacturers, the SCR system shall be on line and functioning properly during combined cycle operation or when the HRSG is producing steam.

    b. *Inlet Conditioning*: In accordance with the manufacturer's recommendations and appropriate ambient conditions, the evaporative cooling system may be operated to reduce the compressor inlet air temperature and provide additional direct, shaft-driven electrical power.

    c. *Duct Burner (DB) Firing*: When firing natural gas in a CTG, the respective HRSG may fire natural gas in the DB to raise additional steam for use in the STG or in the operation of CTG components. The total combined heat input rate to the DB (all three HRSG) shall not exceed 3,697,920 MMBtu (LHV) during any consecutive 12 months.

    [Application; Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C.]

A. COMBINED CYCLE UNIT 3 – COMBUSTION TURBINE GENERATORS (EU 013, 014, and 015)

EMISSIONS STANDARDS

12. Emissions Standards: Emissions from each CTG/DB shall not exceed the following BACT standards. Compliance with the BACT limits also insures compliance with the emission limitations in Subpart KKKK.

Pollutant	Fuel	Method of Operation	Stack Test, 3-Run Average		CEMS Block Average
			ppmvd @ 15% O_2	lb/hr [g]	ppmvd @ 15% O_2
CO [a]	Oil	CTG	8.0	42.0	8.0, 24-hr
	Gas	CTG & DB	7.6	52.5	6, 12-month
		CTG Normal Mode	4.1	23.2	
NO_X [b]	Oil	CTG	8.0	82.4	8.0, 24-hr [h]
	Gas	CTG & DB	2.0	24.2	2.0, 24-hr [h]
		CTG Normal Mode	2.0	20.0	
PM/PM_{10} [c]	Oil/Gas	All Modes	2 gr S/100SCF of gas, 0.0015% sulfur FO		
			Visible emissions shall not exceed 10% opacity for each 6-minute block average.		
SAM/SO_2 [d]	Oil/Gas	All Modes	2 gr S/100 SCF of gas, 0.0015% sulfur FO		
VOC [e]	Oil	CTG	6.0	19.6	NA
	Gas	CTG & DB	1.5	5.4	
		CTG Normal Mode	1.2	4.1	
NH_3 [f]	Oil/Gas	CTG, All Modes	5	NA	NA

a. Compliance with the continuous 24-hour CO standards shall be demonstrated based on data collected by the required CEMS. The initial and annual EPA Method 10 tests associated with the certification of the CEMS instruments shall also be used to demonstrate compliance with the individual standards for natural gas, FO, and basic DB mode. The stacks test limits apply only at high load (90-100% of the CTG capacity).

b. Continuous compliance with the 24-hr NO_X standards shall be demonstrated based on data collected by the required CEMS. The initial and annual EPA Method 7E or Method 20 tests associated with demonstration of compliance with 40 CFR 60, Subpart KKKK or certification of the CEMS instruments shall also be used to demonstrate compliance with the individual standards for natural gas, fuel oil, and duct burner modes during the time of those tests. NO_X mass emission rates are defined as oxides of nitrogen expressed as nitrogen dioxide (NO_2).

c. The sulfur fuel specifications combined with the efficient combustion design and operation of each CTG represents (BACT) for $PM/PM_{10}/PM_{2.5}$ emissions. Compliance with the fuel specifications, CO standards, and visible emissions standards shall serve as indicators of good combustion. Compliance with the fuel specifications shall be demonstrated by keeping records of the fuel sulfur content. Compliance with the visible emissions standard shall be demonstrated by conducting tests in accordance with EPA Method 9.

d. The fuel sulfur specifications effectively limit the potential emissions of SAM and SO_2 from the CTG and represent BACT for these pollutants. Compliance with the fuel sulfur specifications shall be determined by the ASTM methods for determination of fuel sulfur as detailed in the draft permit.

e. Compliance with the VOC standards shall be demonstrated by conducting tests in accordance with EPA Method 25A. Optionally, EPA Method 18 may also be performed to deduct emissions of methane and ethane. The emission standards are based on VOC measured as methane. The limits apply only at high load (90-100% of the CTG capacity). Compliance with the CO CEMS based limits at lower loads shall be deemed as compliance with the VOC limit.

f. Compliance with the NH_3 slip standard shall be demonstrated by conducting tests in accordance with EPA Method CTM-027 or EPA Method 320.

g. The mass emission rate standards are based on a turbine inlet condition of 59° F and may be adjusted to actual test conditions in accordance with the performance curves and/or equations on file with the Department.

h. Compliance with the 24-hour block NO_X BACT limits will insure compliance with the less stringent Subpart KKKK limits of 15 and 42 ppmvd for gas and fuel oil respectively on a 30 day rolling average.

[Rule 62-212.400(BACT), F.A.C.; 40 CFR 60, Subpart KKKK]

A. COMBINED CYCLE UNIT 3 – COMBUSTION TURBINE GENERATORS (EU 013, 014, and 015)

EXCESS EMISSIONS

{Permitting Note: The following conditions apply only to the SIP-based emissions standards specified in Condition No. 12 of this section. Rule 62-210.700, F.A.C. (Excess Emissions) cannot vary or supersede any federal provision of the NSPS, or Acid Rain programs.}

13. Operating Procedures: The BACT determinations established by this permit rely on "good operating practices" to reduce emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the CTG, DB, HRSG, and pollution control systems in accordance with the guidelines and procedures established by each manufacturer. The training shall include good operating practices as well as methods of minimizing excess emissions. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

14. Alternate Visible Emissions Standard: Visible emissions due to startups, shutdowns, and malfunctions shall not exceed 10% opacity except for up to ten, 6-minute averaging periods during a calendar day, which shall not exceed 20% opacity. [Rule 62-212.400(BACT), F.A.C.]

15. Definitions:

    a. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions. [Rule 62-210.200(245), F.A.C.]

    b. *Shutdown* is the cessation of the operation of an emissions unit for any purpose. [Rule 62-210.200(230), F.A.C.]

    c. *Malfunction* is defined as any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner. [Rule 62-210.200(159), F.A.C.]

16. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. All such preventable emissions shall be included in any compliance determinations based on CEMS data. [Rule 62-210.700(4), F.A.C.]

17. 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. For each CTG/HRSG system, excess emissions of NO_X and CO resulting from startup, shutdown, or documented malfunctions shall not exceed two hours in any 24-hour period except for the specific cases listed below. A "documented malfunction" means a malfunction that is documented within one working day of detection by contacting the Compliance Authority by telephone, facsimile transmittal, or electronic mail.

    a. *STG/HRSG System Cold Startup*: For cold startup of the STG/HRSG, excess NO_X and CO emissions from any CTG/HRSG system shall not exceed eight (8) hours in any 24-hour period. 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 STG system, each CTG/HRSG system is sequentially brought on line at low load to gradually increase the temperature of the STG and prevent thermal metal fatigue. Note that shutdowns and documented malfunctions are separately regulated in accordance with the requirements of this condition.}

    b. *Shutdown Combined Cycle Operation*: For shutdown of the combined cycle operation, excess NO_X and CO emissions from any CTG/HRSG system shall not exceed three (3) hours in any 24-hour period.

c. *CTG/HRSG System Cold Startup*: For cold startup of a CTG/HRSG system, excess NO_X and CO emissions shall not exceed four (4) hours in any 24-hour period. "Cold startup of a CTG/HRSG system" is defined as a startup after the pressure in the high-pressure (HP) steam drum falls below 450 psig for at least a one-hour period.

d. *Fuel Switching*: For fuel switching, excess NO_X and CO emissions shall not exceed two (2) hours in any 24-hour period.

18. Ammonia Injection: Ammonia injection shall begin as soon as operation of the CTG/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 CTG. [Design; Rules 62-212.400(BACT) and 62-210.700, F.A.C.]

19. DLN Tuning: CEMS data collected during initial or other major DLN tuning sessions shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer's specifications. A "major tuning session" would occur after completion of initial construction, a combustor change-out, a major repair or maintenance to a combustor, or other similar circumstances. Prior to performing any major tuning session, the permittee shall provide the Compliance Authority with an advance notice of at least 14 days that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail. [Design; Rule 62-4.070(3), F.A.C.]

EMISSIONS PERFORMANCE TESTING

20. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
CTM-027 or 320	Procedure for Collection and Analysis of Ammonia in Stationary Source. {Notes: This is an EPA conditional test method. The minimum detection limit shall be 1 ppm.} Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train. The ascarite trap may be omitted or the interference trap of section 10.1 may be used in lieu of the silica gel and ascarite traps.}
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography {Note: EPA Method 18 may be used (optional) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions.}
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines
25A	Determination of Volatile Organic Concentrations

No other methods may be used for compliance testing unless prior written approval is received from the administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C.
[Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

21. Initial Compliance Determinations: 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. Each CTG shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_X, VOC, visible emissions, and ammonia slip. Each unit shall be tested when firing natural gas, when using the duct burners and when firing distillate fuel oil. Referenced method data collected during the required Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the initial CO and NO_X standards. With appropriate flow measurements (or fuel measurements and approved F-factors), CEMS data may be used to demonstrate compliance with the CO and NO_X mass rate emissions standards. CO and NO_X emissions recorded by the CEMS shall also be reported for each run during tests for visible emissions, VOC and ammonia slip. The Department may require the permittee to conduct additional tests after major replacement or major repair of any air pollution control equipment, such as the SCR catalyst, oxidation catalyst, DLN combustors, etc. [Rule 62-297.310(7)(a)1, F.A.C. and 40 CFR 60.8]

22. Continuous Compliance: The permittee shall demonstrate continuous compliance with the 24-hour CO and NO_X emissions standards based on data collected by the certified CEMS. Within 45 days of conducting any RATA on a CEMS, the permittee shall submit a report to the Compliance Authority summarizing results of the RATA. Compliance with the CO emission standards also serves as an indicator of efficient fuel combustion and oxidation catalyst operation, which reduces emissions of particulate matter and volatile organic compounds. The Department also reserves the right to use data from the continuous monitoring record and from annual RATA tests to determine compliance with the short term CO and NO_X limits for each method of operation given in Condition 12 above. [Rule 62-212.400 (BACT), F.A.C.]

23. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), each CTG shall be tested to demonstrate compliance with the emission standards for visible emissions. NO_X and CO emissions data collected during the required continuous monitor Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the CO and NO_x standards. Annual testing to determine the ammonia slip shall be conducted while firing the primary fuel. NO_X emissions recorded by the CEMS shall be reported for each ammonia slip test run. CO emissions recorded by the CEMS shall be reported for the visible emissions observation period.

    {Permitting Note: After initial compliance with the VOC standards is demonstrated, annual compliance tests for VOC emissions are not required. Compliance with the continuously monitored CO standards shall indicate efficient combustion and low VOC emissions. The Department retains the right to require VOC testing if CO limits are exceeded or for the reasons given in Appendix SC, Condition 17, Special Compliance Tests.}

    [Rules 62-212.400 (BACT) and 62-297.310(7)(a)4, F.A.C.]

24. Compliance for SAM, SO_2 and $PM/PM_{10}/PM_{2.5}$: In stack compliance testing is not required for SAM, SO_2 and $PM/PM_{10}/PM_{2.5}$. Compliance with the limits and control requirements for SAM, SO_2 and $PM/PM_{10}/PM_{2.5}$ is based on the recordkeeping required in Specific Condition 30, visible emissions testing and CO continuous monitoring. [Rule 62-212.400 (BACT), F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

25. Continuous Emissions Monitoring System(s) (CEMS): The permittee shall install, calibrate, maintain, and operate CEMS to measure and record the emissions of CO and NO_X from the combined cycle CTG in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this section. Each monitoring system shall be installed, calibrated, and properly functioning prior to the initial performance tests. Within one working day of discovering emissions in excess of a CO or NO_X standard (and subject to the specified averaging period), the permittee shall notify the Compliance Authority.

a. *CO Monitors:* The CO monitors shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A within 60 calendar days of achieving permitted capacity as defined in Rule 62-297.310(2), F.A.C., but no later than 180 calendar days after initial startup. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately considering the allowable methods of operation and corresponding emission standards.

b. *NO_X Monitors:* Each NO_X monitor shall be certified, operated, and maintained in accordance with the requirements of 40 CFR 75. Record keeping and reporting shall be conducted pursuant to Subparts F and G in 40 CFR 75. The RATA tests required for the NO_X monitor shall be performed using EPA Method 20 or 7E in Appendix A of 40 CFR 60.

c. *Diluent Monitors:* The oxygen (O_2) or carbon dioxide (CO_2) content of the flue gas shall be monitored at the location where CO and NO_X are monitored to correct the measured emissions rates to 15% oxygen. If a CO_2 monitor is installed, the oxygen content of the flue gas shall be calculated using F-factors that are appropriate for the fuel fired. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.

26. CEMS Data Requirements:

a. *Data Collection*: Emissions shall be monitored and recorded at all times including startup, operation, shutdown, and malfunction except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over an hour. If the CEMS measures concentration on a wet basis, the CEM system shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the owner or operator may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Final results of the CEMS shall be expressed as ppmvd corrected to 15% oxygen. The CEMS shall be used to demonstrate compliance with the CEMS emission standards for CO and NO_X as specified in this permit. For purposes of determining compliance with the CEMS emissions standards of this permit, missing (or excluded) data shall not be substituted. Upon request by the Department, the CEMS emission rates shall be corrected to International Organization of Standardization (ISO) conditions.

b. *Valid Hour*: Hourly average values shall begin at the top of each hour. Each hourly average value shall be computed using at least one data point in each fifteen-minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, an hourly value shall be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour). If less than two such data points are available, the hourly average value is not valid. An hour in which any oil is fired is attributed towards compliance with the permit standards for oil firing. The permittee shall use all valid measurements or data points collected during an hour to calculate the hourly average values.

c. *24-hour Block Averages*: A 24-hour block shall begin at midnight of each operating day and shall be calculated from 24 consecutive hourly average emission rate values. If a unit operates less than 24 hours during the block, the 24-hour block average shall be the average of all available valid hourly average emission rate values for the 24-hour block. For purposes of determining compliance with the 24-hour CEMS standards, the missing data substitution methodology of 40 CFR Part 75, subpart D,

shall not be utilized. Instead, the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block. [Rule 62-212.400(BACT), F.A.C.]

{Permitting Note: There may be more than one 24-hour compliance demonstration required for CO and NO_X emissions depending on the use of alternate methods of operation}

d. *12-month Rolling Averages:* Compliance with the long-term emission limit for CO shall be based on a 12-month rolling average. Each 12-month rolling average shall be the arithmetic average of all valid hourly averages collected during the current calendar month and the previous 11 calendar months.

e. *Data Exclusion:* Each CEMS shall monitor and record emissions during all operations including episodes of startup, shutdown, malfunction, fuel switches and DLN tuning. Some of the CEMS emissions data recorded during these episodes may be excluded from the corresponding CEMS compliance demonstration subject to the provisions of Condition Nos. 17 and 19 of this section. All periods of data excluded shall be consecutive for each such episode and only data obtained during the described episodes (startup, shutdown, malfunction, fuel switches, DLN tuning) may be used for the appropriate exclusion periods. The permittee shall minimize the duration of data excluded for such episodes to the extent practicable. Data recorded during such episodes shall not be excluded if the episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented. Best operational practices shall be used to minimize hourly emissions that occur during such episodes. Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented, shall be prohibited.

f. *Availability*: Monitor availability for the CEMS shall be 95% or greater in any calendar quarter. The quarterly excess emissions report shall be used to demonstrate monitor availability. In the event 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit, except as otherwise authorized by the Department's Compliance Authority.

[Rule 62-297.520, F.A.C.; 40 CFR 60.7(a)(5) and 40 CFR 60.13; 40 CFR Part 51, Appendix P; 40 CFR 60, Appendix B - Performance Specifications; 40 CFR 60, Appendix F - Quality Assurance Procedures; and Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

27. Ammonia Monitoring Requirements: In accordance with the manufacturer's specifications, the permittee shall install, calibrate, operate and maintain an ammonia flow meter to measure and record the ammonia injection rate to the SCR system by the time of the initial compliance tests. The permittee shall document and periodically update the general range of ammonia flow rates required to meet permitted emissions levels over the range of load conditions allowed by this permit by comparing NO_X emissions recorded by the CEM system with ammonia flow rates recorded using the ammonia flow meter. During NO_X monitor downtimes or malfunctions, the permittee shall operate at the ammonia flow rate and, as applicable for fuel oil firing, the water-to-fuel ratio, that are consistent with the documented flow rate for the combustion turbine load condition. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

A. COMBINED CYCLE UNIT 3 – COMBUSTION TURBINE GENERATORS (EU 013, 014, and 015)

RECORDS AND REPORTS

28. Monitoring of Capacity: The permittee shall monitor and record the operating rate of each CTG and HRSG DB system on a daily average basis, considering the number of hours of operation during each day (including the times of startup, shutdown, malfunction and fuel switching). Such monitoring shall be made using a monitoring component of the CEMS required above, or by monitoring daily rates of consumption and heat content of each allowable fuel in accordance with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

29. Monthly Operations Summary: By the fifth calendar day of each month, the permittee shall record the following for each fuel in a written or electronic log for each CTG for the previous month of operation: fuel consumption, hours of operation, hours of duct firing, and the updated 12-month rolling totals for each. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request by the Department. The fuel consumption shall be monitored in accordance with the provisions of 40 CFR 75, Appendix D. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

30. Fuel Sulfur Records: The permittee shall demonstrate compliance with the fuel sulfur limits specified in this permit by maintaining the following records of the sulfur contents.

    a. *Natural Gas:* Compliance with the fuel sulfur limit for natural gas shall be demonstrated by keeping reports obtained from the vendor indicating the average sulfur content of the natural gas being supplied from the pipeline for each month of operation. Methods for determining the sulfur content of the natural gas shall be ASTM methods D4084-82, D4468-85, D5504-01, D6228-98 and D6667-01, D3246-81 or more recent versions.

    b. *ULSD Fuel Oil:* Compliance with the distillate fuel oil sulfur limit shall be demonstrated by taking a sample, analyzing the sample for fuel sulfur, and reporting the results to each Compliance Authority before initial startup. Sampling the fuel oil sulfur content shall be conducted in accordance with ASTM D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, and one of the following test methods for sulfur in petroleum products: ASTM methods D5453-00, D129-91, D1552-90, D2622-94, or D4294-90. More recent versions of these methods may be used. For each subsequent fuel delivery, the permittee shall maintain a permanent file of the certified fuel sulfur analysis from the fuel vendor. At the request of a Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content.

    The above methods shall be used to determine the fuel sulfur content in conjunction with the provisions of 40 CFR 75, Appendix D. [Rules 62-4.070(3) and 62-4.160(15), F.A.C.]

31. Emissions Performance Test Reports: A report indicating the results of any required emissions performance test shall be submitted to the Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. and in Appendix SC of this permit. [Rule 62-297.310(8), F.A.C.].

32. Excess Emissions Reporting:

    a. *Malfunction Notification:* If emissions in excess of a standard (subject to the specified averaging period) occur due to malfunction, the permittee shall notify the Compliance Authority within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident.

b. *SIP Quarterly Permit Limits Excess Emissions Report*: Within 30 days following the end of each calendar-quarter, the permittee shall submit a report to the Compliance Authority summarizing periods of CO and NO_X emissions in excess of the BACT permit standards following the NSPS format in 40 CFR 60.7(c), Subpart A. Periods of startup, shutdown and malfunction, shall be monitored, recorded and reported as excess emissions when emission levels exceed the standards specified in this permit. In addition, the report shall summarize the CEMS systems monitor availability for the previous quarter.

c. *NSPS Semi-Annual Excess Emissions Reports*: For purposes of reporting emissions in excess of NSPS Subpart KKKK, excess emissions from the CTG are defined as: a specified averaging period over which either the NO_X emissions are higher than the applicable emission limit in 60.4320; or the total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in 60.4330. Within thirty (30) days following each calendar semi-annual period, the permittee shall submit a report on any periods of excess emissions that occurred during the previous semi-annual period to the Compliance Authority.

{Note: If there are no periods of excess emissions as defined in NSPS Subpart KKKK, a statement to that effect may be submitted with the SIP Quarterly Report to suffice for the NSPS Semi-Annual Report.}

[Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C.; 40 CFR 60.7, and 60.4420]

33. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating hours and emissions from this facility. The permittee shall also keep records sufficient to determine the annual throughput of distillate fuel oil for the fuel oil storage tank for use in the Annual Operating Report. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

B. COOLING TOWER (EU 016)

This section of the permit addresses the following new emissions unit.

ID	Emission Unit Description
016	One 26-cell mechanical draft cooling tower

EQUIPMENT

1. Cooling Tower: The permittee is authorized to install one new 26-cell mechanical draft cooling tower with the following nominal design characteristics: a circulating water flow rate of 304,000 gpm; design hot/cold water temperatures of 92 °F/76 °F; a design air flow rate of 1,350,000 actual cubic feet per minute (acfm) per cell; a liquid-to-air flow ratio of 1.13; and drift eliminators. The permittee shall submit the final design details within 60 days of selecting the vendor. [Application and Design]

EMISSIONS AND PERFORMANCE REQUIREMENTS

2. Drift Rate: Within 60 days of commencing operation, the permittee shall certify that the cooling tower was constructed to achieve the specified drift rate of no more than 0.0005 percent of the circulating water flow rate. [Rule 62-212.400(BACT), F.A.C.]

   {Permitting Note: This work practice standard is established as BACT for PM/PM_{10} emissions from the cooling tower. Based on this design criteria, potential emissions are expected to be less than 100 tons of PM per year and less than 5 tons of PM_{10} per year. Actual emissions are expected be lower than these rates.}.

C. PROCESS HEATERS (EU 017)

This section of the permit addresses the following emissions units.

ID	Emission Unit Description
017	Two gas-fueled 10 MMBtu/hr process heaters

NSPS APPLICABILITY

1. NSPS Subpart Dc Applicability: Each process heater is subject to all applicable requirements of 40 CFR 60, Subpart Dc which applies to Small Industrial, Commercial, or Institutional Boiler. Specifically, each emission unit shall comply with 40 CFR60.48c Reporting and Recordkeeping Requirements.

   [Rule 62-204.800(7)(b) and 40 CFR 60, NSPS-Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, attached as Appendix Dc].

EMISSIONS STANDARDS

2. Natural Gas Fired Process Heaters BACT Emissions Limits:

NO_X	CO	VOC, SO_2, PM/PM_{10}
0.095 lb/MMBtu	0.08 lb/MMBtu	2 gr S/100SCF natural gas spec and 10% Opacity

3. Natural Gas Fired Process Heaters Testing Requirements: Each unit shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_X and visible emissions. The 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 combined cycle unit. As an alternative, a Manufacturer certification of emissions characteristics of the purchased model that are at least as stringent as the BACT values can be used to fulfill this requirement.

   [Rule 62-297.310(7)(a)1, F.A.C. and 40 CFR 60.8]

   Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}

EQUIPMENT SPECIFICATIONS

4. Equipment: The permittee is authorized to install, operate, and maintain two 10 MMBtu/hr process heaters for the purpose of heating the natural gas supply to the CTs.
   [Applicant Request and Rule 62-210.200(PTE), F.A.C.]

PERFORMANCE REQUIREMENTS

5. Hours of Operation: The gas-fueled process heaters are allowed to operate continuously (8760 hours per year). [Applicant Request and Rule 62-210.200(PTE), F.A.C.]

NOTIFICATION, REPORTING AND RECORDS

6. Notification: Initial notification is required for the two small gas-fueled 10 MMBtu/hr process heaters. [40 CFR 60.7]

7. Reporting: The permittee shall maintain records of the amount of natural gas used in the heaters. These records shall be submitted to the Compliance Authority on an annual basis or upon request. [Rule 62-4.070(3] F.A.C.]

D. EMERGENCY GENERATORS (018)

This section of the permit addresses the following emissions unit.

ID	Emission Unit Description
018	Two nominal 2,250 kilowatts (kw) Liquid Fueled Emergency Generators – Reciprocating Internal Combustion Engines (model year 2007-2010)

NESHAPS APPLICABILITY

1. NESHAPS Subpart ZZZZ Applicability: These emergency generators are Liquid Fueled Reciprocating Internal Combustion Engines (RICE) and shall comply with applicable provisions of 40 CFR 63, Subpart ZZZZ.

   [40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) and Rule 62-204.800(11)(b)80, F.A.C.]

NSPS APPLICABILITY

2. NSPS Subpart IIII Applicability: These emergency generators are Stationary Compression Ignition Internal Combustion Engines (Stationary ICE) and shall comply with applicable provisions of 40 CFR 60, Subpart IIII.

   [40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines]

EQUIPMENT SPECIFICATIONS

3. Equipment: The permittee is authorized to install, operate, and maintain two 2,250 kw emergency generators. [Applicant Request and Rule 62-210.200(PTE), F.A.C.]

EMISSIONS AND PERFORMANCE REQUIREMENTS

4. Hours of Operation and Fuel Specifications: The hours of operation shall not exceed 160 hours per year per each generator. The generators are allowed to burn ultralow sulfur diesel fuel oil (0.0015% sulfur). [Applicant Request and Rule 62-210.200(PTE), F.A.C.]

5. Emergency Generators BACT Emissions Limits:

NO_X	CO	Hydrocarbons[1]	SO_2	PM/PM_{10}
6.9 gm/bhp-hr	8.5 gm/bhp-hr	1.0 gm/bhp-hr	0.0015% ULSD FO	0.4 gm/bhp-hr

   Note 1. Hydrocarbons are surrogate for VOC.

   {The BACT limits are equal to the values corresponding to the Table 1 values cited in 40 CFR 60, Subpart IIII}

6. Emergency Generators Testing Requirements: Each unit shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_X and visible emissions. The 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 combined cycle unit. As an alternative, an EPA Certification of emissions characteristics of the purchased model that are at least as stringent as the BACT values and the use of ULSD fuel oil can be used to fulfill this requirement.
   [Rule 62-297.310(7)(a)1, F.A.C.; 40 CFR 60.8 and 40 CFR 60.4211]

7. Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}

NOTIFICATION, REPORTING AND RECORDS

8. Notifications: Permittee shall submit initial notification as required by 40 CFR 60.7, 40 CFR 63.9, and 40 CFR 63.6590 (b) (i) for the two 2,250 kW RICE units.

9. Reporting: The permittee shall maintain records of the amount of liquid fuel used. These records shall be submitted to the Compliance Authority on an annual basis or upon request. [Rule 62-4.070(3) F.A.C.].

SECTION IV. APPENDICES

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SECTION IV. APPENDIX A

NSPS SUBPART A AND NESHAP SUBPART A, IDENTIFICATION OF GENERAL PROVISIONS

NSPS - SUBPART A, IDENTIFICATION OF GENERAL PROVISIONS

The provisions of this Subpart may be provided in full upon request. Emissions units subject to a New Source Performance Standard of 40 CFR 60 are also subject to the applicable requirements of Subpart A, the General Provisions, including:

§ 60.1 Applicability.

§ 60.2 Definitions.

§ 60.3 Units and abbreviations.

§ 60.4 Address.

§ 60.5 Determination of construction or modification.

§ 60.6 Review of plans.

§ 60.7 Notification and Record Keeping.

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§ 60.16 Priority List.

§ 60.17 Incorporations by Reference.

§ 60.18 General Control Device Requirements.

§ 60.19 General Notification and Reporting Requirements.

Individual subparts may exempt specific equipment or processes from some or all of these requirements. The general provisions may be provided in full upon request.

NESHAP - SUBPART A, IDENTIFICATION OF GENERAL PROVISIONS

The provisions of this Subpart may be provided in full upon request. Emissions units subject to a National Emission Standards for Hazardous Air Pollutants of 40 CFR 63 are also subject to the applicable requirements of Subpart A, the General Provisions, including:

§ 63.1 Applicability.

§ 63.2 Definitions.

§ 63.3 Units and abbreviations.

§ 63.4 Prohibited Activities and Circumvention.

§ 63.5 Preconstruction Review and Notification Requirements.

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§ 63.12 State Authority and Delegations.

§ 63.13 Addresses of State Air Pollution Control Agencies and EPA Regional Offices.

§ 63.14 Incorporation by Reference.

§ 63.15 Availability of Information and Confidentiality.

Individual subparts may exempt specific equipment or processes from some or all of these requirements. The general provisions may be provided in full upon request.

FINAL BACT DETERMINATIONS AND EMISSIONS STANDARDS

Refer to the BACT proposal discussed in the initial Technical Evaluation for this project and to the Final Determination issued with the Final permit for the rationale regarding the following BACT determination.

Pollutant	Fuel	Method of Operation	Stack Test, 3-Run Average		CEMS Block Average
			ppmvd @ 15% O_2	lb/hr [g]	ppmvd @ 15% O_2
CO [a]	Oil	CTG	8.0	42.0	8.0, 24-hr 6, 12-month
	Gas	CTG & DB	7.6	52.5	
		CTG Normal Mode	4.1	23.2	
NO_X [b]	Oil	CTG	8.0	82.4	8.0, 24-hr [h]
	Gas	CTG & DB	2.0	24.2	2.0, 24-hr [h]
		CTG Normal Mode	2.0	20.0	
PM/PM_{10} [c]	Oil/Gas	All Modes	2 gr S/100SCF of gas, 0.0015% sulfur FO Visible emissions shall not exceed 10% opacity for each 6-minute block average.		
SAM/SO_2 [d]	Oil/Gas	All Modes	2 gr S/100 SCF of gas, 0.0015% sulfur FO		
VOC [e]	Oil	CTG	6.0	19.6	NA
	Gas	CTG & DB	1.5	5.4	
		CTG Normal Mode	1.2	4.1	
NH_3 [f]	Oil/Gas	CTG, All Modes	5	NA	NA

a. Compliance with the continuous 24-hour CO standards shall be demonstrated based on data collected by the required CEMS. The initial and annual EPA Method 10 tests associated with the certification of the CEMS instruments shall also be used to demonstrate compliance with the individual standards for natural gas, FO, and basic DB mode. The stacks test limits apply only at high load (90-100% of the CTG capacity).

b. Continuous compliance with the 24-hr NO_X standards shall be demonstrated based on data collected by the required CEMS. The initial and annual EPA Method 7E or Method 20 tests associated with demonstration of compliance with 40 CFR 60, Subpart KKKK or certification of the CEMS instruments shall also be used to demonstrate compliance with the individual standards for natural gas, fuel oil, and duct burner modes during the time of those tests. NO_X mass emission rates are defined as oxides of nitrogen expressed as NO_2.

c. The sulfur fuel specifications combined with the efficient combustion design and operation of each CTG represents (BACT) for $PM/PM_{10}/PM_{2.5}$ emissions. Compliance with the fuel specifications, CO standards, and visible emissions standards shall serve as indicators of good combustion. Compliance with the fuel specifications shall be demonstrated by keeping records of the fuel sulfur content. Compliance with the visible emissions standard shall be demonstrated by conducting tests in accordance with EPA Method 9.

d. The fuel sulfur specifications effectively limit the potential emissions of SAM and SO_2 from the CTG and represent BACT for these pollutants. Compliance with the fuel sulfur specifications shall be determined by the ASTM methods for determination of fuel sulfur as detailed in the draft permit.

e. Compliance with the VOC standards shall be demonstrated by conducting tests in accordance with EPA Method 25A. Optionally, EPA Method 18 may also be performed to deduct emissions of methane and ethane. The emission standards are based on VOC measured as methane. The limits apply only at high load (90-100% of the CTG capacity). Compliance with the CO CEMS based limits at lower loads shall be deemed as compliance with the VOC limit.

f. Compliance with the NH_3 slip standard shall be demonstrated by conducting tests in accordance with EPA Method CTM-027 or EPA Method 320.

g. The mass emission rate standards are based on a turbine inlet condition of 59° F and may be adjusted to actual test conditions in accordance with the performance curves and/or equations on file with the Department.

h. Compliance with the 24-hour block NO_X BACT limits will insure compliance with the less stringent Subpart KKKK limits of 15 and 42 ppmvd for gas and fuel oil respectively on a 30 day rolling average.

Two natural gas heaters (EU 017) are required for the project. The purpose of these units is to heat natural gas above dew point temperature and prevent condensation. According to an interpretive memorandum by EPA in response to a Department inquiry, gas heaters in the subject size category are subject to 40 CFR 60, Subpart Dc– Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. The two natural gas heaters are subject to all applicable provisions of Subpart Dc.

The provisions of Subpart Dc may be provided in full upon request and are also available beginning at Section 60.40c at: www.access.gpo.gov/nara/cfr/waisidx_07/40cfr60_07.html .

The key reporting and recordkeeping requirements are listed below.

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by § 60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) Not applicable.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(b)-(f) Not applicable.

(g) The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day.

(h) Not applicable.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

GENERAL CONDITIONS

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. 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.
2. 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.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and 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 or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
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.
5. 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 Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or 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.
7. 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 a reasonable time, access to the premises, where the permitted activity is located or conducted to:

   a. Have access to and copy and records that must be kept under the conditions of the permit;
   b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
   c. 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.
8. 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:

   a. A description of and cause of non-compliance; and

   b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

   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.

9. 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 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. 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.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, 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.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

    a. Determination of Best Available Control Technology (X);
    b. Determination of Prevention of Significant Deterioration (X);
    c. Compliance with National Emission Standards for Hazardous Air Pollutants (X); and
    d. Compliance with New Source Performance Standards (X).

14. The permittee shall comply with the following:

    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 or this permit. These materials shall be retained at least three 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;
        2) The person responsible for performing the sampling or measurements;
        3) The dates analyses were performed;
        4) The person responsible for performing the analyses;
        5) The analytical techniques or methods used; and
        6) The results of such analyses.

15. 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 that 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.

SECTION IV. APPENDIX IIII

NSPS REQUIREMENTS FOR STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES

The two nominal 2,250 kilowatts emergency generators are regulated as one Unit for purposes of the ARMS or Emissions Unit No. 018. They are subject to the applicable requirements of 40 CFR 60, Subpart IIII--Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. The provisions of this Subpart may be provided in full upon request and are also available beginning at Section 60.4200 at:

www.access.gpo.gov/nara/cfr/waisidx_07/40cfr60_07.html .

Combined Cycle Unit 3 is regulated as Emissions Units 013, 014 and 015. The gas turbines and the HRSG duct burners are part of the combined cycle unit. These emissions units shall comply with all applicable requirements of this Subpart.

NEW SOURCE PERFORMANCE STANDARDS (NSPS)

On July 6, 2006, EPA published the final NSPS Subpart KKKK (of 40 CFR 60) provisions for combustion turbines in the Federal Register. Subpart KKKK was adopted within Rule 62-204.800(8), F.A.C. Table 1 is a listing of the key NO_X limits from Subpart KKKK that apply to the West County Unit 3 project. The full provisions may be provided in full upon request and are also available beginning at Section 60.4300 at www.access.gpo.gov/nara/cfr/waisidx_07/40cfr60_07.html .

Table 1 to Subpart KKKK of Part 60. NO_X Emission Limits for New Stationary Combustion Turbines.*

Combustion turbine type	Combustion turbine heat input at peak load (HHV)	NO_X emission standard
New, modified, or reconstructed turbine firing natural gas	> 850 MMBtu/h	15 ppm at 15 percent O_2or 54 ng/J of useful output (0.43 lb/MWh).
New, modified, or reconstructed turbine firing fuels other than natural gas	> 850 MMBtu/h	42 ppm at 15 percent O_2or 160 ng/J of useful output (1.3 lb/MWh).

* Only the portion of the table that includes the NO_X Requirements applicable to the WCEC Unit 3 project.

STANDARD CONDITIONS

Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at this facility.

EMISSIONS AND CONTROLS

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future 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 the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]

2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]

3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) 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.]

4. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permitee shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]

6. VOC or OS Emissions: No person shall 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. [Rule 62-296.320(1), F.A.C.]

7. 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. [Rules 62-296.320(2) and62-210.200(203), F.A.C.]

8. 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 percent opacity. [Rule 62-296.320(4)(b)1, F.A.C.]

9. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

TESTING REQUIREMENTS

10. 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.]

11. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. 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. [Rule 62-297.310(2), F.A.C.]

12. 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.]

13. Test Procedures: Tests shall be conducted in accordance with all applicable requirements of Chapter 62-297, F.A.C.

    a. Required Sampling Time. 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. The minimum observation period for a visible emissions compliance test shall be thirty (30) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur.

    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. 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.

    [Rule 62-297.310(4), F.A.C.]

14. 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.]

15. Sampling Facilities: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C.

16. Test Notification: 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. [Rule 62-297.310(7)(a)9, F.A.C.]

17. 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 in a 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. [Rule 62-297.310(7)(b), F.A.C.]

18. Test Reports: 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. 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. 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.]

RECORDS AND REPORTS

19. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]

20. 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 March 1st of each year. [Rule 62-210.370(2), F.A.C.]

SEMIANNUAL NSPS EXCESS EMISSIONS REPORT

FIGURE 1. SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

[Note: This form is referenced in 40 CFR 60.7, Subpart A-General Provisions]

Pollutant *(Circle One)*: SO_2 NO_X TRS H_2S CO Opacity

Reporting period dates: From _____ to _____

Company: _____

Emission Limitation: _____

Address: _____

Monitor Manufacturer: _____

Model No.: _____

Date of Latest CMS Certification or Audit: _____

Process Unit(s) Description: _____

Total source operating time in reporting period [1]: _____

Emission data summary [1]	**CMS performance summary** [1]
1. Duration of excess emissions in reporting period due to:	1. CMS downtime in reporting period due to:
a. Startup/shutdown ..... ____	a. Monitor equipment malfunctions ..... ____
b. Control equipment problems ..... ____	b. Non-Monitor equipment malfunctions ..... ____
c. Process problems ..... ____	c. Quality assurance calibration ..... ____
d. Other known causes ..... ____	d. Other known causes ..... ____
e. Unknown causes ..... ____	e. Unknown causes ..... ____
2. Total duration of excess emissions ..... ____	2. Total CMS Downtime ..... ____
3. Total duration of excess emissions x (100) / [Total source operating time] ..... ____ %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time] ..... ____ %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted.

Note: On a separate page, describe any changes since the last in CMS, process or controls.

I certify that the information contained in this report is true, accurate, and complete.

Name: _____

Signature: _____ *Date*: _____

Title: _____

SECTION IV. APPENDIX YYYY
NESHAP REQUIREMENTS FOR COMBUSTION TURBINES

The WCEC Unit 3 combustion turbines are subject to all applicable requirements of 40 CFR 63, Subpart YYYY--National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines. The provisions of this Subpart may be provided in full upon request and are also available beginning at Section 63.6080 at:

www.access.gpo.gov/nara/cfr/waisidx_07/40cfr63c_07.html .

Following is important information related to the present status of the mentioned subpart.

Staying of the Rule

On August 18, 2004, EPA stayed the effectiveness of 40 CFR 63, Subpart YYYY for lean premix gas turbines such as the one proposed for the Unit 4 Project. Following is the change in 40 CFR 63 that stays effectiveness:

§ 63.6095(d) Stay of standards for gas-fired subcategories.

If you start up a new or reconstructed stationary combustion turbine that is a lean premix gas-fired stationary combustion turbine or diffusion flame gas-fired stationary combustion turbine as defined by this subpart, you must comply with the Initial Notification requirements set forth in Sec. 63.6145 but need not comply with any other requirement of this subpart until EPA takes final action to require compliance and publishes a document in the Federal Register.

Requirements

The applicable requirements in Subpart YYYY are:

§ 63.6145 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.7(b) and (c), 63.8(e), 63.8(f)(4), and 63.9(b) and (h) that apply to you by the dates specified.

(b) As specified in § 63.9(b)(2), if you start up your new or reconstructed stationary combustion turbine before March 5, 2004, you must submit an Initial Notification not later than 120 calendar days after March 5, 2004.

(c) As specified in § 63.9(b), if you start up your new or reconstructed stationary combustion turbine on or after March 5, 2004, you must submit an Initial Notification not later than 120 calendar days after you become subject to this subpart.

(d) If you are required to submit an Initial Notification but are otherwise not affected by the emission limitation requirements of this subpart, in accordance with § 63.6090(b), your notification must include the information in § 63.9(b)(2)(i) through (v) and a statement that your new or reconstructed stationary combustion turbine has no additional emission limitation requirements and must explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary combustion turbine).

(e) If you are required to conduct an initial performance test, you must submit a notification of intent to conduct an initial performance test at least 60 calendar days before the initial performance test is scheduled to begin as required in § 63.7(b)(1).

(f) If you are required to comply with the emission limitation for formaldehyde, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). For each performance test required to demonstrate compliance with the emission limitation for formaldehyde, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test.

[Rules 62-4.070(3) and 62-204.800, F.A.C.; Subparts A and YYYY in 40 CFR 63]

NESHAPS REQUIREMENTS-STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES

The two nominal 2,250 kilowatts emergency generators are regulated as one Unit for purposes of the ARMS or Emissions Unit No. 018. These two reciprocating internal combustion engines (RICE) are subject to the notification requirements of 40 CFR 63, Subpart ZZZZ--National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

The complete provisions of Subpart ZZZZ may be provided in full upon request and are also available beginning at Section 63.6580 at:

www.access.gpo.gov/nara/cfr/waisidx_07/40cfr63d_07.html .

Appendix 3: Underground Injection Control Permit 247895-007-UC

Florida Department of Environmental Protection

Southeast District
400 N. Congress Avenue, Suite 200
West Palm Beach, Florida 33401

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

NOTICE OF PERMIT

May 1, 2008

Mr. Randall LaBauve, Vice President
FPL
700 Universe Blvd.
Juno Beach FL 33408

PALM BEACH COUNTY
UIC - FPL West County Energy Center
Class I IW-1, IW-2 & DZMW-1
Position: 26° 41' 26" N / 80° 22' 30" W
File #: 247895-007-UC

Dear Mr. LaBauve:

Enclosed is Permit Number 247895-007-UC, to construct and operationally test a Class I injection well system. Specifically to: convert exploratory well EW-2 to injection well IW-1, construct IW-2 and add dual zone monitoring well DZMW-1. This permit has been issued pursuant to Section(s) 403.087, Florida Statutes and Florida Administrative Codes 62-4, 62-520, 62-522, 62-528, 62-550, 62-600 and 62-601. The system will be constructed at the FPL West County Energy Center, located at 20505 State Road 80, Loxahatchee, Florida.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, 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, Mail Stop 35, 3900 Commonwealth Blvd., 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 this Notice is filed with the Clerk of the Department.

Should you have any questions, please contact Mark A. Silverman, P.G., or Joseph R. May, P.G., of this office at (561) 681-6778 or (561) 681-6691, respectively.

Executed in West Palm Beach, Florida.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Jack Long 5-1-08

Jack Long
District Director
Southeast District

Date

JL/LAB/JRM/mas

Copies furnished to:

UIC Permitting File, SED	Richard Deuerling, FDEP/TLH	Cathy McCarty, FDEP/TLH
Steve Anderson, SFWMD	Barbara Linkiewicz, FPL-Juno Beach	John Gnecco, FPL-Juno Beach
Jonathan Shaw, Golder Assoc.	David McNabb, McNabb Hydrologic	Nancy Marsh, USEPA-Region IV
Tom Lefevre, PBCHD	Mike Halpin, FDEP Siting Office	Ron Hoenstein, OGC
Alexandria Larson	Palm Beach Environmental Coalition c/o Panagiotis Tsolkas	
Rosa Durando	Michael Christiansen	Barry Silver, Esq.
Southern States Land and Timber		

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on 5/1/08 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to the §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Vanessa DeLaune — Clerk

5/1/08 — Date

Department of Environmental Protection

Southeast District
400 N. Congress Avenue — Suite 200
West Palm Beach, Florida 33401

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

Mr. Randall LaBauve, Vice President
FPL
700 Universe Blvd.
Juno Beach FL 33408

PALM BEACH COUNTY
UIC - FPL West County Energy Center
Class I IW-1, IW-2 & DZMW-1
Position: 26° 41' 26" N / 80° 22' 30" W
File No.: 247895-007-UC

Dear Mr. LaBauve:

The Department of Environmental Protection gives notice that An Intent to Issue Permit (Permit No. 0247895-007-UC) has been prepared for Mr. Randall LaBauve, Vice President, FPL, Juno Beach, FL 33408, to convert and operationally test exploratory well EW-2 to a Class I injection well IW-1, construct and operationally test injection well IW-2, and incorporate permitted for construction dual zone monitoring well DZMW-1 into the Class I injection well system. These three wells would then constitute an injection well system under this permit for the disposal of industrial wastewater at the FPL, West County Energy Center, located at 20505 State Road 80, Loxahatchee, Florida. This permit has been issued pursuant to Section(s) 403.087, Florida Statutes and Florida Administrative Codes 62-4, 62-520, 62-522, 62-528, 62-550, 62-600 and 62-601.

The injection interval, for each injection well, shall be in the "Boulder Zone" in the lower Oldsmar Formation, and is planned to be in an approximate interval from 2775 feet below pad level to the total depth of the each well, (IW-1 total depth is 3400 ft below pad level; IW-2 total depth is expected to be 3250 feet below pad level). The confinement of the injection zone from overlying underground source of drinking water (USDW) aquifers and fluid movement adjacent to the well bore of the injection well will be monitored by two monitoring zones in monitoring well DZMW-1. All depths projected in the permit application (and referenced above) are preliminary; final depths in Injection Well IW-2 will be determined during construction and field testing. The Class I injection well system is designed for use in the new West County Energy Center for sufficient disposal of non hazardous wastewater, consisting primarily of cooling tower blowdown water generated as a result of electrical power generation.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, 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, Mail Stop 35, 3900 Commonwealth Blvd., 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 this Notice is filed with the Clerk of the Department.

Should you have any questions, please contact Joseph May, P.G., or Vanessa Osborne, of this office at (561) 681-6691 or (561) 681-6745, respectively.

Executed in West Palm Beach, Florida.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

11-1-08

Jack Long
District Director
Southeast District

Date

JL/LAB/jrm

cc: UIC Permitting File, SED
Steve Anderson, SFWMD
Jonathan Shaw, Golder Assoc.
Tom Lefevre, PBCHD
Palm Beach Environmental Coalition c/o Panagiotis Tsolkas
Rosa Durando
Southern States Land and Timber
Richard Deuerling, FDEP/TLH
Barbara Linkiewicz, FPL-Juno Beach
David McNabb, McNabb Hydrologic Con.
Mike Halpin, FDEP Siting Office
Michael Christiansen
Cathy McCarty, FDEP/TLH
John Gnecco, FPL-Juno Beach
Nancy Marsh, USEPA-Region IV
Ron Hoenstein, OGC
Alexandria Larson
Barry Silver, Esq.

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Vanessa Osborne

Clerk

5/1/08

Date

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Department of Environmental Protection

Southeast District
400 N. Congress Avenue — Suite 200
West Palm Beach, Florida 33401

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

PERMITTEE:
Mr. Randall LaBauve, Vice President
FPL
700 Universe Blvd.
Juno Beach FL 33408

PALM BEACH COUNTY
UIC - FPL West County Energy Center
Class I IW-1, IW-2 & DZMW-1
Position: 26° 41' 26" N / 80° 22' 30" W
File No: 247895-007-UC

PROJECT: Convert and to operationally test exploratory well EW-2 to a Class I injection well IW-1, construct and operationally test injection well IW-2, and incorporate permitted for construction dual zone monitoring well DZMW-1 into the Class I injection well system

This permit is issued under the provisions of Chapter 403.087, Florida Statutes, and Florida Administrative Code (F.A.C.) Rules 62-4, 62-520, 62-522, 62-528, 62-550, 62-600 and 62-601. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

TO CONSTRUCT AND OPERATIONALLY TEST: The injection interval, for each injection well, shall be in the "Boulder Zone" in the lower Oldsmar Formation, and is planned to be in an approximate interval from 2775 feet below pad level to the total depth of the each well, (IW-1 total depth is 3400 ft below pad level; IW-2 total depth is expected to be 3250 feet below pad level). The confinement of the injection zone from overlying underground source of drinking water (USDW) aquifers and fluid movement adjacent to the well bore of the injection well will be monitored by two monitoring zones in monitoring well DZMW-1. All depths projected in the permit application (and referenced above) are preliminary; final depths in Injection Well IW-2 will be determined during construction and field testing. The Class I injection well system is designed for use in the new West County Energy Center for non hazardous wastewater, consisting primarily of cooling tower blowdown water generated as a result of electrical power generation.

IN ACCORDANCE WITH: Application to Construct a Class I Injection Well System received 25 April 2007..

LOCATED AT: FPL West County Energy Center, located at 20505 State Road 80, Loxahatchee, Florida

TO SERVE: the Florida grid

SUBJECT TO: General Conditions 1-24 and Specific Conditions 1-11

GENERAL CONDITIONS:

The following General Conditions are referenced in Florida Administrative Code Rule 62-528.307.

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are "permit conditions" and are binding and enforceable pursuant to Section 403.141, F.S.

2. 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.

3. As provided in Subsection 403.087(7), F.S., the issuance of this permit does not convey any vested rights or exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor 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.

4. This permit conveys no title to land, 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.

5. This permit does not relieve the permittee from liability for harm to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefrom; 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.

6. 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, or are 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.

7. 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:

   a. Have access to and copy any records that must be kept under conditions of this permit;
   b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
   c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

   Reasonable time will depend on the nature of the concern being investigated.

8. 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:

   a. A description of and cause of noncompliance; and

GENERAL CONDITIONS:

b. 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 the 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.

9. 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.

10. 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.

11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-528.350, F.A.C. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records shall be extended automatically unless the Department determines that the records are no longer required.
b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including 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 three 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;
2) the person responsible for performing the sampling or measurements;
3) the dates analyses were performed;
4) the person responsible for performing the analyses;
5) the analytical techniques or methods used
6) the results of such analyses

d. The permittee shall furnish to the Department, within the time requested in writing, any information which the Department requests to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.

GENERAL CONDITIONS:

e. If the permittee becomes aware that 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.

14. All applications, reports, or information required by the Department shall be certified as being true, accurate, and complete.

15. Reports of compliance or noncompliance with, or any progress reports on, requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each scheduled date.

16. Any permit noncompliance constitutes a violation of the Safe Drinking Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

17. 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.

18. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

19. This permit may be modified, revoked and reissued, or terminated for cause, as provided in 40 C.F.R. Sections 144.39(a), 144.40(a), and 144.41 (1998). The filing of a request by the permittee for a permit modification, revocation or reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

20. The permittee shall retain all records of all monitoring information concerning the nature and composition of injected fluid until five years after completion of any plugging and abandonment procedures specified under Rule 62-528.435, F.A.C. The permittee shall deliver the records to the Department office that issued the permit at the conclusion of the retention period unless the permittee elects to continue retention of the records.

21. All reports and other submittals required to comply with this permit shall be signed by a person authorized under Rules 62-528.340(1) or (2), F.A.C. All reports shall contain the certification required in Rule 62-528.340(4), F.A.C.

22. The permittee shall notify the Department as soon as possible of any planned physical alterations or additions to the permitted facility. In addition, prior approval is required for activities described in Rule 62-528.410(1)(h).

23. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or injection activity which may result in noncompliance with permit requirements.

GENERAL CONDITIONS:

24. The permittee shall report any noncompliance which may endanger health or the environment including:

    a. Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water; or
    b. Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water.

    All 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 5 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 times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

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SPECIFIC CONDITIONS:

1. General Requirements

   a. This permit is for FPL to construct and operation test two Class I industrial injection wells, IW-1 and IW-2, and incorporate the dual zone monitoring well, DZMW-1. This permit does not authorize the construction or operational testing of any other well or wells associated with the FPL project.

   b. Four permanent surficial aquifer system monitoring wells, identified as Pad Monitoring Wells (PMWs), shall be located near the corners of the pads to be constructed for IW-2, and shall be identified by location number and pad location, i.e., IW-2-NW, IW-2-NE, IW-2-SW, and IW-2-SE. If located in a traffic area the well head(s) must be protected by traffic bearing enclosure(s) and cover(s). Each cover must lock and be specifically marked to identify the well and its purpose. The PMWs shall be sampled as follows:

      1) During the construction and associated testing phases, the PMWs shall be sampled weekly for chlorides (mg/L), specific conductance (µmho/cm or µS/cm), temperature and water level (relative to the North American Vertical Datum of 1988 [NAVD 88]).
      2) Initial PMW analyses shall be submitted prior to the onset of drilling activities.
      3) The PMWs shall also be sampled for total dissolved solids (mg/L) during the first four weeks of PMW sampling and at all times when specifically requested by the Department.

      The results of the PMW analyses shall be submitted to the Department within 30 days of the completion of the activity. A summary sheet from the FDEP Southeast District is attached for your use when reporting the above information. The PMWs shall be retained in service throughout the construction phase of the project. Upon completion of construction, the permittee may submit a request to the Department for cessation of sampling followed by capping, or plugging and abandonment of these wells.

   c. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures.

   d. No underground injection is allowed that causes or allows movement of fluid into an underground source of drinking water (USDW), except as authorized under the federal regulations at 40 CFR 146.15 and 146.16.

2. Construction and Testing Requirements

   a. The measurement points for drilling and logging operations shall be surveyed and referenced to the North American Vertical Datum of 1988 (NAVD 88) prior to the onset of drilling activities for the injection well and associated dual zone monitoring well.

   b. Blow-out preventers shall be installed on well IW-2 prior to penetration of the Floridan aquifer system.

SPECIFIC CONDITIONS:

c. No drilling operations shall begin without an approved disposal site for drilling fluids, cuttings, or waste. It shall be the permittee's responsibility to obtain the necessary approval(s) for disposal prior to the start of construction. A detailed disposal plan shall be submitted to the Department prior to the commencement of drilling activities (for the injection and monitoring wells).

d. The Department shall be notified 7 days prior to the mobilization of drilling operations to the site.

e. Hurricane Preparedness – Upon the issuance of a "Hurricane Watch" by the National Weather Service, the preparations to be made include but are not necessarily limited to the following:

1) Secure all on-site salt and stockpiled additive materials to prevent surface and/or ground water contamination.

2) Properly secure drilling equipment and rig(s) to prevent damage to well(s) and on-site treatment process equipment.

f. Waters spilled during construction or testing of the injection well system shall be contained and properly disposed.

g. Department notification and approvals are required prior to the following stages of construction and testing:

1) Notification of operation to install tubing into IW-1, three full business days
2) Notifications of video survey, pressure test and radioactive survey of IW-1, three full business days
3) Spud date of IW-2, three full business days
4) Each casing seat landing shall be recommended and approved prior to installation, IW-2
5) Notification of operation to install tubing into IW-2, three full business days
6) Notifications of video survey, pressure test and radioactive survey of IW-2, three full business days
7) Request to short term injection test, IW-1 and IW-2
8) Operational testing inspection request, IW-1 and IW-2
9) Notification that weekly sampling of DZMW-1 has commenced, within three full business days

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SPECIFIC CONDITIONS:

h. The conversion program to convert exploratory well EW-2 into injection well IW-1, shall at a minimum include:

1) Conduct a video survey to inspect the length of the nominal 20-inch diameter final casing and outer mandrel of the YBI positive seal packer
2) Install approximately 2770 feet of nominal 16-inch diameter fiberglass reinforced pipe (FRP) tubing and YBI positive seal inner mandrel
3) Fill entire annulus between the FRP tubing and final casing with 1% Baracor 100® solution immediately prior to seating the FRP tubing into the outer mandrel
4) Conduct pressure test of the fluid filled annulus for a minimum of 60 minutes; with an anticipated pressure of 150 psig
5) Perform radioactive tracer survey (RTS)
6) Conduct preliminary capacity injection test
7) Conduct step injection test
8) A cement well pad of approximately 30 feet x 50 feet shall be constructed
9) The Final Report shall include a professional interpretation of pad monitoring well data and a recommendation to continue monitoring or to properly plug and abandon the wells

i. The construction and testing program for injection well IW-2, shall at a minimum include:

1) Single shot drift surveys shall be performed at interval of not less than 90 feet as the well boring is advanced
2) Advance 68-inch nominal bore to approximately 40 feet below pad level and install nominal 60-inch steel casing
3) Advance a 12-inch nominal pilot hole from approximately 225 feet below pad level using mud rotary method
4) Perform X-Y caliper and gamma ray logs.
5) Ream a 60-inch nominal bore, using the mud rotary method, to approximately 225 feet below pad level
6) Perform X-Y caliper and gamma ray logs
7) Install 52-inch steel casing to approximately 200 feet below pad level, cement into place with a temperature log after each lift.
8) Advance a 12-inch nominal pilot hole, using the mud rotary method, to approximately 975 feet below pad level using mud rotary method
9) Perform dual induction, spontaneous potential, X-Y caliper, and gamma ray logs
10) Ream a 52-inch nominal bore, using the mud rotary method, to approximately 950 feet below pad level
11) Perform X-Y caliper and gamma ray logs
12) Install 42-inch steel casing to approximately 950 feet below pad level, cement into place with a temperature log after each lift
13) Advance a 12-inch nominal pilot hole, using the mud rotary method, to approximately 2000 feet below pad level using closed circuit reverse air method. A minimum of two packer tests shall be performed in the interval to determine the depth of the 10,000 mg/L TDS isocline (i.e., base of the USDW).
14) Perform dual induction, spontaneous potential, X-Y caliper, gamma ray, sonic, flowmeter, fluid conductivity, and temperature logs.
15) Cement pilot hole from bottom to 1100 feet below pad level or shallower.
16) Ream a 42-inch nominal bore, using the closed circuit reverse air method, to approximately 1975 feet below pad level

SPECIFIC CONDITIONS:

17) Perform X-Y caliper and gamma ray logs
18) Install 30-inch steel casing to approximately 1970 feet below pad level, cement the lower 200 feet into place with a temperature log after each lift
19) Advance a 12-inch nominal pilot hole, using the closed circuit reverse air method, to approximately 3250 feet below pad level. A minimum of three packer tests shall be performed in the interval to obtain confining characteristics of field selected intervals. Similarly, a minimum of three cores with core intervals with a minimum of 10 ft in length. Each coring event shall results in a minimum of 3 feet of recovered core. The packer testing and core collecting are anticipated to occur between 1950 and 2800 feet below pad level.
20) Perform dual induction, spontaneous potential, X-Y caliper, gamma ray, sonic, flowmeter, fluid conductivity, temperature logs. Additionally, either a video survey or bore hole televiewer shall be run, the method contingent upon acceptable clarity.
21) Install a drillable cement plug at approximately 2750 feet below pad level and grout pilot from the plug to approximately 2050 feet below pad level.
22) Ream a 30-inch nominal bore, using the closed circuit reverse air method, to approximately 2770 feet below pad level then a 20-inch nominal bore to approximately 3250 feet below pad level
23) Perform X-Y caliper and gamma ray logs
24) Install 20-inch seamless steel casing with YBI positive seal packer outer mandrel to approximately 2770 feet below pad level, cement to within 250 feet below pad level (leaving approximately 250 of open interval at the top to be cemented subsequent to cement bond logging) with a temperature log after each lift
25) Conduct casing pressure test using an inflatable packer for a minimum of 60 minutes, with an anticipated pressure of 150 psig.
26) Perform cement bond log
27) Cement uppermost 250 feet interval of the final casing annulus

28) Conduct a video survey to inspect the length of the nominal 20-inch diameter final casing and outer mandrel of the YBI positive seal packer. Should installation of the FRP tubing not occur within four months of this video survey, then another video survey shall be accomplished and approved prior to installation of the FRP tubing.
29) Install approximately 2770 feet of nominal 16-inch diameter fiberglass reinforced pipe (FRP) tubing and YBI positive seal inner mandrel.
30) Fill entire annulus between the FRP tubing and final casing with 1% Baracor 100® solution immediately prior to seating the FRP tubing into the outer mandrel.
31) Conduct pressure test of the fluid filled annulus for a minimum of 60 minutes; with an anticipated pressure of 150 psig.
32) Perform radioactive tracer survey
33) Conduct preliminary capacity injection test
34) Conduct step injection test
35) A cement well pad of approximately 30 feet x 50 feet shall be constructed
36) The Final Report shall include a professional interpretation of pad monitoring well data and a recommendation to continue monitoring of to properly plug and abandon the wells

SPECIFIC CONDITIONS:

j. Dual zone monitoring well DZMW-1 shall be added to this permit upon acceptance of the Final Report of the construction either separately under its permit number (Permit No. 247895-006-UC) or under this permit. Sampling and analysis for determination of ambient ground water quality in both monitoring zones shall occur prior to any injection into either IW-1 or IW-2. Additionally, weekly sampling of the monitoring zones shall commence a minimum of four weeks prior to use of either IW-1 or IW-2.

k. If additives are used during grouting, for lost circulation or for any other reason — which were not approved in the permit application — information on their properties shall be submitted to FDEP prior to their use — for Department review and approval. Use of such additives may be authorized in a minor permit modification after receipt of an application form, supporting data, and the applicable fee.

l. Packer testing shall at a minimum include the following:

1) Packer tests will be performed in the anticipated confining zones. At least one packer test supporting the demonstration of confinement will be obtained from each interval under consideration, based on the data collected to date, to be a confining unit. To the extent feasible, the packer tests in the confining zones shall be performed over intervals that are sufficiently narrow so as not to include high hydraulic conductivity beds.
2) Water samples shall be collected from each packer test, and analyzed for total dissolved solids (TDS), chlorides, sulfate, temperature compensated specific conductance, ammonia and Total Kjeldahl Nitrogen (TKN), at a minimum.

m. The confinement of the injection zone in the injection well system from overlying aquifers shall be monitored using the dual zone monitoring well and a ground water monitoring program. The intention of this monitoring well system design is to have the upper monitoring zone to be the compliance point with regard to matters of the USDW and to have the lower monitoring zone to be the compliance point with regard to vertical movement out of the injection zone.

n. Confinement for the Injection Well IW-2 location shall be demonstrated using, at a minimum, directly measured lithologic properties, geophysical evidence, and tests performed while pumping the formation.

o. Test results pertaining to confinement shall include and specifically reference the following informational and quality control items:

1) Information that documents the calibration of tools, including field checks prior to testing.
2) The conditioning/development of the borehole prior to logging, including the techniques used and the time periods in which applied, and
3) Pertaining to packer and pump testing — recording the pumping rate regularly throughout the test to account for possible variations in the pumping rate, and providing information regarding the detection of packer leaks, if any, during testing.

p. Representative samples of circulation fluid shall be collected during the drilling of the pilot hole of Injection Well IW-2. Additionally, for IW-2, the representative samples of circulation fluid shall be collected a minimum of every 30 feet in drilling from a depth of approximately 1,000 feet bls to the top of the "Boulder Zone" preliminarily estimated at approximately 3,000 feet bls.

SPECIFIC CONDITIONS:

q. If effluent is encountered or suspected during pilot hole drilling and testing, the Department shall be notified immediately by telephone and in writing; with immediate appropriate precautionary measures shall be taken to prevent any upward fluid movement.

r. Mechanical integrity of the injection well shall be determined pursuant to Rules 62-528.300(6)(b)1. and 62-528.300(6)(c), F.A.C.

1) The pressure test for the final casing shall be accepted if tested with a liquid filled casing at 1.5 times the operating pressure at which the well is to be permitted. A test tolerance of not greater than ±5%, (i.e., 5% in total) must be certified by the Engineer of Record.
2) Verification of pressure gauge calibration must be provided to the Department representative at the time of the test and in the certified test report.

s. The Department shall be notified at least three full business prior to all testing for mechanical integrity.

t. All testing for mechanical integrity must be initiated during normal business hours, Monday through Friday.

u. UIC-TAC meetings are scheduled on the 2nd and 4th Tuesday of each month subject to a five working day prior notice and timely receipt of critical data by all UIC-TAC members. Emergency meetings may be arranged when justified to avoid undue construction delays.

3. Quality Assurance/Quality Control Requirements

a. Pursuant to Rule 62-528.440(5)(b), F.A.C., the Professional Engineer(s) of Record shall certify all documents related to the completion of the Class I injection well system (including the associated Floridan aquifer monitoring well) as a disposal facility. The Department shall be notified immediately of any change of the Engineer(s) of Record.

b. In accordance with Section 492, Florida Statutes, all documents prepared for the geological/hydrogeological evaluation of the injection well system shall be signed and sealed by a Florida Licensed Professional Geologist or qualified Florida Licensed Professional Engineer.

c. Continuous on-site supervision by qualified personnel (engineer or geologist) is required during all testing, geophysical logging and cementing operations.

4. Reporting Requirements

a. This project shall be monitored by the Department with the assistance of the TAC, which consists of representatives of the following agencies

- Department of Environmental Protection, West Palm Beach and Tallahassee
- South Florida Water Management District (SFWMD), West Palm Beach

SPECIFIC CONDITIONS:

- Palm Beach County Health Dept (PBCHD), West Palm Beach

b. The permittee shall provide copies of all correspondence relative to this permit to each member of the UIC-TAC. Such correspondence includes but is not limited to reports, schedules, analyses and geophysical logs required by the Department under the terms of this permit. The permittee is not required to provide specific correspondence to any UIC-TAC member who submits to the permittee a written request to be omitted as a recipient of specific correspondence.

c. A drilling and construction schedule shall be submitted to the Department and all members of the UIC-TAC prior to site preparation for the injection well system.

d. The Department and other applicable agencies must be notified of any unusual or abnormal events occurring during construction, and in the event the permittee is temporarily unable to comply with the provisions of the permit (e.g., on-site spills, artesian flows, large volume circulation losses, equipment damage due to: fire, wind and drilling difficulties, etc.). Any information shall be provided orally or by electronic mail 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 times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

e. The permittee shall report any noncompliance which may endanger health or the environment, including:

1) Any monitoring or other information which indicates that any contaminant may cause an endangerment to a USDW; or

2) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

Any information shall be provided verbally or by electronic mail 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 times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

f. Weekly progress reports shall be submitted throughout the construction period for IW-1 and IW-2. These reports, which may be submitted by electronic mail, shall be submitted within 48 hours of the end of the period of record and shall include at a minimum the following information:

1) A cover letter summary of the daily engineer report, driller's log and a projection for activities in the next reporting period.

SPECIFIC CONDITIONS:

2) Daily engineers report and driller's/work log with detailed descriptions of all drilling progress, cementing, testing, logging, and casing installation activities.
3) Lithologic and geophysical logs, deviation survey results, and water quality test results.
4) Interpretations shall be included with all test results and logs submitted under Items 2) and 3) above.
5) Detailed description of any unusual construction-related events that occur during the reporting period.
6) Weekly water quality analysis and water levels for the eight pad monitoring wells. [See S.C. 1.b.]
7) A certified evaluation of all logging and test results must be submitted with test data.
8) Description of the formations and lithology encountered.
9) Details of cementing operations, including the number of cementing stages, and the following information for each stage of cementing: pumping rate, volume of cement pumped, theoretical fill depth, and actual tag depth. From both the physical tag and the geophysical logs, a percent fill shall be calculated. An explanation of any deviation between actual versus theoretical fill shall be provided.

g. Per Rules 62-528.410(4)(c), 62-528.420(4)(c) and 62-528.605(2), F.A.C., the final selection of specific injection intervals must be approved by the Department. In order to obtain an approval, the permittee shall submit a request to the Department. The request shall be submitted concurrently to all members of the UIC-TAC. All casing seat requests for the injection well and the Floridan aquifer monitoring well shall be accompanied by technical justification. To the extent possible, each casing seat request should address the following items:

1) Lithologic and geophysical logs with interpretations, as the interpretations relate to the casing seat.
2) Water quality data (including but not necessarily limited to TDS concentrations).
3) Identification of confining units, including hydrogeologic data and interpretations.
4) Identification of monitoring zones.
5) Casing depth evaluation (mechanically secure formation, potential for grout seal).
6) Lithologic drilling rate and weight on bit data, with interpretations (related to the casing seat).
7) Identification of the base of the USDW using water quality, Rwa plots, and geophysical log interpretations.

h. An interpretation of all test results and geophysical logs must be submitted with all submittals.

i. The short-term injection test, for IW-1 and IW-2, requests shall contain the following justifications, for each request:

1) Cement bond logs and interpretation.
2) Final downhole television survey with interpretation.
3) Radioactive tracer test results
4) Demonstration of mechanical integrity, which shall include Items 1) through 3) above, and the pressure testing and temperature logging results
5) Reasonable assurance that adequate confinement exists.
6) Planned injection testing procedures.

SPECIFIC CONDITIONS:

j. Upon completion of analysis of cores (when no longer needed by the permittee) and sample cuttings recovered during the construction of Injection Well IW-2, the permittee shall contact the UIC Section of the Department of Environmental Protection in Tallahassee to arrange their transfer to the Florida State Geologic Survey.

k. A final report of the construction and testing of IW-1, IW-2, and DZMW-1 (the Final Report for DZMW-1 may be submitted independently) shall be submitted no later than 120 days after commencement of operational testing, pursuant to Rule 62-528.430(1)(e), F.A.C. This report shall include, at a minimum: definitions of the injection interval, all relevant confining units, the depth of the base of the USDW and all monitoring zones, including all relevant data and interpretations.

5. Operational Testing Requirements

a. The operational testing of the Class I injection well system under this permit shall not commence without written authorization from the Department.

b. Prior to operational testing approval, the following items must be submitted (with the request for operational testing approval) for UIC-TAC review and Department approval:

1) Lithologic and geophysical logs with interpretations

2) A copy of the borehole television survey(s) or borehole televiewer results of the injection well, with interpretation

3) Certification of mechanical integrity and interpreted test data

4) Results of the short-term injection test with interpretation of the data. Each injection well shall first be tested for integrity of construction, and shall be followed by a short term injection test of such duration to allow for the prediction of operating pressure. The test results shall include a calculation or determination of fracture pressure of the injection formation [per Rule 62-528.410(6)(b)3., F.A.C.]. For a minimum of 12 hours, the injection test rate shall be run at no less than the maximum rate at which injection is to be authorized (for operational testing). IW-1 and IW-2 may each be tested at a rate not exceeding 12 feet per second (fps) since, in a multiple well system, this can be allowed for when one of the other injection wells is inoperable due to planned testing or maintenance. However, under normal operation the velocity cannot be permitted to exceed 10 feet per second. Pressure or water level data from the injection zone and both monitoring zones shall be recorded continuously for at least 24 hours before the test and at least 24 hours following the test. The following data shall be recorded, analyzed, and reported for the duration of each injection test (i.e., all data should encompass the entire background, injection and recovery periods):

- injection flow rate, in MGD, with all injection periods recorded
- injection wellhead pressure, in psig
- pressure with no flow (shut-in pressure in psig)

SPECIFIC CONDITIONS:

- monitoring well pressures (upper and lower zones)
- tidal data
- barometric pressure

5) A description of the actual injection procedure including the anticipated maximum pressure and flow rate at which the well will be operated under normal and emergency conditions.

6) Information concerning the compatibility of the injected waste with fluids in the injection zone and minerals in both the injection zone and the confining zone.

7) Certification of completion of well construction.

8) Surface equipment (including piping, pressure gauges and flow meters, and all appurtenances) completion certified by the Engineer of Record.

9) Draft operation and maintenance manual, including a description of surge and water hammer control and emergency discharge management plan procedures. The emergency discharge system must be fully constructed and operational (ready to operate) prior to approval of operational testing.

10) Calibration certificates for pressure gauges and flow meters.

11) Signed and sealed record "as-built" engineering drawings of the injection well system including all well construction, subsurface and surface piping and equipment, and appurtenances.

12) The demonstration of confinement for each injection well location, prepared providing confirmation of confinement and defining the injection and confining sequences utilizing data collected during the drilling, logging and testing of the injection well and dual zone monitoring well. The report shall include the results of hydraulic testing (permeability, porosity, etc.) on the cores, and shall be reviewed and updated as appropriate after the completion of any additional injection/monitoring well pairs in the future from the confining interval. This submittal shall be prepared, signed, and sealed by a Florida Registered Professional Geologist or appropriately qualified Professional Engineer.

13) Background water quality data from the monitoring and injection zones, analyzed for primary and secondary drinking water standards (62-550, F.A.C.) and minimum criteria parameters (62-520, F.A.C.) as attached.

14) Other data obtained during well construction needed by the Department to evaluate whether the well will operate in compliance with Department Rules.
[Rule 62-528.450(3)(a)3.i., F.A.C.]

c. Prior to operational testing, the permittee shall comply with the requirements of Rule 62-528.450(3)(a),(b), and (c), F.A.C.

SPECIFIC CONDITIONS:

d. Pursuant to Rules 62-528.425(1)(a) and 62-528.450(2)(f)3., F.A.C., a wastewater stream analysis (24-hour composite sample) for primary and secondary drinking water standards (Chapter 62-550, F.A.C.) and minimum criteria, see attached list, shall be sampled and submitted, with interpretation to the Department, within 90 days of power plant operations start-up. Biological and VOCs shall be collected by grab or *in situ.* Sampling requirements with regard to the upper and lower monitoring zones may be altered upon review of the results.

e. Pressure gauges and flow meters shall be installed on all wells of the injection well system (i.e., IW-1, IW-2, and DZMW-1) prior to initiating injection activities at the site.

f. Prior to the authorization of operational testing by the Department, the permittee shall contact the UIC Section of the Department, Southeast District, to arrange a site inspection. The inspection will determine if the conditions of the permit have been met and to verify that the injection well system is operational. During the inspection, emergency procedures and reporting requirements shall be reviewed.

6. Operational Testing Conditions

a. Upon receipt of written authorization from the Department [S.C. 5.a.], the operational testing of the injection well system shall be subject to the following conditions:

1) A qualified representative of the Engineer of Record shall be present for the start-up operations.

2) The Department shall be notified in writing of the date of commencement operations.

3) The Department and UIC-TAC will monitor the progress of the operational testing phase of this project. UIC-TAC meetings shall be held if necessary to aid the Department in determining if it may be necessary to modify the operational testing conditions. If requested by the Department, reports evaluating the system's progress shall be submitted to the Department and each member of the UIC-TAC at least two weeks prior to the scheduled UIC-TAC meeting. The conditions for the operational testing period may be modified by the Department at each of these UIC-TAC review intervals.

4) The flow to the injection well at the wellhead shall be monitored and controlled at all times to ensure the maximum injection rate does not exceed the rate at which the well was tested. Should the tested rate be restricted because of a limited volume of source water available during the initial injection test, a second (higher-rate) injection test may be performed during operational testing, to verify capacity at higher flows when sufficient source water volume is available. Department authorization is required to test at the higher rate. An increase in the permitted rate up to 10 feet per second may be authorized in a minor permit modification after receipt of an application form, supporting data, and the applicable fee, should the original rating test not occur with a rate of 10 feet per second.

5) Injection well system monitoring devices:

SPECIFIC CONDITIONS:

a) Pursuant to Rule 62-528.425(1)(b), F.A.C., the injection well system shall be monitored by continuous indicating, recording and totalizing devices to monitor effluent flow rate and volume, and continuous indicating and recording devices to monitor injection pressure and monitoring zone pressure (or water level, as appropriate; all zones). All indicating, recording and totalizing devices shall be maintained in good operating condition.
b) The surface equipment shall be such that manual backup capability to monitor pressure shall be provided for systems utilizing automatic and continuous recording equipment.

6) The permittee shall calibrate all pressure gauges, flowmeters, chart recorders, and other related equipment associated with the injection well system on a semiannual basis, at a minimum. The permittee shall maintain all monitoring equipment and shall ensure that the monitoring equipment is calibrated and in proper operating condition at all times. Laboratory equipment, methods, and quality control will follow United States Environmental Protection Agency (USEPA) guidelines as expressed in Standard Methods for the Examination of Water and Wastewater. The pressure gauges, flow meter, and chart records shall be calibrated using standard engineering methods.

7) Each wellhead and associated appurtenances shall be equipped with lightning arrestors, surge capacitors or other similar devices.

8) The flow from the monitoring zones during well evacuation and sampling must not be discharged to surface waters or aquifers containing a USDW.

9) The injectate shall be non-hazardous in nature at all times, as defined in 40-CFR, Part 261 and as adopted in Chapter 62-730, F.A.C.

10) Mechanical Integrity

a) Injection is prohibited until the permittee demonstrates that the well has mechanical integrity. Prior to operational testing the permittee shall establish, and thereafter maintain, the mechanical integrity of the wells at all times.
b) If the Department determines that an injection well lacks mechanical integrity, written notice shall be given to the permittee.
c) Within 48 hours of receiving written notice that a well lacks mechanical integrity, unless the Department requires immediate cessation of injection, the permittee shall cease injection into the well unless the Department allows continued injection pursuant to subparagraph (d) below.
d) The Department shall allow the permittee to continue operation of a well that lacks mechanical integrity if the permittee has made a satisfactory demonstration that fluid movement into or between USDWs is not occurring.

11) The pressure at the wellheads shall be monitored and controlled at all times to ensure the maximum pressure at the wellhead casing does not exceed 66 percent (%) of the tested pressure on the final casing. [See S.C. 2.t.]

SPECIFIC CONDITIONS:

12) Any failure of Class I injection well monitoring and recording equipment for a period of more than 48 hours shall be reported within 24 hours to the Department. A written report describing the incident shall also be given to the Department within five days of the start of the event. The final report shall contain a complete description of the occurrence, a discussion of its cause(s) and the steps being taken to reduce, eliminate, and prevent recurrence of the event, and all other information deemed necessary by the Department.

13) The injection system shall be monitored in accordance with Rules 62-528.425(1)(g) and 62-528.430(2), F.A.C. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The following injection well performance and monitoring zone data shall be collected and reported to the Department in Monthly Operating Reports (MORs) as indicated below.

a) Injection well performance:

(1) Physical characteristics of the injection well:

Flow rate parameters:
- average daily flow rate to injection well as measured from flowmeter (MGD)
- daily maximum sustained (15 minutes minimum) flow rate to injection well (MGD)
- daily minimum sustained (15 minutes minimum) flow rate to injection well (MGD)
- monthly average of the daily flow rates to injection well (MGD)
- monthly maximum (peak hour) flow rate to injection well (MGD)
- monthly minimum flow rate to injection well (MGD)

Volumetric parameters:
- total daily flow volume to injection well as measured from totalizer (MG)
- total monthly flow volume to injection well (MG)
- monthly average of the daily flow volumes to injection well (MG)
- monthly maximum of the daily flow volumes to injection well (MG)
- monthly minimum of the daily flow volumes to injection well (MG)

Wellhead pressure parameters:

- daily average injection pressure at injection well (psig)
- daily maximum sustained (15 minutes minimum) injection pressure at injection well (psig)
- daily minimum sustained (15 minutes minimum) injection pressure at injection well (psig)
- monthly average injection pressure at injection well (psig)
- monthly maximum sustained injection pressure at injection well (psig)
- monthly minimum sustained injection pressure at injection well (psig)
- monthly wellhead pressure with no flow (shut-in pressure, psig)

SPECIFIC CONDITIONS:

(2) Chemical characteristics of the wastewater stream sampled from the wet well monthly:

- residue, total filterable (dried at 180° C) [total dissolved solids, TDS] (mg/L)
- chloride (mg/L)
- specific conductance (µmho/cm or µS/cm)
- nitrogen, ammonia, total as N (mg/L)
- nitrogen, total Kjeldahl as N (TKN, mg/L)
- nitrate-nitrite nitrogen (mg/L)
- phosphorous, total as P (mg/L)
- pH (standard units, s.u.)
- sulfate, total as SO_4 (mg/L)

The MORs shall indicate monthly averages for all parameters sampled daily.

b) Monitoring well performance:

(1) Physical characteristics — upper and lower monitoring zones potentiometric surface or water table height relative to NAVD 88 (feet of head) or pressure (psig) referenced to NAVD 88:

- daily maximum pressure or water level (as appropriate)
- daily minimum pressure or water level (as appropriate)
- daily average pressure or water level (as appropriate)
- monthly maximum pressure or water level (as appropriate)
- monthly minimum pressure or water level (as appropriate)
- monthly average pressure or water level (as appropriate)

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SPECIFIC CONDITIONS:

(2) Chemical characteristics of the upper and lower monitoring zones:

Weekly sampling:

- residue, total filterable (dried at 180° C) [total dissolved solids, TDS] (mg/L)
- chloride (mg/L)
- specific conductance (µmho/cm or µS/cm)
- nitrogen, ammonia, total as N (mg/L)
- nitrogen, total Kjeldahl as N (TKN, mg/L)
- nitrogen, nitrate, total as N (mg/L)
- phosphorous, total as P (mg/L)
- pH (standard units, s.u.)
- sulfate, total as SO_4 (mg/L)
- total coliform (CFU/100 ml)
- field temperature (°C)

Monthly sampling:

- sodium (mg/L)
- calcium (mg/L)
- potassium (mg/L)
- magnesium (mg/L)
- iron (mg/L)
- bicarbonate (mg/L)

The MORs shall also indicate monthly averages for all parameters sampled weekly.

c) After the upper and lower monitoring zones have been sampled weekly for a minimum of six months, the permittee may submit data for UIC-TAC review and Department approval to demonstrate that reasonable assurance of groundwater stability has been established in justification of any request to reduce the sampling frequency to monthly. The request for reduction in sampling frequency shall be accompanied by technical justification and interpretations.

14) A minimum of three well volumes of fluid shall be evacuated from the monitoring zones prior to sampling for the chemical parameters listed above. A State-certified laboratory shall analyze all samples. Sufficient purging shall have occurred when either of the following have occurred:

a) pH, specific conductance and temperature when sampled, upon purging the third or subsequent well volume, each vary less than 5% from that sampled upon purging the previous well volume; or
b) upon purging the fifth well volume.

15) All samples must be collected and analyzed in accordance with the quality assurance/quality control (QA/QC) requirements of Rule 62-160, F.A.C.

SPECIFIC CONDITIONS:

16) All injection well system data submissions including MORs shall be clearly identified on each page with facility name, I.D. Number, permit number, operator's name, license number, daytime phone number, date of sampling/recording, and type of data. Monitoring zones shall be identified by well number and depth interval. The lead plant operator or higher official must sign and date each submittal. An approved summary sheet from the FDEP Southeast District UIC Section is attached.

17) The permittee shall submit monthly to the Department the results of all injection well and monitoring well data required by this permit (MORs) no later than the last day of the month immediately following the month of record. The results shall be sent to the Department of Environmental Protection's Southeast District Office (FDEP, UIC Section, 400 N. Congress Avenue, Suite 200, West Palm Beach, FL 33401). A copy of this report shall also be sent to the Department of Environmental Protection, Underground Injection Control Program, MS 3530, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

18) A controlled monthly specific injectivity test (rate with respect to pressure) shall be conducted on each injection well and in accordance with Rule 62-528.430(2)(d), F.A.C. This test shall be conducted at a rate that approaches the maximum design flow but which can be repeated on a monthly basis. The injectivity test results shall be reported to the Department in the MORs. The following data shall be recorded and reported:

Parameters pertinent to flow rate:

- injection flow rate as measured from flowmeter (MGD)
- initial totalizer reading (gallons)
- final totalizer reading (gallons)
- time (minutes) from initial to final totalizer readings

Pressure parameters:

- static injection wellhead pressure (psig)
- wellhead injection pressure fall-off — every 30 seconds until again static (psig)
- final pressure upon test cessation — approximately 10-15 minutes (psig)
- wellhead pressure with no flow (shut-in pressure in psig)
- monitoring zone pressures (psig)

Specific Injectivity shall be reported in gpm/psig.
All readings shall be taken after a minimum 5-minute period of stabilized flow.

Pursuant to Rule 62-528.430(2)(d), F.A.C., as part of the specific injectivity test, each well shall be shut-in for a period of time necessary to conduct a valid observation of pressure fall-off.

19) Pursuant to Rules 62-528.425(1)(a) and 62-528.450(2)(f)3., F.A.C., a wastewater stream analysis (24-hour composite sample) for primary and secondary drinking water standards (Chapter 62-550, F.A.C.) and minimum criteria, see attached list, shall be submitted

SPECIFIC CONDITIONS:

annually (sampled in February and submitted on or before April 30th, both of that year). Biological and VOCs shall be collected by grab or *in situ*.

7. Surface Equipment

a. The integrity of the monitoring zone sampling systems shall be maintained at all times. Sampling lines shall be clearly and unambiguously identified by monitoring zone at the point at which samples are drawn. All reasonable and prudent precautions shall be taken to ensure that samples are properly identified by monitoring zone and that samples obtained are representative of those zones. Sampling lines and equipment shall be kept free of contamination with independent discharges and no interconnections with any other lines.

b. The surface equipment for the injection well system shall maintain compliance with Chapter 62-600, F.A.C. for water hammer control, screening, access for logging and testing, and reliability and flexibility in the event of damage to the well and effluent piping. A regular program of exercising the valves integral to the wellhead shall be instituted. At a minimum, all valves integral to the wellhead shall be exercised during the regularly scheduled quarterly injectivity testing.

c. The injection well and monitoring well surface equipment and piping shall be kept free of corrosion at all times.

d. Spillage onto the injection well pad during construction activities, and — after construction completion — any waters spilled during mechanical integrity testing, other maintenance, testing or repairs to the system shall be contained. The spilled waters shall be directed to a sump which in turn discharges to the pumping station wet well or via other approved means to the injection well system.

e. An injection well pad shall be maintained and retained in service for the life of the injection well. The injection and monitoring well pad(s) are not, unless specific approval is obtained from the Department, to be used for storage of any material or equipment at any time.

8. Financial Responsibility

a. The permittee shall maintain the resources necessary to close, plug and abandon the injection and associated monitoring wells, at all times [Rule 62-528.435(9), F.A.C.].

b. The permittee shall update annually the cost estimate for plugging and abandonment, and submit each updated cost estimate annually to the Department. If during the duration of this permit the cost estimate exceeds that upon which financial responsibility is based ($500,000) by 10 percent or more, the permittee will need to obtain a new *Certification of Financial Responsibility* forms and Comprehensive Annual Financial and submit these documents to the Department for approval. A copy of the annual update shall be submitted to the Department's

SPECIFIC CONDITIONS:

West Palm Beach and Tallahassee UIC programs each year within 60 days after the anniversary date of issuance of this permit.

c. In the event the mechanism used to demonstrate financial responsibility should become invalid for any reason, the Permittee shall notify the Department of Environmental Protection in writing within 14 days of such invalidation. The permittee shall then within 30 days of said notification submit to the Department for approval new financial documentation in order to comply with Rule 62-528.435(9), F.A.C., and the conditions of this permit.

9. Emergency Disposal

a. All applicable federal, state, and local permits shall be in place to allow for any alternate discharges due to emergency or planned outage conditions.

b. Any proposed changes in emergency disposal methods shall be submitted for UIC-TAC review and Department approval prior to implementation.

c. In the event of an emergency or discharge, or other abnormal event where the Permittee is temporarily unable to comply with any of the conditions of this permit due to breakdown of equipment, power outages, destruction by hazard or fire, wind, or by other cause, the Department shall be notified in person or by telephone within 24 hours of the incident. A written report describing the incident shall also be submitted to the Department within five days of the start of the incident. The written report shall contain a complete description of the emergency and/or discharge, a discussion of its cause(s), and if it has been corrected, the anticipated time the discharge is to continue, the steps being taken to reduce, eliminate, and prevent recurrence of the event, and all other information deemed necessary by the Department.

d. The emergency disposal method consists of the following:

1) The emergency disposal method presented in the permit application received April 25, 2007 and approved by the Department as a part of this permit, shall be maintained in fully operational order at all times.

2) The emergency disposal method includes diversion of the non hazardous wastewater to the injection well remaining in service.

3) Any emergency bypass of the injection well system shall be governed by Rule 62-620.610, F.A.C.

4) Any proposed changes in emergency disposal methods shall be submitted for UIC-TAC review and Department approval prior to implementation.

SPECIFIC CONDITIONS:

10. Signatories

a. All reports and other submittals required to comply with this permit shall be signed by a person authorized under Rules 62-528.340(1) or (2), F.A.C.

b. In accordance with Rule 62-528.340(4), F.A.C., all reports shall contain the following certification:

"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."

11. Permit Extension(s), Renewal(s) and Operation Permit Application(s)

a. Pursuant to Rule 62-4.080(3), a permittee may request that a permit be extended as a modification of an existing permit. A request for an extension is the responsibility of the permittee and shall be submitted to the Department before the expiration of the permit. In accordance with Rule 62-4.070(4), F.A.C., a permit cannot be extended beyond the maximum 5-year statutory limit. Should operational testing need to continue beyond the 5-year limit for this permit, the permittee must renew the construction permit in accordance with S.C. 11.b. below.

b. If necessary, to complete the two-year operational testing period, the permittee shall apply for renewal of the construction permit at least 60 days prior to the expiration date of this permit. However, under no circumstances shall the duration of the operational testing period exceed two years as specified in Rule 62-528.450(3)(e), F.A.C.

Issued this 1 day of May, 2008

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Jack Long
District Director
Southeast District

JL/LAB/jrm

SOUTHEAST DISTRICT UIC SECTION
SURFICIAL AQUIFER MONITORING WELL (SAMW) REPORT

FACILITY NAME

_____

REPORT MONTH/YR. _____

OPERATOR NAME _____ LICENSE #

_____

INJECTION WELL # _____ PERMIT #

_____

SAMPLING DATE _____ TIME _____

	SAMW #1	SAMW #2	SAMW #3	SAMW #4
LOCATION	NE CORNER	NW CORNER	SE CORNER	SW CORNER
ELEV. OF TOC* (NAVD 88)				
DEPTH TO WATER (TOC*)				
WATER LEVEL (NAVD 88)				
CHLORIDE (mg/L)				
CONDUCTIVITY(μmhos/cm)				
TEMPERATURE (° C)				

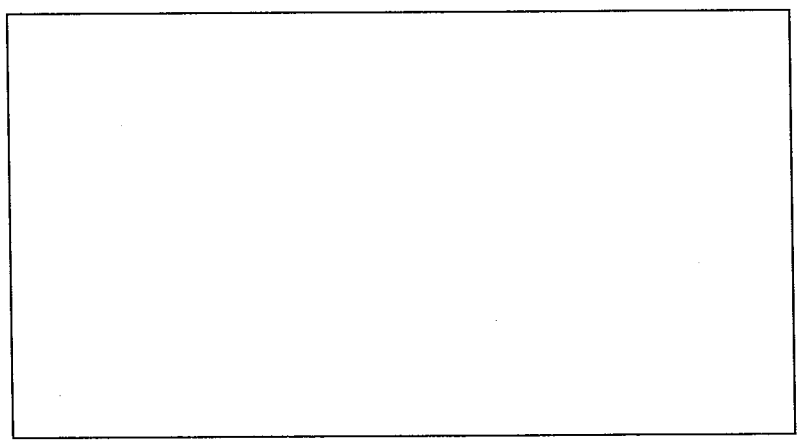
* TOC: indicates the "top of the casing" of the Surficial Aquifer System Monitoring Well

ANALYZED BY_____ SAMPLED BY

_____

PHONE # _____ TITLE _____

SITE PLAN OF SAMW LOCATIONS



PRIMARY & SECONDARY DRINKING WATER STANDARDS & MINIMUM CRITERIA

Updated May 6, 2002

PRIMARY DRINKING WATER STANDARDS

PARAMETER

Alachlor (Polychlorinated Biphenyl or PCB)
Aldicarb
Aldicarb sulfoxide
Aldicarb sulfone
Aroclors (Polychlorinated Biphenyls or PCBs)
Alpha, Gross
Antimony
Arsenic
Atrazine
Barium
Benzene
Benzo(a)pyrene
Beryllium
Bis(2-ethylhexyl) adipate (Di(2-ethylhexyl) adipate)
Bis(2-ethylhexyl) phthalate (Di(2-ethylhexyl) phthalate)
Cadmium
Carbofuran
Carbon Tetrachloride (Tetrachloromethane)
Chlordane
Chlorine Dioxide
Chlorite
Chlorobenzene (Monochlorobenzene)
Chloroethylene (Vinyl Chloride)
Chromium
Coliforms, Total
Cyanide
2,4-D (2,4-Dichlorophenoxyacetic acid)
Dalapon (2,2-Dichloropropionic acid)
Dibromochloropropane (DBCP)
1,2-Dibromoethane (EDB, Ethylene Dibromide)
1,2-Dichlorobenzene (o-Dichlorobenzene)
1,4-Dichlorobenzene (p-Dichlorobenzene or Para Dichlorobenzene)
1,2-Dichloroethane (Ethylene dichloride)
1,1-Dichloroethylene (Vinylidene chloride)
1,2-Dichlorethylene (cis-1,2-Dichloroethylene or trans-1,2-Dichloroethylene)
cis-1,2-Dichloroethylene (1,2-Dichlorethylene)
trans-1,2-Dichloroethylene (1,2-Dichlorethylene)
Dichloromethane (Methylene chloride)
1,2-Dichloropropane
Di(2-ethylhexyl) adipate (Bis(2-ethylhexyl) adipate)
Di(2-ethylhexyl) phthalate (Bis(2-ethylhexyl) phthalate)
Dinoseb
Diquat
EDB (Ethylene dibromide, 1,2-Dibromoethane)
Endothall
Endrin
Ethylbenzene
Ethylene dichloride (1,2-Dichloroethane)
Fluoride
Glyphosate (Roundup)
Gross Alpha
Haloacetic Acids (HAA5)
Heptachlor
Heptachlor Epoxide
Hexachlorobenzene (HCB)
gamma-Hexachlorocyclohexane (Lindane)
Hexachlorocyclopentadiene
Lead

PRIMARY DRINKING WATER STANDARDS, CONT'D

PARAMETER

Lindane (gamma-Hexachlorocyclohexane)
Mercury
Methoxychlor
Methylene chloride (Dichloromethane)
Monochlorobenzene (Chlorobenzene)
Nickel
Nitrate (as N)
Nitrite (as N)
Total Nitrate + Nitrite (as N)
Oxamyl
p-Dichlorobenzene or Para Dichlorobenzene (1,4-Dichlorobenzene)
Pentachlorophenol
Perchloroethylene (Tetrachloroethylene)
Picloram
Polychlorinated biphenyl (PCB or Aroclors)
Radium
Roundup (Glyphosate)
Selenium
Silver
Silvex (2,4,5-TP)
Simazine
Sodium
Strontium-90
Styrene (Vinyl benzene)
Tetrachloroethylene (Perchloroethylene)
Tetrachloromethane (Carbon Tetrachloride)
Thallium
Toluene
Toxaphene
2,4,5-TP (Silvex)
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethylene (Trichloroethene, TCE)
Trihalomethanes, Total
Vinyl Chloride (Chloroethylene)
Xylenes (total)

SECONDARY DRINKING WATER STANDARDS

PARAMETER

Aluminum
Chloride
Color
Copper
Ethylbenzene
Fluoride
Foaming Agents (MBAS)
Iron
Manganese
Odor
pH
Silver
Sulfate
Toluene
Total Dissolved Solids (TDS)
Xylenes
Zinc

MUNICIPAL WASTEWATER MINIMUM CRITERIA
GROUND WATER MONITORING PARAMETERS

INORGANICS

Ammonia
Nitrogen (organic)
Total Kjeldahl Nitrogen
Total Phosphorus (phosphate)

VOLATILE ORGANICS

Chloroethane
Chloroform
para-Dichlorobenzene (1,4 Dichlorobenzene)
1,2-Dichloroethylene (cis-1,2-Dichloroethylene or trans-1,2-Dichloroethylene)

BASE/NEUTRAL ORGANICS

Anthracene
Butylbenzylphthalate
Dimethylphthalate
Naphthalene
Phenanthrene

PESTICIDES AND PCBs

Aldrin
Dieldrin

ACID EXTRACTABLES

2-chlorophenol
Phenol
2,4,6-trichlorophenol

OTHER

Specific Conductance
Biological Oxygen Demand
Chemical Oxygen Demand
Temperature