

VI: BROWARD COUNTY**A - POLLUTION PREVENTION, REMEDIATION AND AIR QUALITY DIVISION**

VI-A.1) Please submit information regarding what reasonable precautions will be taken to prevent the emissions of particulate matter related to demolition and construction, including the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice. Sections 27-175(h), 27-177(b), and 27-180(c), Broward County Code of Ordinances (“BCC”).

RESPONSE:

As described in SCA Chapter 5, a number of control measures will be implemented during the construction period to minimize air emissions and potential impacts pursuant to FDEP Rule 62-296.320(4)(c)3, F.A.C. These precautions are consistent with Broward County Ordinance Chapter 27 Article IV, Sections 27-175(h) and 27-177(b).

The Site consists of compacted soils that are difficult for wind to pick up, thereby reducing fugitive emissions due to wind. After grading, the untraveled or lightly used areas may be paved, provided with an erosion resistant covering, or vegetated to minimize fugitive particulate matter (PM) and wind erosion. Fugitive dust generation from construction traffic will be minimized through paving roads and the use of water sprinkling or other dust suppressant techniques as identified in the Broward County Ordinances. Watering on an as-needed basis will control fugitive dust from highly traveled areas.

Construction materials, such as aggregate, and soils removed or stored will be stored in areas to minimize fugitive emissions from construction activities, construction traffic and wind. The length of time storing such materials will be minimized. Reasonable precautions such as watering, dust suppressants or covering, will taken to mitigate wind borne emissions from any open material storage piles.

The effectiveness of the control measures are recognized by FDEP Rule 62-296.320(4)(c)3 F.A.C. and EPA fugitive duct control studies and emission factors (EPA, 1995, EPA 1998, EPA, 2006a, EPA, 2006b and EPA, 2006c). Control efficiencies for wet suppression depend on the original moisture of the material, the amount applied and duration between applications. Excavated materials may already be moist and not require additional moisture. Control efficiencies of 75 percent are readily achievable, with control efficiencies in excess of 90 percent achievable with modest application of water (0.007 gallons/square feet). In addition, the majority of fugitive dust emissions are larger particles reducing the potential impact on air quality. For example, PM₁₀ and PM_{2.5} for which there are ambient air quality standards, range from 30 to 50 percent and 3 to 7.5 percent, respectively, of total fugitive emissions.

As described in SCA Section 5.5, the magnitude of the air emissions including the control techniques described are temporary and will not degrade air quality outside the boundary of Site. The costs of these controls are inherent in the cost of the construction process and the construction contractor will be required to provide reasonable controls as defined in the FDEP rules that includes watering as necessary to reduce fugitive emissions. Other methods such as minimizing storage piles to avoid wind erosion will also be implemented.

During dismantlement, asbestos-containing insulation and other friable asbestos-containing materials and hazardous materials will be removed from the structures. These materials will be identified prior to beginning dismantlement activities and disposed of according to applicable regulations. The existing plant stacks will be pre-washed and evaluated for hazardous and asbestos containing materials. Hazardous materials will be disposed of in accordance with applicable regulations. Friable asbestos containing materials in the stacks will be removed and asbestos containing materials that cannot be removed will be identified and addressed during dismantlement to mitigate asbestos exposure to the environment. The non-procedural requirements of Section 27-180 "Asbestos demolition and renovation notification requirements" will be followed.

Reasonable precautions, consistent with Section 27-177(b) will be taken to minimize fugitive emissions during any dismantlement activities. Water or dust suppressants may be used to control fugitive emissions during dismantlement activities that could generate fugitive emissions.

References

EPA. 1995. Compilation of Air Pollutant Emission Factors, Section 13.2.3 Heavy Construction Operations.

EPA. 1998. Technical Background Document on Control of Fugitive Dust at Cement Manufacturing Facilities (Draft).

EPA. 2006a. Compilation of Air Pollutant Emission Factors, Section 13.2.2 Unpaved Roads.

EPA. 2006b. Compilation of Air Pollutant Emission Factors, Section 13.2.4 Aggregate Handling and Storage Piles.

EPA. 2006c. Compilation of Air Pollutant Emission Factors, Section 13.2.5 Industrial Wind Erosion.

VI-A.2) Please submit information demonstrating that a survey, prepared by or under the supervision of an asbestos consultant licensed in the state of Florida, pursuant to Chapter 469, Florida Statutes, as amended, hereinafter referred to as a Florida Licensed Asbestos Consultant, indicating the presence or absence of asbestos containing material has been conducted for the structure(s) proposed to be demolished. 27-180(b) BCC.

RESPONSE:

FPL acknowledges and accepts the National Emission Standards for Hazardous Air Pollutants (NESHAP) notification requirements related to abatement and/or dismantlement of asbestos-containing materials at Units 1 through 4. A comprehensive asbestos-containing materials survey was recently completed by Tierra Consulting Group, Inc., Asbestos Business License ZA0000276, under the direction of Scott Zednek, Florida Licensed Asbestos Consultant AX79.

B - PORT EVERGLADES DEPARTMENT

Please provide additional information sufficient to support FPL's assertion of sufficient real property interests in the proposed Certified Site or FPL's plans to acquire such interests and the specific information requested, below.

VI-B.1) Incomplete Information Impacting Description of Certified Site: Section 1.1 of the SCA states: "Exhibit A presents the Site legal descriptions on FPL Port Everglades Plant property, and Section 3.2.4 and Appendix 10.12 (Leases, Easements, Title, Agency Works) present information on easements related to the intake and discharge canals and conveyances. Together these documents provide legal descriptions for the Certified Site." The Broward County Port Everglades Department believes the data provided and used to establish easements and authorizations as covered in Section 3.2.4 is incomplete or selectively used to define the Certified Site. Section 3.2.4.1 (1) indicates existence of a 1957 easement to build an intake in an alternate location to the existing intake canal; however, the easement was relinquished by FPL in 2011. Section 3.2.4.1 (4) claims easement rights relinquished by FPL in 1957 as part of a land exchange with the Broward County Port Authority.

RESPONSE:

Comment acknowledged. Subsequent title review indicates that the alternative intake canal easement referenced in Section 3.2.4.1 (1) of the SCA and the 1945 easement referenced in Section 3.2.4.1 (4) of the SCA have been released by FPL. A revised Figure 3.2.4-1 is attached to this response.

VI-B.2) Please submit information demonstrating that a survey, prepared by or under the supervision of an asbestos consultant licensed in the state of Florida, pursuant to Chapter 469, Florida Statutes, as amended, hereinafter referred to as a Florida Licensed Asbestos Consultant, indicating the presence or absence of asbestos containing material has been conducted for the structure(s) proposed to be demolished. 27-180(b) BCC.

RESPONSE:

FPL acknowledges and accepts the NESHAP notification requirements related to abatement and/or dismantlement of asbestos-containing materials at Units 1 through 4. A comprehensive asbestos-containing materials survey was recently completed by Tierra Consulting Group, Inc., Asbestos Business License ZA0000276, under the direction of Scott Zednek, Florida Licensed Asbestos Consultant AX79.

VI-B.3) Incomplete Information Necessary to Determine Feasibility of Placing Linear Facilities on Port Lands: Section 3.2.4.2 of the SCA explains that "FPL has taken a corridor approach in identifying associated linear facilities that maximizes the flexibility for coordinating the required PEEC linear facility easements with Broward County." The Broward County Port Everglades Department believes the corridor approach as adopted by FPL in the PEEC SCA, while granting flexibility to FPL, is overly broad. The approach allows FPL to seek application approval while avoiding the necessity of providing the Port Everglades Department with specific factual information needed to determine the feasibility

of placing proposed Associated Linear Facilities on Port lands. The key underlying criteria used by the Port to determine feasibility include:

VI-B.3)a Is the proposed linear facility compatible with current and expected future marine and ship operations?

VI-B.3)b Is the proposed linear facility compatible with current and expected future landside cargo operations?

VI-B.3)c Is the proposed linear facility compatible with future port redevelopment and operational plans?

VI-B.3)d Can the proposed linear facility be accommodated in a given route considering existing infrastructure?

RESPONSE (a, b, c, d):

Comment acknowledged. The corridor approach is a tool used under the Power Plant Siting Act (PPSA) to provide maximum flexibility for both the agency and applicant in circumstances where final construction design of proposed linear facilities may not be known at the time of Certification.

Based upon discussions with Port staff about potential locations for the Aquatic Organism Return System (AORS), FPL has revised the proposed corridor to provide maximum flexibility. Please see Figure VI-B.3-1.

FPL will work with the Port Everglades Department of Broward County to develop mutually-agreeable rights-of-way (ROWs) within the proposed corridor and a design for the proposed linear facilities that is compatible with Port lands and operations. The mutually agreed ROW and design of the linear facilities will be submitted to the County to assess consistency with the applicable compatibility criteria. The mutually agreed-upon ROW will then be submitted as a post-certification submittal. The mutually agreed-upon Conditions of Certification governing use of Port lands during the commercial life of the facilities may place terms and conditions upon the use of Port lands for FPL's PEEC linear facilities similar to those provided by the current license agreements between FPL and the Port Everglades Department of Broward County.

VI-B.3)e Does the placement of the linear facility obligate the Port to provide a service (to FPL) going forward that may not be commercially or economically sustainable?

RESPONSE:

No. FPL will design, build, and operate a mutually agreed-upon system that will not obligate the Port to provide FPL a service that may not be commercially or economically viable. The fuel oil pipeline and AORS will not obligate the Port any more than the presence of current FPL fuel oil infrastructure on Port property.

The PEEC Project is, in fact, greatly reducing FPL's infrastructure footprint on Port property through removal or retirement of numerous existing No. 6 fuel oil pipelines from multiple berths.

The removal or retirement of this infrastructure may improve the Port's ability to redevelop or modify its infrastructure as necessary.

VI-B.3)f Do the terms and conditions under which linear facilities are to be placed on Port lands include enough flexibility to ensure the Port's ability to redevelop or modify its infrastructure as may be dictated by future changes in domestic and international marine trade?

RESPONSE:

Yes. Please see Response VI-B.3a, b, c, d and e above.

VI-B.3)g Is a Port commitment to accommodate proposed linear facilities limited to a reasonable period of time, commensurate with the expected life of the project?

RESPONSE:

Yes. The approval to use Port lands will provide that the use of the Port lands for proposed linear facilities will be limited to the commercial life of PEEC.

The Broward County Port Everglades Department has the following concerns regarding each of the proposed types of linear facilities and believes additional information is needed in order for the Port to evaluate whether or not the facilities can be accommodated in a manner consistent with established criteria for license agreements regarding the use of County-owned land (such as the existing license agreement with FPL executed on June 24, 2008):

RESPONSE:

Comment acknowledged. See detailed responses below.

ULSD (Ultra Low Sulfur Diesel) Oil Pipeline

VI-B.4) The Associated Linear Facility Corridor depicted in Figure 3.2.4-3 to the north and east of the existing FPL property is extremely congested with underground petroleum and utility infrastructure. In addition to the normal array of utilities for water, communications and drainage, there exists bulkhead tie-back systems and a large number of active petroleum product receiving lines extending out to and connecting Piers 1 and 2. There are also underground bunkering (ship fueling) lines in the area. To determine if placement of the proposed ULSD pipeline in this corridor is practical, the Port must review details of the design and routing, including identification of and three dimensional locations of existing infrastructure within the route.

RESPONSE:

As noted above, FPL will work with the Port on a mutually agreeable ROW. Please see Response VI-B.3a, b, c and d above.

The intent is to place the new ultra-low sulfur diesel (ULSD) line in the same ROW as the existing No. 6 fuel line that will be removed or retired. The details of the ULSD design will not be available until the ROW is established.

VI-B.5) The same corridor also encompasses an area where the Port intends to relocate Security Gate 6 as part of the Port's Bypass Road Phase I Project. This area is traversed by existing FPL No. 6 Fuel Oil lines to be removed, and it is where the new ULSD Oil Pipeline may be placed. The Bypass Road Phase I Project is scheduled to go to bid shortly. To assess the practicality of accommodating the ULSD Pipeline in the corridor, the Port would require enough design information on the pipeline relative to the new gate location to assure compatibility with the relocated gate and associated heavy equipment traffic flow.

RESPONSE:

The intent is to place the new ULSD line in the same ROW as the existing No. 6 fuel line that will be removed or retired. As noted above, FPL will work with the Port Everglades Department of Broward County to develop a mutually-agreeable ROW. Please see Response VI-B.3a, b, c and d above.

VI-B.6) The SCA does not provide enough detail for the Port Everglades Department to evaluate the functionality of a new ULSD receiving system on Pier 1. To determine impacts of such an installation on Port petroleum operations, the Port normally requires volume projections over the expected life of the project, ship/barge offloading frequency, and the system's design discharge rate. While the SCA attempts to present the new backup ULSD system as a direct replacement for the existing No. 6 Fuel Oil system, the latter occupies extensive amounts of Port land under terms predicated on original very high throughput volumes of No. 6 Fuel Oil. The No. 6 Fuel Oil System operates under a 10 year volume driven License Agreement that expires in June 2018 rather than under an easement as represented in the SCA. None of these points and the implications are covered in the SCA.

RESPONSE:

With respect to ULSD pipeline location, please see Response VI-B.5 above. As noted in Response VI-B.4a, b, c and d above, the mutually agreed-upon Conditions of Certification governing use of Port lands during the commercial life of the facilities may place conditions upon the use of Port lands for FPL's PEEC required facilities similar to those provided by the current license agreements between FPL and the Port Everglades Department of Broward County.

A new PEEC 7 million gallon tank is necessary to support approximately 3 days of backup operation. The USLD pipeline will provide emergency fuel-supply reliability to the power production capabilities of PEEC. Therefore, operations timing or yearly total quantities using USLD are not predictable. Capability to supply USLD when needed as the emergency backup fuel is critical to reliability.

VI-B.7) We note that Table 5.1.1-1 of the SCA indicates "No current knowledge of contamination" regarding "Soil and Other Contaminated Media" and would point out that

the entire proposed northern linear corridor is located within a FDEP registered petroleum contamination site awaiting state cleanup. The Port believes the SCA is incomplete in that it does not provide any detail indicating how these conditions will be dealt with during removal of the No. 6 Fuel Oil System and installation of the ULSD system.

RESPONSE:

FPL acknowledges that the northern linear corridor is located within a registered petroleum contamination site pending cleanup action. Although not specifically required by regulation, FPL will voluntarily characterize and properly dispose of all media excavated during the removal and installation of its piping systems to ensure that contamination, regardless of its source, is not spread during construction activities.

Please note that the FDEP previously approved a No. 6 Oil Closure Assessment Sampling Plan (December 15, 2010) applicable to pipeline and storage tanks removed from service at any FPL facility in Florida. Therefore, if contaminated media is encountered during the tank and pipeline closure and new construction activities, at a minimum, cleanup actions would be performed in accordance with the aforementioned No. 6 Oil Closure Assessment Sampling Plan and the FDEP-approved Heavy Fuel Oil Protocol (April 11, 2007) (Attachments I-C.1-1 and -2).

Aquatic Organism Return System Routes

VI-B.8) While the Port Everglades Department is generally familiar with petroleum pipeline site requirements, we are unaware of any of the design parameters which would dictate or influence the placement of the Aquatic Organism Return System. Preliminary technical discussions with FPL project staff which occurred subsequent to the SCA filing lead us to believe that requirements for the System's placement may be difficult to meet while assuring continuity of port operations and compatibility with existing subsurface infrastructure. The SCA is incomplete because it provides the Port Everglades Department with very little of the information required to evaluate FPL's proposed corridors for this particular linear facility.

RESPONSE:

FPL maintains that the application and the Responses to Completeness Determination provide sufficient information to evaluate the application. As noted in Response VI-B.3 a, b, c and d above, FPL will work with the Port Everglades Department of Broward County to develop a mutually agreeable ROW within the proposed corridor and a design for the proposed linear facilities that is compatible with Port lands and operations. The mutually agreed ROW and design of the linear facilities will be submitted to the County to assess consistency with the applicable compatibility criteria. The mutually agreed-upon ROW will then be submitted as a post-certification submittal. The mutually agreed-upon Conditions of Certification governing use of Port lands during the commercial life of the facilities may place terms and conditions upon the use of Port lands for FPL's PEEC linear facilities similar to those provided by the current license agreements between FPL and the Port Everglades Department of Broward County.

VI-B.9) Regarding port marine and ship operations, we are concerned about placement of the outfall point and whether or not there is a potential conflict with vessel

movements. To our knowledge the outfall locations being considered are subject to having vessels, normally of deep draft, docked immediately outboard of the outfall point with minimal offset from the dock face. Additionally these same outfall points are subject to periodic powerful, if not violent prop wash conditions driven directly at the dock face during maneuvering and docking operations generated by tug movements, azipod drives on cruise or cargo vessels, bow thrusters, etc. The SCA is incomplete in that it does not provide the Port Everglades Department with any information regarding the design of the outfall such as depth, diameter, mixing zone requirements and potential limitations on its placement, if any, that the Port needs to properly evaluate the proposed route.

RESPONSE:

Comment acknowledged. FPL understands that this area is an active port, subject to periodic powerful prop wash conditions. The AORS design will address these conditions. The outfall will be 2 to 3 ft below low water, the return pipe will be less than 2 ft in diameter, and the exit velocity will be only a few feet per second. The maximum hydraulic force against a ship directly in front of the organism return pipe will be minimal. Therefore, there should be no adverse impact to vessel operations.

As noted in Response VI-B.3 a, b, c and d above, FPL will work with the Port Everglades Department of Broward County to develop a mutually agreeable ROW within the proposed corridor and a design for the proposed linear facilities that is compatible with Port lands and operations. The mutually agreed ROW and design of the linear facilities will be submitted to the County to assess consistency with the applicable compatibility criteria. The mutually agreed-upon ROW will then be submitted as a post-certification submittal. The mutually agreed-upon Conditions of Certification governing use of Port lands during the commercial life of the facilities may place terms and conditions upon the use of Port lands for FPL's PEEC linear facilities similar to those provided by the current license agreements between FPL and the Port Everglades Department of Broward County.

VI-B.10) The Port Everglades Department also believes the SCA is incomplete in that it does not provide any design parameters for the underground segment of the Aquatic Organism Return System which are needed for the Port to assure compatibility with cargo operations and previously mentioned underground infrastructure. We are particularly concerned about depth limitations, limitations such as bend radius and depth variances, access requirements, load bearing ability, and materials compatibility in areas of free phase petroleum contamination.

RESPONSE:

As discussed above, FPL will work with the Port Everglades Department of Broward County to develop a mutually agreeable design for the proposed AORS that is compatible with Port lands and operations. The mutually agreed design of the AORS will be submitted to the County to assess consistency with the applicable compatibility criteria. The mutually agreed-upon ROW and design will then be provided as a post-certification submittal. The design will include information about depth, bend radii, depth variances, access requirements, load bearing ability and material compatibility. The mutually agreed-upon Conditions of Certification governing use of Port lands during the commercial life of the facilities may place terms and conditions upon the use of Port

lands for FPL's PEEC linear facilities similar to those provided by the current license agreements between FPL and the Port Everglades Department of Broward County.

Environmental - Site & Vicinity Characterization

VI-B.11) The following represent questions and comments related to environmental issues. As mentioned in previous comments, the route of the proposed aquatic organism return system needs to be coordinated with the Port Everglades Department. The Port has concern over the design of the outfall such as depth, diameter, mixing and distribution zone requirements, limitations on placement specifically adjacent to cruise ship terminals, and potential environmental concerns such as odor, nutrient loading, predation, algal blooms, etc.

RESPONSE:

The water used to sluice the aquatic organisms is the same as that pumped from the Port. No chemicals are added. Therefore, nutrient loadings and algal blooms should not be an issue. Predation by larger fish and birds may be a minimal issue, but will be reduced by the AORS design. FPL will continue to work with the Port Everglades Department to determine the optimum location for the AORS. Please also see Response VI-B.10 above.

VI-B.12) The removal of transmission pipelines and remediation of any encountered petroleum contamination needs to be discussed and coordinated with the Port Everglades Department.

RESPONSE:

Comment acknowledged. FPL will coordinate with the Port Everglades Department.

VI-B.13) The SCA discusses potential impacts to transportation from construction traffic, etc.; however, the potential effects from the FDOT/Port Everglades I-595 Eller Drive roadway project and reconfiguration to access SE 14th Avenue, the Port Everglades SR-84 Spangler Blvd. construction, and the Ft. Lauderdale /Hollywood International Airport runway expansion with the potential PEEC impacts do not appear to be taken into consideration or discussed.

RESPONSE:

SCA Appendix 10.7.4 (Rev. 1) has been updated to address the questions raised by Broward County regarding the traffic in Port Everglades during the construction of PEEC. This updated traffic analysis is provided on the attached CD. The updated analysis concluded that the additional traffic created by the peak construction conditions will not degrade the operating conditions of the roadway network located in the vicinity of the PEEC Project. During the peak construction phase of the Project, level of service deficiencies may be experienced on several movements of the Eller Drive/SE 14th Avenue intersection during the AM and PM peak hours. The intersection of Eller Drive and SE 14th Avenue will be monitored in order to determine if police control is required during the morning and afternoon peak arrival and dismissal periods of

the construction work force. Furthermore, due to the close proximity of SE 14th Avenue from McIntosh Road, the signalized intersection of Eller Drive and McIntosh Road will be monitored in order to determine if the peak construction traffic negatively affects the operating conditions of this intersection. These measures will be implemented, as necessary, in order to mitigate any negative impacts created by the peak construction phase of the PEEC.

Based on the analyses, FPL recognizes the roadway improvements planned for the Port Everglades area and will factor mitigation measures into a specific management plan that addresses the potential impact of constructing PEEC. This traffic management plan will contain traffic management techniques to minimize impacts to the level of service in the vicinity of Port Everglades. The plan will be developed in coordination of the PEEC construction contractors and will be available post-certification for review.

VI-B.14) Is the natural gas pipeline that will power the PEEC facility existing to the site? Will it require to be expanded or need additional easements from Broward County/Port Everglades?

RESPONSE:

The natural gas pipeline exists. PEEC does not anticipate the need for new natural gas pipeline easements.

VI-B.15) Page 3-27 of the SCA includes the following incorrect statement: Port Everglades tidal inlet is a dredged maintained channel with design depth of 33 ft for a mid-width of 200 ft (NOAA NOS Nautical Chart 11472, 1985; see Figure 3.3.4-1). The Port Everglades inlet channel is authorized and maintained at depths that transition from 45' offshore to 42' within the actual inlet and turning basin.

RESPONSE:

Comment acknowledged. SCA Figure 3.3.4-1 is from Nautical Chart 11467 (41st Edition, June 2008). Chart 11470 (38th edition, August 2008) provides more detailed depth information within Port Everglades. The following description of the federal project is from the Port Everglades Pilots Association (February 3, 2012) (<http://www.popilots.com/navigation.htm>):

A federal project provides for a 500 foot wide entrance channel 45 feet deep converging at the jetties to a 450 foot wide channel 42 feet deep leading to a turning basin 42 feet deep with north and south extensions 31 feet deep. From the turning basin southward, the Intracoastal Waterway leading to the Southport terminal has been dredged to a project width of 500 feet and a project depth of 42 feet. The Port Everglades Department has dredged the south extension of the turning basin to a depth of 38 feet.

VI-B.16) As an environmental benefit to the project, FPL should consider removing invasive exotic vegetation such as Brazilian pepper and Australian pine and maintaining such removal along the canal banks on the Port Everglades Plant Property and along the discharge canal easement.

RESPONSE:

FPL will evaluate the extent and location of invasive exotic vegetation such as Brazilian pepper and Australian pine along the banks of the intake and discharge canals to determine the cost and feasibility of potential short- and long-term maintenance strategies.

VI-B.17) Have any studies been completed on the potential thermal effects of the plants' discharge on the distribution of Johnson's seagrass (*Halophila johnsonii*) and shoal grass (*Halodule wrightii*)? In the most recent seagrass mapping survey there a long linear bed of *H. wrightii* across the discharge canal entrance to the ICW along the shoreline of John U. Lloyd State Park.

RESPONSE:

FPL is not aware of any more recent studies than the 316 demonstration studies provided in SCA Appendix 10.2.1. The Port Everglades Units 1 through 4 have been operating for over 50 years using a once-through cooling system. When PEEC is operational, the thermal load to the ICW will be about half. Consequently, the size of the thermal plume in the ICW will be even less.

VI-B.18) The Port Everglades Jurisdictional Boundary should be depicted on an area exhibit.

RESPONSE:

Please see attached Figure VI-B.18-1.

The Plant and Directly Associated Facilities

VI-B.19) Could on-site storage of natural gas in the form of LNG be considered as an alternative to using ULSD oil as a backup fuel?

RESPONSE:

Storage of liquid natural gas (LNG) as an alternate backup fuel to ULSD is not an option due to cost and reliability concerns for a relatively small back-up quantity (72 hours). No LNG fuel unloading facilities are currently available, creating the need to construct a LNG receiving plant and adding additional cost.

VI-B.20) Can existing on-site fuel oil tanks be utilized to hold the proposed approximately 7 million gallon (MG) ULSD storage tank and can existing pipelines be used to convey the product?

RESPONSE:

Due to the age of the tanks and current industry and environmental standards, re-use of these tanks is not a technically, environmentally, or economically feasible option. Additionally, the

area north of the power block in the location of the No. 6 tank farm is needed for onsite stormwater ponds. Re-use of the existing No. 6 fuel oil pipelines is an option that may be considered in the detailed design stage of this Project, but is not currently planned due to the age of the pipelines and industry and environmental standards.

VI-B.21) There are numerous potential treated discharges to the cooling water and system outfalls such as heat recovery steam generator, evaporative cooler blowdown, water treatment wastewaters and non-hazardous, low volume wastewaters (e.g., wash water and equipment drains), hydrostatic test water, dewatering effluent, and stormwater. How can these potential discharges be further minimized or reduced from entering specifically the cooling water discharge canal?

RESPONSE:

Combined cycle technology inherently addresses water conservation. PEEC will require approximately 50 percent less water for cooling and process demands compared to the existing Units 1 through 4. The operation of combined cycle technology minimizes, recycles and reuses to the maximum extent practicable all wastewater streams. For example, under most operating conditions, the heat recovery steam generator (HRSG) blowdown and inlet air (i.e., evaporative cooler) cooling blowdown are recycled to the water treatment system and reused as process water. Wastewater discharges have been minimized by the PEEC design.

Environmental Effects of Site Preparation, and Plant and Associated Facilities Construction

VI-B.22) Describe in detail the coordination, notification, and monitoring that will be provided to the Port Everglades community and nearby residents and business for activities such as demolition explosions, etc.

RESPONSE:

FPL will work with the Port staff to ensure communication of upcoming dismantlement and construction activities. Based on these discussions, FPL will develop protocols for notifying the PEEC community and nearby residents and businesses of activities such as demolition and steam blows, as previously successfully demonstrated for the RBEC and CCEC Projects.

VI-B.23) Other than water spray, what other controls will be used to curtail fugitive emissions that could potentially affect the Port area during plant demolition and during construction?

RESPONSE:

Please refer to Response VI-A.1 above.

VI-B.24) On page 5-4 of the SCA it is stated that prior to construction of PEEC, FPL will conduct environmental assessments and perform necessary remediation of impacted media (soil and groundwater) in accordance with applicable state, federal and local regulations. Will this also occur along the transmission pipelines on Port property proposed to be removed?

RESPONSE:

Environmental assessment and remediation activities will be performed along FPL's No. 6 pipelines proposed to be removed from Port property or retired. FPL will characterize and properly dispose of all media excavated during the removal/retirement and installation of its piping systems to ensure that contamination, regardless of its source, is not spread during construction activities.

Please note that the FDEP previously approved a No. 6 Oil Closure Assessment Sampling Plan (December 15, 2010) applicable to pipeline and storage tanks removed from service at any FPL facility in Florida. Therefore, if contaminated media is encountered during the tank and pipeline closure, at a minimum, cleanup actions would be performed in accordance with the aforementioned No. 6 Oil Closure Assessment Sampling Plan and the FDEP-approved Heavy Fuel Oil Protocol (April 11, 2007) (Attachments I-C.1-1 and -2).

Please also see Response FDEP I-C.1.

VI-B.25) Have any studies been completed on the potential effects of sea level rise on the plant?**RESPONSE:**

FPL has considered the available studies of potential effects of sea level rise. However, specific studies have not been completed by FPL regarding the potential effects of sea level rise on PEEC. PEEC will be located in an area of the existing plant that is approximately 15-17 feet above mean sea level. At this elevation, potential effects of sea level rise are not expected during the operation of PEEC.

VI-B.26) Related to question 13 above, will the referenced road and airport construction projects affect the trip distribution and traffic assignment/patterns for the project and will the combination of these projects affect the traffic patterns acceptable levels of service for the roadways for Port access during the cruise season and for PEEC access during construction?**RESPONSE:**

FPL recognizes the roadway improvements planned for the Port Everglades area and will factor these elements into a specific traffic management plan that addresses the potential impact of constructing PEEC. This traffic management plan will contain traffic management techniques to avoid and minimize impacts to the level of service in the vicinity of the Port. The plan will be developed in coordination with the PEEC contractors and will be available post-certification for review. Please also refer to Response VI.B-13 above.

Effects of Plant Operation**VI-B.27) Page 6-1-2 of the SCA includes the following statement: "Where the discharge canal enters the ICW, the water is relatively deep and the channel is maintained**

by dredging. The shoreline is protected with bulkheads and armoring. Consequently, there is no significant submerged aquatic vegetation or wetlands along the western shoreline of the ICW, where the heated water enters the ICW. Also, this area does not provide spawning sites, food production, nursery areas, or migratory pathways.” To the south of the east-west portion of the discharge canal heading toward the ICW is approximately a 57-acre conservation easement area with a vast expanse of mangrove habitat. The mangrove area extends to the western shoreline of the ICW directly south of the discharge canal confluence. A rip-rap breakwater runs along the western boundary of the mangrove area. The shoreline directly across from the ICW/discharge canal confluence includes large expanses of mangrove and wetland vegetation within John U. Lloyd State Park, portions of which are also under conservation easement. The north-south portion of the discharge canal incurs a ninety-degree bend before heading east toward the ICW adjacent to the conservation easement mangrove area. In this area the mangroves appear to have been potentially stressed by prior thermal discharge or water velocity from the plant. This should be further investigated and potential impact comparisons made to the represented reductions in discharge and the thermal plume from the proposed PEEC plant construction.

RESPONSE:

The Port Everglades Plant has operated for over 50 years. Stresses on vegetation in the 57-acre conservation easement south of the discharge canal are very recent. Examination of a Google Earth[®] photograph from 3/26/2011 shows the stressed vegetation are tall trees. The trees appear to have been laid over at their base, possibly by storm surge or flooding. Examination of historical aerial photographs from 2004 and 2005 shows that damage to the vegetation was inflicted during the time when hurricanes made landfall in the area. The shoreline erosion in this area began at about this same time. The shoreline erosion can be seen in a photograph from February 2006. If the plant was the cause, the effects would have been observed many years ago. FPL will investigate the erosion and evaluate whether plant operations are contributing to the impacts.

PEEC will reduce the flows by half compared to the current Port Everglades Plant and will therefore reduce the potential for erosion.

VI-B.28) Page 6-2 of the SCA includes the following statement: “The aquatic organism return system will return the organisms to the source water in a manner that does not promote predation or re-impingement.” The system will release into approximately 40' water depth with a direct connection through the Port Everglades inlet to the Atlantic Ocean. How will predation and re-impingement be controlled and documented as not occurring? Also see previous comment in question 11 above.

RESPONSE:

Predation and re-impingement are controlled by selecting an appropriate location for the AORS outlet, and by incorporating certain design features into the AORS. Re-impingement is controlled by locating the outlet away from the inlet's hydraulic zone of influence. Predation is controlled by using a closed-top conveyance to prevent birds from feeding on the organisms as they are transported back to the water body. Predation is also controlled by placing the outlet a few feet

below the water surface. Typically, monitoring for predation and re-impingement is not required if the AORS design incorporates these considerations.

VI-B.29) Page 6-3 of the SCA makes the following incorrect statement: There is no sensitive aquatic habitat such as submerged aquatic vegetation or wetlands along the western shoreline of the ICW, where the heated water enters the ICW. Also see question 27 above.

RESPONSE:

The statement from the SCA is correct. The 57-acre conservation area, located south of the confluence of the discharge canal and the ICW, is separated from the ICW by a rip-rap breakwater along the western shoreline of the ICW. The conservation area along the eastern shoreline of the ICW is also separated from the ICW by rip-rap breakwaters. These breakwaters protect the aquatic vegetation within the conservation areas from the heated water released to the ICW. See also Response VI-B-27 above.

VI-B.30) Page 6-3 of the SCA includes the following statement: “Previous biological assessments have found no adverse impact of the existing thermal plume on fish, shellfish, or plankton from operation of the Units 1 through 4 (ABI, 1987); and the studies found no adverse impact to benthos outside the discharge canal. Within the discharge canal the impacts were seasonal and temporary.” Page 6-4 makes the following somewhat contradictory statement: In fact, as discussed in Section 6.1.1, the flow reduction and the reduced heat load will reduce effects to the aquatic environment and the addition of an aquatic organism return will further reduce aquatic potential effects due to impingement. Please discuss and explain.

RESPONSE:

FPL believes the statements are consistent. Previous studies found no adverse impacts of the existing thermal plume on biological communities outside the discharge canal. When PEEC is operational, the thermal load to the environment will be reduced by approximately 50 percent. Therefore, the size and extent of the thermal plume within the ICW will be reduced (i.e., the temperature effects on the aquatic environment will be reduced). Since there has been no adverse impact to the biological communities in the ICW under the existing temperature regime, there should be none after the conversion. The AORS that will be installed as part of the plant modernization will reduce impingement associated with the existing intake.

VI-B.31) Please explain whether the utilization of water heaters during the time the plant is shutdown during dismantlement and construction will be adequate to avoid thermal shock to other fish and organisms within the discharge canal.

RESPONSE:

FPL has designed, installed, and operated a manatee temporary heating system (MTHS) at both RBEC and CCEC, and FPL is in the process of designing a MTHS for Port Everglades. The design criteria and performance standards from these previously installed systems will be used to

customize a system for the Port Everglades site. The final plan will be designed in consultation with FWS and FWC and included in an Environmental Monitoring Plan.

When Units 1 through 4 are shut down, the water temperature within the discharge canal will slowly decrease until it reaches ambient levels. Temperature change from the operations of the MTHS will be gradual. This slow decrease/increase in temperature will allow fish and other organisms to acclimate to the conditions.

VI-B.32) Page 6-17-18 of the SCA includes the following statement: “The noise and lighting impacts associated with PEEC will be similar in magnitude and character when compared to the existing Port Everglades Plant.” Additional SCA statements compared the site lighting to the relatively bright nature of the security, safety, street, and industrial lighting in the surrounding area. The fact the adjacent area is industrial should have no bearing on light reductions from the new plant construction. Regardless of the lower profile of the new plant, it is recommended that FPL develop a light management plan for the plant and reduce fugitive light emissions that add to the area’s sky glow or cause direct exposures through shielding and selection of proper lighting cut-off fixtures associated with the plant’s location in relation to coastal sea turtle nesting.

RESPONSE:

As described in SCA Section 6.9.2, the need for lighting is directly associated with plant personnel safety. In this section of the SCA, FPL has committed to reducing light pollution and light trespass using the guidelines from the Illuminating Engineering Society of North America to the extent possible while meeting OSHA and security requirements. The incorporation of those light reduction features identified in SCA Section 6.9.2 will result in lower lighting impacts from PEEC and much lower visibility of PEEC than the existing Port Everglades Plant.

The use of the light reduction measures coupled with the much lower profile of PEEC than the existing Units 1 through 4 will reduce the lighting impacts from PEEC. This is directly illustrated by Figure VI-B.32-1 that shows the existing Port Everglades Units 1 through 4 and a dimensional representation of PEEC from the same direction. As stated in the SCA, the existing stacks with lights are approximately 343 feet high while the height of the stacks for PEEC will be less than 150 feet. The existing units have four boilers with heights in excess of 150 feet that are lighted at night. In contrast, there will be three combustion turbine/heat recovery steam generator trains with heights much less than 150 feet as shown in the profiles on SCA Figures 4.2.0-2 and 4.2.0-3.

FPL will develop a light management plan for the Project incorporating the elements stated in SCA Section 6.9.2. This light management plan will be developed during the design of PEEC and will be available post-certification. The lower profile of PEEC along with light management techniques is expected to reduce the plant’s contribution to the cumulative light impacts of the Port on sea turtle nesting.

C - NATURAL RESOURCES PLANNING AND MANAGEMENT DIVISION

The SCA reveals no plans to incorporate any alternative water supplies into the plant retrofit, with insufficient information to substantiate the stated technical and economic infeasibility of reuse as part of the alternative water supply assessment. The plan lacks detail regarding the proposed traveling screen system, contains no reference to sea turtle

lighting considerations, and only minimal information regarding manatee protection efforts. Many of the referenced documents are antiquated.

Alternative Water Supply Assessment

VI-C.1) The current cooling system consists of a once-through seawater system that uses 1295 million gallons per day (MGD). Modernization is noted to reduce cooling water demands by 50% to 635 MGD. The water alternatives analysis (appendix 10.10) states the plan is to continue to use a once through cooling system.

RESPONSE:

Comment acknowledged.

VI-C.2) It is stated that reuse water could potentially be used for process and irrigation water (total demand < 0.5 MGD) if a delivery system were in place and water deemed of appropriate quality and quantity.

RESPONSE:

Comment acknowledged.

VI-C.3) It is also noted in the SCA that several wastewater treatment facilities are located within 10 miles of the site, including Fort Lauderdale's George T. Lohmeyer Plant (1 mile to north) and Hollywood's Wastewater Plant (5 miles to south). Both facilities have uncommitted wastewater flows that potentially could be used to produce reclaimed water, although only the City of Hollywood facility currently produces reclaimed water. It is acknowledged that Hollywood has a reuse system in place that could be expanded to meet demands and a potential distribution corridor is detailed.

RESPONSE:

Comment acknowledged.

VI-C.4) The analysis of alternative water supply options is incomplete. Water quality considerations are not detailed and cost estimates are incomplete. No cost estimate is provided for installation of pipeline and requisite pumps, but FPL indicates this cost would need to be borne by City. No statements have been provided regarding the potential for cost share participation of the reuse provider toward the installation of the pipeline, nor is there information about the amount of additional water quality treatment that reuse water currently produced by the City would have to undergo in order to meet FPL's requirements. The assumption is made that if reuse water is delivered for this purpose the City would likely increase rates from current rate of \$0.1/1000 gallons to \$1.25/1000 gallons. These rates have not been validated by the potential wastewater supplier.

RESPONSE:

FPL believes that the analysis of alternative water supply options is complete. FPL performed a Water Alternatives Analysis to comply with the requirements of the South Florida Water Management District's (SFWMD) Basis of Review (BOR). The additional analyses requested by Broward County are not required by the BOR.

FPL has previously provided the City of Hollywood with information regarding our requirements for water quality should reclaimed water become available to meet process and irrigation demands at a quantity, quality, and price that is deemed prudent for FPL's ratepayers. FPL has also attached the most current version of the FPL Reclaimed Water Quality Requirements Table II-2-1 attached to SFWMD Response II-2. FPL did not estimate costs for possible infrastructure needs prior to future discussions with potential water suppliers to the PEEC Project. The Project schedule is such that no alternative water suppliers were anticipated to be able to provide reclaimed water by the planned PEEC commercial operation date of June 2016. Therefore, FPL planned to engage potential water suppliers during the construction of PEEC to discuss the opportunity for a public-private partnership on reclaimed water distribution to the Site and vicinity. In fact, FPL has already started to coordinate meetings with the two local water utilities that could potentially supply PEEC with reclaimed water.

The discussion of rates was provided solely as an example, so the reader could have an idea of the relative unit cost for reclaimed water as provided by a recent, local public-private partnership. FPL will not speculate on the future price of reclaimed water, and the future price of reclaimed water was not considered in the evaluation of potentially feasible options.

VI-C.5) Thus far it would appear that reclaimed water from the Hollywood Wastewater Treatment Plant by Port Everglades Energy Center for process and irrigation supply remains a technically, environmentally and economically feasible.

RESPONSE:

As stated in the PEEC Water Alternatives Analysis, a reclaimed water supply for the Project's process and irrigation demands is potentially environmentally and economically feasible. At this time, a reclaimed water supply is not available to the Site; therefore, pursuant to the District's Basis of Review, FPL has deemed it technically infeasible. Should reclaimed water become available to the Site at a quantity, quality, and price that is prudent for FPL's ratepayers, then FPL would re-evaluate the potential use at that time. To support a planned commercial operation date of June 2016, FPL plans to use existing water supplies for potable, process, and irrigation demands for PEEC.

As FPL moves forward with the detailed design for PEEC, consideration will be given for the space and other requirements necessary to potentially accommodate the use of reclaimed water at PEEC for process and irrigation demands in the future.

VI-C.6) FPL should develop and integrate into its cost figures the construction of the transmission pipeline, an expense that has been assumed by the energy provider as part of cooling system design in neighboring communities.

RESPONSE:

FPL will evaluate the potential costs for a reclaimed water pipeline to the PEEC Site if discussions with area utilities result in a viable public-private partnership. The terms and conditions of a theoretical signed agreement to provide reclaimed water for the PEEC Project's process and irrigation demands would govern the cost structure for all participants, including analysis of transmission costs.

VI-C.7) The Site Certification Review process should consider regional obligations to develop beneficial reuse projects in accordance with requirements of the 2008 Ocean Outfall legislation, the reuse opportunities unique to energy facilities (producing a constant demand), and the lack of any beneficial reuse projects pursued by FPL in Broward County.

RESPONSE:

The Power Plant Siting Act balances local, regional, and state-wide issues of concern with the need for and public benefits of power generation projects, including water supply and wastewater disposal issues affecting South Florida.

FPL has chosen to pursue beneficial reuse projects in other parts of South Florida when it has made technical, economic, and environmental sense to do so. FPL's West County Energy Center, the largest natural gas combined cycle facility in the world, is cooled by 100 percent reclaimed water through a public-private partnership with Palm Beach County. The environmental benefits of this Project accrue regionally, as would the proposed use of reclaimed water for cooling two new nuclear units in Miami-Dade County. As noted in the Water Alternatives Analysis and committed to in prior responses, FPL will engage local utilities in a dialogue to determine if there is a possibility for a public-private partnership that may supply PEEC with reclaimed water for process and irrigation needs that is technically, economically, and environmentally feasible.

FPL anticipates a standard Condition of Certification from SFWMD requiring FPL to re-evaluate the potential use of reclaimed water should it become available during the life of the PEEC Project. In addition, as per FPL's response to Broward County comment VI-C.5 above, as FPL moves forward with the detailed design for PEEC, consideration will be given for the space and other requirements necessary to potentially accommodate the use of reclaimed water at PEEC for process and irrigation demands in the future.

Impingement and Entrainment

VI-C.8) Reference is made to an Impingement Report conducted between 2006 and 2007 and environmental benefits of the current proposal with a 50% reduction in cooling water intake and the planned installation of an aquatic organism return system and collection screens. It is noted that total impingement and entrainment of organisms will be reduced by 50%. Previous environmental studies downplayed the impact of impingement and entrainment, which remain significant event with ah 50% flow reduction. A traveling screen system to return impinged organisms to a safer environment is proposed but there is information regarding its anticipated effectiveness.

RESPONSE:

In the proposed 316(b) rule, EPA recognizes that both impingement and entrainment are generally proportional to flow. Therefore, PEEC will reduce both impingement and entrainment by at least 50 percent. Impingement will be reduced further by installation of the AORS. EPA estimates that modified traveling screens with return systems can be 70 to 90 percent effective at reducing impingement mortality. However, the effectiveness of the AORS depends on many factors, including the species composition, and the effectiveness cannot be determined *a priori*. Using EPA's lower estimate, PEEC could reduce impingement mortality by 65 percent [1.0 - 0.7*0.5].

Manatee Protection

VI-C.9) The current plan states that "FPL will endeavor to release" heated water when ambient water temperature falls below a threshold. This does not sound like a strong commitment. What is the actual plan? What water temperature is to be maintained and across how large of an area? Will this area accommodate the number of manatees documented to rely upon these thermal discharges during cold weather events?

RESPONSE:

FPL has designed, installed, and operated a MTHS at both RBEC and CCEC, and it is in the process of designing a MTHS for Port Everglades. The design criteria and performance standards from these previously installed systems will be used to customize a system for the Port Everglades Plant.

The final MTHS plan will be designed in consultation with FWS and FWC and included in Environmental and Biological Monitoring Plans as was the case with the two previous plants. FPL has designed the MTHS system to create 68° F water in an area of about 0.4 acres when the ambient temperature falls below a threshold of 65°F, providing adequate space to accommodate about 600 manatees (more than documented). Please also refer to Response VI-C.10 below.

VI-C.10) Section 3.3 Page 3-31 of the SCA lists sources of species that could potentially be in the Plant property, but Broward's survey data were not included. It also states that manatees are known to occur in the vicinity of the Port Everglades Plan, This seems to downplay the number of animals that are actually documented to occupy the property (in the discharge canals) during the manatee season.

RESPONSE:

As discussed in recent conversations regarding manatees, both FPL and Broward County conduct manatee surveys, with FPL's efforts being focused on wintertime cold fronts. FPL's aerial survey data contained in Mote Marine Laboratory Technical Report No. 1535 indicate that the maximum number of manatees observed in a single event in the winter at the Port Everglades Plant was approximately 454, and the lowest number from a single winter survey in the past 10 years is 155. Please refer to Responses VI-C.9 and VI-C.12 regarding manatee protection plans.

VI-C.11) Figure 3.3.6-1 in the SCA showing the manatee aggregations sites is incorrect. The reported Port aggregation site is incorrectly shown as up near the berths rather than in the discharge canal.

RESPONSE:

The manatee aggregation site identified on Figure 3.3.6-1 is from the FNAI database, as are all occurrences shown on the figure, because this data source includes the state and federally listed species required in the SCA Guidelines. It is well-documented that manatees occur in the cooling water discharge canal, particularly in the winter. Please refer to Response VI-C.10 above.

VI-C.12) Section 5.4.1.3 of the SCA states that during construction, warm water will be discharged pursuant to the Manatee Protection Plan (MPP); however, FPL Port MPP has not been updated in 13 years and calls for a heated water endeavor if the ambient water temp drops below 61°F and then only until the ambient temp again reaches 61°F. How will the MPP be updated and what provisions will be made to ensure that adequate thermal discharges are maintained following plant retrofit when the volume discharged water will be reduced by 50 percent?

RESPONSE:

The MPP is issued through the FDEP in consultation with the state (FWC) and federal (FWS) agencies overseeing threatened and endangered species. FPL anticipates Conditions of Certification similar to those for manatees at RBEC, including a requirement to develop and implement Environmental and Biological Monitoring Plans in consultation with the agencies. Please also refer to Response VI-C.9 above.

The 50 percent reduction in discharge volume described in the SCA will not translate into a 50 percent reduction in temperature within the discharge canal. Due to the narrow width of the discharge canal, the temperature of the water within the canal will not change with the reduced flow. The effect of the reduced flow (volume) will be a smaller thermal plume within the Intracoastal Waterway (ICW). Therefore, the cooling water discharge canal will continue to provide a warm water refuge for manatees in the winter months.

Please also refer to FWC Response III-11.

Sea Turtle Lighting

VI-C.13) There is no mention of the plans to address sea turtle lighting requirements, requirements of local ordinances, nor any reference to coordination with FWC Imperiled Species in review of lighting plans for consistency with sea turtle protection provisions. This needs to be formally addressed.

RESPONSE:

Please refer to FPL's Response III-10 to FWC, a party to this certification process. As described in SCA Section 6.9.2, the need for lighting is directly associated with plant personnel safety. In this section FPL has committed to reducing light pollution and light trespass using the guidelines

from the Illuminating Engineering Society of North America to the extent possible while meeting OSHA and security requirements. The incorporation of those light reduction features identified in SCA Section 6.9.2 will result in lower lighting impacts from PEEC and much lower visibility of PEEC than the existing Port Everglades site. The use of the light reduction measures coupled with the much lower profile of PEEC than the existing Units 1 through 4 will reduce the lighting impacts from PEEC. This is directly illustrated by Figure VI-B.32-1 that shows from the same direction the existing Port Everglades Units 1 through 4 and a dimensional representation of PEEC. As stated in the SCA, the existing stacks with lights are approximately 343 feet high while the height of the stacks for PEEC will be less than 150 feet. The existing units have four boilers with heights in excess of 150 feet that are lighted at night. In contrast, there will be three combustion turbine/heat recovery steam generator trains with heights much less than 150 feet as shown in the profiles on SCA Figures 4.2.0-2 and 4.2.0-3. FPL will develop a light management plan for the Project incorporating the elements stated in SCA Section 6.9.2. This light management plan will be developed during the design of PEEC and available post-certification. The lower profile of PEEC along with light management techniques are expected to reduce the plant's contribution to the cumulative light impacts of the Port to sea turtle nesting.

Cold Ironing

VI-C.14) FPL should consider expanding the switch yard to allow for the future possibility of cold ironing at Port Everglades.

RESPONSE:

The switchyard at Port Everglades will be receiving minor upgrades that will only improve the switchyards ability to be modified at a later date if cold ironing is pursued at the Port. Additional work beyond that necessary for the future operations of the modernized facility cannot be included in the proposed Project during the certification and approval process for regulatory reasons. Cold ironing could be pursued separately; discussions on this topic have been occurring for multiple years between the Port and FPL, most recently between Peg Buchan and Leonard Roberts, to determine if it is in the best interests of both organizations.

D - PUBLIC WORKS DEPARTMENT

VI-D.1) Safe and adequate access to Port Everglades requires that adverse effects on traffic associated with the proposed project be monitored and mitigated for, including the assignment of adequate police details. Broward County requests specific information showing FPL will conduct the monitoring, mitigation, and police details described below and that it recommends in the Site Certification Application.

RESPONSE:

Comment noted and accepted. Please refer to Response VI-B.13 above.

VI-D.2) Traffic Engineering Division concurs with the finding in the SCA that during the peak construction phase of the project, level-of-service deficiencies may be experienced at the intersection of Eller Drive and SE 14 Avenue. For that reason, we support the recommendation that conditions be monitored and a police detail be deployed

to control traffic as needed during peak arrival, dismissal and operations period during the construction of the project.

RESPONSE:

Comment noted and accepted. Please also refer to Response VI-B.13 above.

VI-D.3) In addition, the signalized intersection of Eller Drive and McIntosh Road currently experiences periods of congestion and long queues, particularly in the northbound direction, due to a high percentage of tractor trailer traffic from the Southport container facility at the southern terminus of McIntosh Road. This intersection should also be monitored and the traffic conditions mitigated if necessary in the same manner as the intersection of Eller Drive and SE 14 Avenue. The generalized capacity values and corresponding level-of-service forecasts are likely more optimistic than actual since the very high percentage of heavy vehicles may not have been accounted for in the analysis.

RESPONSE:

Also, please refer to Response VI-B.13.

E - DEVELOPMENT AND ENVIRONMENTAL REGULATION DIVISION

Under Chapter 6.2.1 of the SCA, Effects of Chemical and Biocide Discharges, Industrial Wastewater Discharges, FPL discusses that the PEEC will discharge four wastewater streams and the once-through cooling water. Chapter 4.6 states that the wastewaters will be generated by cooling water, HRSG (three new heat recovery steam generators-HRSGs) and evaporative cooler blow down, process water treatment system wastewater, wash water, and equipment area stormwater. And as stated in 6.3.2 Groundwater, PEEC will not use groundwater for any purpose. And that the PEEC onsite sources of discharges to groundwater will be eliminated.

VI-E.1) New non-domestic wastewater discharges, including industrial wastewater discharges, are specifically prohibited within Broward County. 27-193(b)(3)a, BCC. In order to conduct the discharge, FPL must provide sufficient information to show that it is entitled to a variance from that section. Broward County's relevant variance provisions are contained in 27-11 through 27-13, BCC, and include that the applicant must provide information sufficient to show:

VI-E.1)a That there are unique and special circumstances or conditions in regard to the applicant or the applicant's situation which do not apply generally to other similarly regulated persons;

VI-E.1)b That strict application of the provisions of this chapter would cause the applicant undue hardship;

VI-E.1)c That any alleged hardship is not self-created by the applicant and/or is not the result of mere disregard for, or ignorance of, the provisions of this chapter;

VI-E.1)d That the variance proposed is the minimum variance which alleviates the undue hardship;

VI-E.1)e That the granting of the variance will be in harmony with the general intent and purpose of this chapter;

VI-E.1)f That such a variance will not be injurious to the public welfare and to the environment; and

VI-E.1)g That the variance is for the minimum time necessary to remedy the hardship and grants the minimum waiver of this chapter necessary to remedy the hardship;

A variance from the prohibition would normally allow for the County to issue a license pursuant to 27-198(c), BCC, for the operation of the discharge, so the County may suggest Site Certification conditions consistent with County licenses of the same type, such as the license conditions currently in place for FPL's current non-domestic wastewater discharge.

RESPONSE:

The existing facility has operated at this same site for over 50 years pursuant to all required permits. Consequently, the discharge existed before 1984, when the Broward County requirement became effective. The water sources and the industrial processes to be used at PEEC are similar to the existing Port Everglades Plant. Therefore, the quality of the PEEC discharges will be similar to the existing facility. In many cases, the discharge quantities will be reduced and the thermal load to the aquatic environment will be reduced by approximately 50 percent compared to the existing facility. The PEEC discharge will be consistent with previous discharge monitoring reports. Consequently, PEEC is not a "new" discharge. Each of the wastewater effluents are discussed further below:

Non-contact Circulating Cooling Water: The cooling water source for PEEC is the same as for the existing plant. The biological treatment requirements for this process will be similar to the existing facility; and the temperature rise between the intake and discharge will be approximately the same. Therefore, the quality will be the same. The circulating cooling water flow rate for PEEC (592.2 MGD), however, will be less than 50 percent of the flow currently authorized by Broward County for Units 1 through 4 (1295 MGD). Therefore, the thermal load to the aquatic environment will be reduced by one-half.

Auxiliary Cooling Water: The source water for PEEC will be the intake canal; the same as for Units 3 & 4 of the existing plant. The biological treatment requirements for this process will be similar to the existing facility; and the temperature rise between the intake and discharge will be approximately the same. Therefore, the quality will be the same. The auxiliary cooling water flow rate for PEEC (43.2 MGD) is approximately the same as the flow currently authorized by Broward County for the existing Units 1 & 2 auxiliary cooling water discharge (42.6 MGD).

Water Treatment: The PEEC water treatment facility will use the same water source (City) and the same treatment process (reverse osmosis) as the existing power plant. Therefore, the PEEC water treatment plant RO discharge quality will be similar to the existing plant effluent. The average discharge rate for PEEC will be 54 GPM. Broward County currently authorizes up to 110 GPM for the existing plant.

HRSG and Evaporative Cooler Blowdown: This waste stream is similar to the boiler blowdown generated by the existing plant. The water source in both cases is highly treated water from the water treatment system. The discharge is required to remove dissolved solids that build up due to evaporation. In PEEC and the existing plant, this waste stream is normally recycled and reused in the water treatment system. In both PEEC and the existing facility, when reuse in the water treatment system is not feasible, the wastewater is discharged to the intake and reused as cooling water.

Screen Wash/ Aquatic Organism Return System: For both PEEC and the existing plant, the source water is the intake canal. This water is filtered, but otherwise untreated. For the existing facility, the screen wash water is returned to the intake canal. For PEEC, most of the screen wash water is used to return aquatic organisms to the source water body away from the intake. The remainder, if any, is returned to the intake canal. The water quality of the screen wash discharge is essentially the same as the intake canal. The water qualities of the discharges for PEEC and the existing facility are the same.

Plant and Equipment Drains: PEEC will discharge approximately 25 GPM from plant and equipment cleaning operations after treatment through an oil/water separator. The existing facility is authorized by Broward County to discharge approximately 30 GPM of wastewaters from various cleaning operations after treatment through a settling basin. The quality of the discharge for PEEC is expected to be similar or somewhat better than the existing discharge.

Equipment Area Stormwater Runoff: Both PEEC and the existing plant treat contact stormwater through oil water separators before discharge to either the intake or discharge canals. The stormwater quality and quantity should be approximately the same for both facilities.

Sanitary Wastewater: For both PEEC and the existing power plant sanitary wastewater is discharged to the sanitary sewer system. PEEC will use high efficiency sanitary water facilities. Therefore, the wastewater discharges should be less for PEEC.

In summary, the existing facility has been operating at this site for over 50 years. The water sources and the industrial processes are similar. Therefore, the wastewater quality should remain approximately the same. The wastewater quality reported in the discharge monitoring reports should not change. PEEC will meet all applicable water quality standards specified in the existing Broward County authorization to discharge. The wastewater quantities will be approximately the same or less. The cooling water flows will be significantly less and the thermal load to the environment will be reduced by about one-half. Consequently, PEEC is not a "new" discharge.

Based upon discussions with Broward County staff, the industrial wastewater discharge associated with the modernized facility is not considered to be a new discharge. The modernization will not result in an increase in quantity or decrease in quality of the current discharge and will not result in significant harm to human health or the environment. Pursuant to these discussions, it is FPL's understanding that Broward County now concurs that no variances are required from applicable non-procedural standards.