

Florida Department of
Environmental Protection

Memorandum

To: Jeff Koerner
Through: Jon Holtom *JH 7/8/11*
From: Tom Cascio *TCM*
Date: July 1, 2011
Subject: Draft Minor Source Air Construction Permit
Project No. 0250003-015-AC
Florida Power and Light Company, Turkey Point Nuclear Plant
Replacement of Two Emergency Diesel Engines

Attached for your review is a draft minor air construction permit package for the Turkey Point Nuclear Plant, which is located in Miami-Dade County, 10 miles east of Florida City on SW 344th Street, in Florida City, Florida. Briefly, the draft permit authorizes replacement of two emergency diesel engines for instrument air compressors at the facility. The attached Technical Evaluation and Preliminary Determination provides a detailed description of the project and the rationale for permit issuance. I recommend your approval of the attached draft permit package.

Attachments

JKH/tbc



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

Mr. Gabriel Mendoza
Florida Power and Light Company
700 Universe Boulevard
Juno Beach, Florida 33408

Re: Project No. 0250003-015-AC
Florida Power and Light Company, Turkey Point Nuclear Plant
Minor Air Construction Permit
Replacement of Emergency Diesel Engines for Instrument Air Compressors

Dear Mr. Mendoza:

On June 15, 2011, you submitted an application requesting replacement of two emergency diesel engines for instrument air compressors at the Turkey Point Nuclear Plant facility. This facility is located in Miami-Dade County, 10 miles east of Florida City on SW 344th Street, in Florida City, Florida. Enclosed are the following documents: the Technical Evaluation and Preliminary Determination; the Draft Permit and Appendices; the Written Notice of Intent to Issue Air Permit; and the Public Notice of Intent to Issue Air Permit. The Public Notice of Intent to Issue Air Permit is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project. If you have any questions, please contact the project engineer, Tom Cascio, at 850-717-9077.

Sincerely,

Jeffrey F. Koerner, Program Administrator
Air Permitting and Compliance Section
Division of Air Resource Management

7-11-11

Date

Enclosures

JFK/jkh/tbc

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

*In the Matter of an
Application for Air Permit by:*

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

Project No. 0250003-015-AC
Minor Air Construction Permit
Miami-Dade County, Florida

Authorized Representative:
Mr. Gabriel Mendoza, Chemistry Manager

Turkey Point Nuclear Plant
Replacement of Emergency
Diesel Engines

Facility Location: Florida Power and Light Company operates the existing Turkey Point Nuclear Plant, which is located in Miami-Dade County 10 miles east of Florida City on SW 344th Street, in Florida City, Florida.

Project: The applicant proposes to replace two emergency diesel engines for instrument air compressors at the facility. In the event station power is lost, Turkey Point Units 003 and 004 (nuclear reactors) have emergency generators (Unit 005) that supply critical systems including electric power for the instrument air compressors. In the event that the emergency generators cannot supply electric power for instrument air, the diesel engines provide backup power to instrument air compressors (i.e., the new instrument air compressor diesel engines are a backup to a backup system). As a result of this project, emission rates of nitrogen oxides, volatile organic compounds and particulate matter are reduced, while emission of sulfur dioxide and carbon monoxide remain approximately the same. Details of the project are provided in the application and the enclosed Technical Evaluation and Preliminary Determination.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Permitting Authority responsible for making a permit determination for this project is the Department of Environmental Protection's Air Permitting and Compliance Section in Tallahassee. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/717-9000.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the draft permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above.

Notice of Intent to Issue Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a final permit in accordance with the conditions of the draft permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Public Notice: Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the activity is to take

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at above address or phone number. Pursuant to Rule 62-110.106(5) and (9), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within 7 days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

Comments: The Permitting Authority will accept written comments concerning the draft permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of the 14-day period. If written comments received result in a significant change to the draft permit, the Permitting Authority shall revise the draft permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241). Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this Written Notice of Intent to Issue Air Permit. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the attached Public Notice or within 14 days of receipt of this Written Notice of Intent to Issue Air Permit, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

Executed in Tallahassee, Florida.

Jeffrey F. Koerner, Program Administrator
Air Permitting and Compliance Section
Division of Air Resource Management

7-11-11
Date

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Written Notice of Intent to Issue Air Permit package (including the Written Notice of Intent to Issue Air Permit, the Public Notice of Intent to Issue Air Permit, the Technical Evaluation and Preliminary Determination and the Draft Permit) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on 7/11/11 to the persons listed below.

- Gabriel Mendoza, Florida Power and Light Company: gabriel.mendoza@fpl.com
- Kevin Washington, Florida Power and Light Company: kevin_washington@fpl.com
- Kennard F. Kosky, P.E., Golder Associates, Inc.: kkosky@golder.com
- H. Patrick Wong, Miami-Dade DERM: wongp@miamidade.gov
- Lennon Anderson, P.E., Southeast District Office: lennon.anderson@dep.state.fl.us
- Kathleen Forney, EPA Region 4: forney.kathleen@epa.gov
- Barbara Friday, DEP Air Permitting and Compliance Section: barbara.friday@dep.state.fl.us
- Lynn Searce, DEP Air Permitting and Compliance Section: lynn.searce@dep.state.fl.us

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

Barbara Friday (Clerk) 7/11/11 (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

Florida Department of Environmental Protection
Air Permitting and Compliance Section
Draft Minor Source Air Construction Permit
Project No. 0250003-015-AC
Florida Power and Light Company, Turkey Point Nuclear Plant
Miami-Dade County, Florida

Applicant: The applicant for this project is Florida Power and Light Company. The applicant's authorized representative and mailing address are: Gabriel Mendoza, Chemistry Manager, Florida Power and Light Company, Turkey Point Nuclear Plant, 700 Universe Boulevard, Juno Beach, Florida 33408.

Facility Location: Florida Power and Light Company operates the existing Turkey Point Nuclear Plant, which is located in Miami-Dade County, 10 miles east of Florida City on SW 344th Street, in Florida City, Florida.

Project: This project authorizes replacement of two emergency diesel engines for instrument air compressors at the facility. In the event station power is lost, Turkey Point Units 003 and 004 (nuclear reactors) have emergency generators (Unit 005) that supply critical systems including electric power for the instrument air compressors. In the event that the emergency generators cannot supply electric power for instrument air, the diesel engines provide backup power to instrument air compressors (i.e., the new instrument air compressor diesel engines are a backup to a backup system). As a result of this project, emission rates of nitrogen oxides, volatile organic compounds and particulate matter are reduced, while emission of sulfur dioxide and carbon monoxide remain approximately the same.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Permitting Authority responsible for making a permit determination for this project is the Department of Environmental Protection's Air Permitting and Compliance Section in Tallahassee. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/717-9000.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at the physical address indicated above for the Permitting Authority. The complete project file includes the draft permit, the Technical Evaluation and Preliminary Determination, the application and information submitted by the applicant (exclusive of confidential records under Section 403.111, F.S.). Interested persons may contact the Permitting Authority's project engineer for additional information at the address and phone number listed above. In addition, electronic copies of these documents are available on the following web site: <http://www.dep.state.fl.us/air/emission/apds/default.asp>.

Notice of Intent to Issue Air Permit: The Permitting Authority gives notice of its intent to issue an air construction permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a final permit in accordance with the conditions of the draft permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the draft permit for a period of 14 days from the date of publication of this Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of the 14-day period. If written comments received result in a significant change to the draft permit, the Permitting Authority shall revise the draft permit and require, if applicable, another Public Notice. All comments filed will be made available for public

(Public Notice to be Published in the Newspaper)

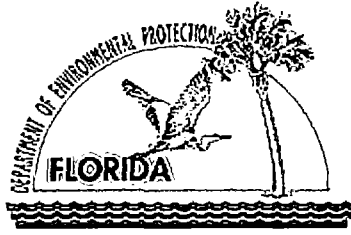
inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241). Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address and telephone number of the petitioner; the name address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial rights will be affected by the agency determination; (c) A statement of when and how the petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Public Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available for this proceeding.



**TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION**

APPLICANT

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

Turkey Point Nuclear Plant
Facility ID No. 0250003

PROJECT

Project No. 0250003-015-AC
Application for Minor Source Air Construction Permit
Replacement of Emergency Diesel Engines for Instrument Air Compressors

COUNTY

Miami-Dade County, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Air Permitting and Compliance Section
Power Plant Group

July 1, 2011

1. GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Facility Description and Location

The Florida Power and Light Company Turkey Point Nuclear Plant (part of the Turkey Point Title V facility that includes a fossil plant) is an existing electrical generation power plant, which is categorized under Standard Industrial Classification Code No. 4911. The facility is located in Miami-Dade County 10 miles east of Florida City on SW 344th Street, in Florida City, Florida. The Universal Transverse Mercator (UTM) coordinates of the existing facility are Zone 17,567.2 km East, and 2813.2 km North. This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standards (AAQS).

Facility Regulatory Categories

- The facility is a major source of hazardous air pollutants (HAP).
- The facility has units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C., for the Prevention of Significant Deterioration (PSD) of Air Quality.

Project Description

This project authorizes replacement of two emergency diesel engines for instrument air compressors at the facility. In the event station power is lost, Turkey Point Units 003 and 004 (nuclear reactors) have emergency generators (Unit 005) that supply critical systems including electric power for the instrument air compressors. In the event that the emergency generators cannot supply electric power for instrument air, the diesel engines provide backup power to instrument air compressors (i.e., the new instrument air compressor diesel engines are a backup to a backup system).

Processing Schedule

June 15, 2011 Received the application for a minor source air pollution construction permit; application deemed complete.

2. PSD APPLICABILITY

General PSD Applicability

For areas currently in attainment with the state and federal AAQS or areas otherwise designated as unclassifiable, the Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. Under preconstruction review, the Department first must determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, must conduct a PSD preconstruction review. A PSD applicability review is required for projects at new and existing major stationary sources. In addition, proposed projects at existing minor sources are subject to a PSD applicability review to determine whether potential emissions *from the proposed project itself* will exceed the PSD major stationary source thresholds. A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit:

- 250 tons per year or more of any regulated air pollutant; or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the following 28 PSD-major facility categories: fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), Kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants and charcoal production plants.

Once it is determined that a project is subject to PSD preconstruction review, the project emissions are compared to the "significant emission rates" defined in Rule 62-210.200, F.A.C. for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO_x); sulfur dioxide (SO₂); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM₁₀); volatile organic compounds (VOC); lead (Pb); fluorides (F1); sulfuric acid mist (SAM); hydrogen sulfide (H₂S); total reduced sulfur (TRS), including H₂S; reduced sulfur compounds, including H₂S; municipal waste combustor organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans; municipal waste combustor metals measured as particulate matter; municipal waste combustor acid gases measured as SO₂ and hydrogen chloride (HCl); municipal solid waste landfills emissions measured as non-methane organic compounds (NMOC); and mercury (Hg). In addition, significant emissions rate also means any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 µg/m³, 24-hour average.

If the potential emission exceeds the defined significant emissions rate of a PSD pollutant, the project is considered "significant" for the pollutant and the applicant must employ the Best Available Control Technology (BACT) to minimize the emissions and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

PSD Applicability for Project

The proposed project involves replacing 1970's vintage backup diesel engines for the instrument air compressors for Turkey Point Units 003 and 004. These engines are identified as part of Emission Unit (EU) 007 in Title V Air Operation Permit No. 0250003-010-AV. The primary power to the instrument air compressors is electric that is supplied by station power. In the event station power is lost, Turkey Point Units 003 & 004 have emergency generators that supply critical systems including electric power for the instrument air compressors. These emergency generators are EU 005. In the unlikely event that the emergency generators cannot supply

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

electric power for instrument air, the diesel engines provide backup power to instrument air compressors (i.e., the new instrument air compressor diesel engines are a backup to a backup system). The new diesel engines are Caterpillar C-11 325 horsepower (hp) diesel engines that meet the EPA Tier III 2006 emission standards for non-road compression-ignition engines promulgated in 40 CFR Part 89.112. The Standards of Performance for Stationary Compression Ignition Internal Combustion Engines codified in 40 CFR 60 Subpart IIII are applicable to compression ignition engines for model years 2007 and later. The air compressor diesel engines are considered emergency engines under the rule and are required to comply with the emission standards in 40 CFR 89.112. The air compressor diesel engines are normally only operated for maintenance and reliability testing that occurs several hours per month.

Table EU-07, below, presents a comparison of the estimated emissions from the new air compressor diesel engines to the 1970's vintage diesel engines being replaced. The emissions for the new and existing engines are based on 52 hours per year (1 hour per week) used for maintenance testing. Emissions for the new air compressor diesel engines are based on EPA Tier III 2006 emission standards. For the existing 1970's vintage diesel engines, performance was estimated based on the hp rating and emissions based on AP-42 emission factors. As shown in the table, emission rates of NO_x, VOC and PM are reduced, while emission of SO₂ and CO remain approximately the same, even though the new engines have about 25 percent more horsepower. It should also be noted that the estimated annual emissions are much lower than the threshold for the generic exemption in Rule 62-210.300, F.A.C., and insignificant activity in Rule 62-213.430(6), F.A.C.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

May 2011

**TABLE EU-07
ESTIMATED PERFORMANCE AND EMISSION DATA FOR
AIR COMPRESSOR DIESEL ENGINES ASSOCIATED WITH TURKEY POINT UNITS 3 & 4**

Parameter	New Backup Air Compressor Diesel Engines	1970's Vintage Air Compressor Diesel Engines	Difference
<u>Performance</u>			
Number	2	2	
Rating (kW)	242	194	
Rating (hp)	325	260	
Fuel	Diesel	Diesel	
Fuel Heat content (Btu/lb) (HHV)	19,300	19,300	
Fuel density (lb/gal)	7.0	7.0	
Heat input (MMBtu/hr) (HHV)	2.28	1.86	
Fuel usage (gallons/hr)	16.9	13.8	
Maximum operation (hours)	52	52	
Maximum fuel usage (gallons/yr/unit)	878	717	
Maximum fuel usage (gallons/yr)	1,756	1,433	
<u>Stack Parameters</u>			
Exhaust Flow (cfm; each stack)	2,024		
Exhaust Temperature (°F; each stack)	873		
<u>Emissions</u>			
SO ₂ - Basis (%S)	0.0015%	0.0015%	
Conversion of S to SO ₂	100	100	
Molecular weight SO ₂ / S (64/32)	2	2	
Emission rate (lb/hr)	3.54E-03	2.89E-03	6.51E-04
(tpy/diesel engine)	9.22E-05	7.52E-05	
(tpy/plant)	1.84E-04	1.50E-04	3.39E-05
NO _x - Basis (g/kW-hr) ^a (lb/MMBtu) ^b	4.0	4.41	
Emission rate (lb/hr)	2.14	8.21	-6
(tpy/diesel engine)	0.056	0.213	
(tpy)	0.111	0.427	-0.316
CO - Basis (g/kW-hr) ^a (lb/MMBtu) ^b	3.5	0.95	
Emission rate (lb/hr)	1.9	1.77	0.101
(tpy/diesel engine)	0.049	0.046	
(tpy)	0.097	0.092	0.005
VOC - Basis (g/kW-hr) ^a (lb/MMBtu) ^b	1.0	0.36	
Emission rate (lb/hr)	0.53	0.67	-0.136
(tpy/diesel engine)	0.014	0.017	
(tpy)	0.028	0.035	-0.007
PM/PM ₁₀ - Basis (g/kW-hr) ^a (lb/MMBtu) ^b	0.2	0.31	
Emission rate (lb/hr)	0.11	0.58	-0.470
(tpy/diesel engine)	0.003	0.015	
(tpy)	0.006	0.030	-0.024

^a Caterpillar C-11 Industrial Engine; EPA Tier III 2005; EU Stage-IIIa 2006-2010. Note: Tier III based on NO_x and HC at 4.0 g/kw-hr. 40 CFR Part 89.112. Emissions based on conservative estimate for NO_x and VOC.

^b Performance estimated. Emissions based on AP-42 Section 3.3 Gasoline and Diesel Industrial Engines; Table 3.3-1.

Turkey Point Nuclear Air Compressor Diesels.xlsx

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

As provided in the application, the following table summarizes potential emissions and PSD applicability for the project.

Table A. Potential Emissions (Tons/Year) and PSD Applicability

Pollutant	Project Potential Emissions (TPY)	Significant Emissions Rate (TPY)	Subject To PSD?
CO	0.005	100	No
NO _x	-0.316	40	No
PM/PM ₁₀	-0.024	25/15	No
SO ₂	3.39 x 10 ⁻⁵	40	No
VOC	-0.007	40	No

As shown in the above table, total project emissions will not exceed the PSD significant emissions rates; therefore, the project is not subject to PSD preconstruction review.

3. APPLICATION REVIEW

Discussion of Emissions

See above tables.

State Requirements

These rules apply to this project: Rule 62-296.320(4)(b)1(General Visible Emissions Standard), 62-296.570(4)(b)7(RACT), 62-296.570(4)(c), (RACT), 62-297.570, F.A.C. These units are regulated under Reasonably Available Control Technology (RACT) - Requirements for Major VOC- and NO_x-Emitting Facilities Rule 62-297.570, F.A.C.

Federal NSPS and NESHAP Provisions

These emissions units, compression ignition (CI) engines, are regulated under 40 CFR 63, Subpart ZZZZ, NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE) adopted in Rule 62.204.800(11)(b), F.A.C. and 40 CFR 60, Subpart IIII, NSPS. These RICE are not used for fire pumps. They are "new" stationary CI RICE greater than or equal to 175 HP and less than or equal to 500 HP, with a displacement less than 10 liters per cylinder, that are located at a major source of HAP and that have been modified, reconstructed or commenced construction on or after 6/12/2006 and have a post-2007 model year.

Other Draft Permit Requirements

There are no additional production and operation limitations, monitoring requirements, etc., because of this project.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Tom Cascio is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Air Permitting and Compliance Section, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

***** DRAFT PERMIT *****

Sent by Electronic Mail – Received Receipt Requested

PERMITTEE

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

Air Permit No. 0250003-015-AC
Permit Expires: July 1, 2012
Minor Source Air Construction Permit

Authorized Representative:
Gabriel Mendoza, Chemistry Manager

Turkey Point Nuclear Plant
Replacement of Emergency Diesel Engines

This is the final air construction permit, which authorizes replacement of two emergency diesel engines for instrument air compressors at the facility. The proposed work will be conducted at the Turkey Point Nuclear Plant, which is a nuclear power generation plant (Standard Industrial Classification No. 4911). The facility is located in Miami-Dade County, 10 miles east of Florida City on SW 344th Street, in Florida City, Florida. The Universal Transverse Mercator (UTM) coordinates are Zone 17,567.2 km East, and 2813.2 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit. As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit.

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida
For the Division of Air Resource Management

(Draft)

(Signature)

(Date)

(Printed Name of Above Designee)

DRAFT PERMIT

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit with Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on _____(DRAFT)_____ to the persons listed below.

Gabriel Mendoza, Florida Power and Light Company: gabriel.mendoza@fpl.com
Kevin Washington, Florida Power and Light Company: kevin_washington@fpl.com
Kennard F. Kosky, P.E., Golder Associates, Inc.: kkosky@golder.com
H. Patrick Wong, Miami-Dade DERM: wongp@miamidade.gov
Lennon Anderson, P.E., Southeast District Office: lennon.anderson@dep.state.fl.us
Kathleen Forney, EPA Region 4: forney.kathleen@epa.gov
Barbara Friday, DEP Air Permitting and Compliance Section: barbara.friday@dep.state.fl.us
Lynn Scearce, DEP Air Permitting and Compliance Section: lynn.scearce@dep.state.fl.us

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

(DRAFT)

(Clerk)

(Date)

4

SECTION 1. GENERAL INFORMATION (DRAFT)

FACILITY AND PROJECT DESCRIPTION

Existing Facility

The Turkey Point Title V Source is composed of two separate co-located power plants: the Fossil Plant and the Nuclear Plant. The Nuclear Plant consists of two nuclear generating units with a combined capacity of 1,332 megawatts (MW); nine diesel emergency generators; miscellaneous diesel engines; and miscellaneous unregulated and insignificant emissions units and/or activities. The existing Nuclear Plant includes the following emissions units.

Facility ID No. 0250003	
ID No.	Emission Unit Description
005	Four 2.5 MW Diesel Emergency Generators
006	Five Other Diesel Emergency Generators
007	Miscellaneous Diesel Plant Equipment, including Air Compressor Engines

Proposed Project

This project authorizes replacement of two emergency diesel engines (currently part of Unit 007) for instrument air compressors at the facility. In the event station power is lost, Turkey Point Units 003 and 004 (nuclear reactors) have emergency generators (Unit 005) that supply critical systems including electric power for the instrument air compressors. In the event that the emergency generators cannot supply electric power for instrument air, the diesel engines provide backup power to instrument air compressors (i.e., the new instrument air compressor diesel engines are a backup to a backup system). This project will modify the following emissions unit.

Facility ID No. 0250003	
ID No.	Emission Unit Description
007	Miscellaneous Diesel Plant Equipment, including Air Compressor Engines

FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility has units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT)

1. Permitting Authority: The permitting authority for this project is the Office of Air Permitting and Compliance, Division of Air Resource Management, Florida Department of Environmental Protection (Department). The Office of Air Permitting and Compliance's mailing address is: 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the District Office and Local Air Program. The mailing address and phone number of the Southeast District Office is: 400 North Congress Avenue, West Palm Beach, Florida 33401, 561/681-6600. The mailing address and phone number of the Local Air Program is: Miami-Dade County Department of Environmental Resources Management, 701 NW 1st Court Suite 400 Miami, Florida 33136, 305/372-6925.
3. Appendices: The following Appendices are attached as part of this permit: Appendix A. Citation Formats and Glossary of Common Terms; and Appendix B. General Conditions.
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, 62-296 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: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be 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. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after 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 appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

A. Two Emergency Diesel Engines

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
007	Two Caterpillar C11 ACERT™ Industrial Engines, 350 brake horsepower (bhp), I-6, 4-stroke-cycle diesel engines

EQUIPMENT

- Emergency Diesel Engines: The permittee is authorized to install two diesel engines to provide backup power to instrument air compressors. [Application No. 0250003-015-AC]

The Caterpillar model C11 is an inline, six cylinder, four-stroke-cycle diesel engine. The cylinder bore has a diameter of 5.12 inches, and the stroke piston is 5.51 inches long. The engine's compression ratio is 17 to 1. When operating at 2,100 revolutions per minute (rpm), the horsepower range is 305 to 370. When operating at 1,200 revolutions per minute, the pound-feet of torque range is 1,050 to 1,450. The fuel rate at 2,100 rpm is 19.1 gallons/hour. The engines will burn ultra low sulfur diesel fuel with 15 ppm (parts per million) sulfur content by weight.

In the event station power is lost, Turkey Point Units 003 and 004 (nuclear reactors) have emergency generators (Unit 005) that supply critical systems including electric power for the instrument air compressors. In the event that the emergency generators cannot supply electric power for instrument air, the diesel engines provide backup power to instrument air compressors (i.e., the new instrument air compressor diesel engines are a backup to a backup system).

The following table provides important details for these emissions units:

E.U. ID No.	Engine Brake HP	Date of Construction	Model Year	Primary Fuel	Type of Engine	Displacement liters/cylinder (l/c)	Serial #	Date of last modification or reconstruction
007	325	01/03/11	2011	Diesel	Emergency	1.85	GLS0 3911 and GLS0 3912	N/A

PERFORMANCE RESTRICTIONS

- Permitted Capacity: The maximum allowable heat input rate is as follows:

<u>Unit No.</u>	<u>MMBtu/hr Heat Input</u>	<u>Fuel Type</u>
007	5.85	Ultra low sulfur diesel fuel

Heat input may be determined by using fuel flow meters in conjunction with the heating value of the fired fuel. [Rules 62-4.160(2) & 62-210.200 (PTE), F.A.C.]

- Authorized Fuel: The Stationary Reciprocating Internal Combustion Engines (RICE) must use diesel fuel that meets the following requirements for non-road diesel fuel:
 - Sulfur Content. The sulfur content shall not exceed = 15 ppm = 0.0015% by weight (ultra low sulfur) for non-road fuel.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

A. Two Emergency Diesel Engines

- b. *Cetane and Aromatic.* The fuel must have a minimum cetane index of 40 or must have a maximum aromatic content of 35 volume percent.

[40 CFR 60.4207(b) and 80.510(b); Application No. 0250003-015-AC and Rule 62-210.200(PTE), F.A.C.]

4. Restricted Hours of Operation:

- a. *Emergency Situations.* There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 60.4211(e)]
- b. *Maintenance and Testing.* Each RICE is authorized to operate for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. [40 CFR 60.4211(e)]
- c. *Other Situations.* Each RICE cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 60.4219; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

5. NO_x Emissions: Nitrogen oxides (NO_x) emissions shall not exceed 4.75 lb per million Btu heat input. This limit shall apply at all times except during periods of startup, shutdown, or malfunction. [Rule 62-296.570(4)(b)7. and (c), F.A.C.; Application No. 0250003-015-AC]
6. Compliance with NO_x Reasonably Available Control Technology (RACT) Standard: If the owner or operator of a emissions unit subject to the requirements of this rule assumes a more stringent NO_x emissions limit than the RACT emissions limit established in subsection 62-296.570(4), F.A.C., compliance with the emissions unit's NO_x emissions limit in its air construction permit shall be considered compliance with RACT for purposes of this rule. Note that the NO_x emissions limit specified in Specific Condition 7 is more stringent than the emissions limit specified in Specific Condition 5. [Rule 62-296.570(2), F.A.C.]
7. NMHC + NO_x Emissions: Non-methane hydrocarbons (NMHC) and NO_x emissions shall not exceed 4.0 grams per kilowatt hour (g/KW-hr). [40 CFR 60.4205(b)]
8. CO Emissions: Carbon monoxide (CO) emissions shall not exceed 3.5 g/KW-hr. [40 CFR 60.4205(b)]
9. PM Emissions: Particulate matter (PM) emissions shall not exceed 0.2 g/KW-hr. [40 CFR 60.4205(b)]

TESTING REQUIREMENTS

10. NTE Standards: Exhaust emissions from stationary compression ignition (CI) internal combustion engines (ICE) that are complying with the emission standards in Specific Conditions 7. - 9. must not exceed the not to exceed (NTE) numerical requirements, rounded to the same number of decimal places as the applicable standard, determined from the following equation: $NTE = (1.25) \times (\text{Standard})$. [40 CFR 60.4212]
11. Compliance Requirements: No stack testing for compliance with emissions limits is required. The owner or operator must demonstrate compliance according to one of the methods below:
- a. *Certification.* Have purchased an engine certified according to 40 CFR Part 89 or Part 94, as applicable, for the same model year and maximum engine power.
- b. *Manufacturer Data.* Keep records of engine manufacturer data indicating compliance with the standards.

[40 CFR 60.4211(b)]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

A. Two Emergency Diesel Engines

MONITORING REQUIREMENTS

12. Hour Meter: The owner or operator must install a non-resettable hour meter if one is not already installed. [40 CFR 60.4209(a)]
13. Operation and Maintenance: The owner or operator must operate and maintain the stationary CI internal combustion engine according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. The owner or operator must meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply. [40 CFR 60.4211(a)]

RECORDS AND REPORTS

14. Required Records: Owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner or operator must record the time of operation of the engine and the reason the engine was in operation during that time. [40 CFR 60.4214]
15. Record Retention:
 - a. The owner or operator must keep records in a suitable and readily available form for expeditious reviews.
 - b. The owner or operator must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record.

[40 CFR 63.6660 and 40 CFR 63.10(b)(1)]

GENERAL PROVISIONS

16. Subpart A: The owner or operator must comply with the general provisions in 40 CFR 60 Subpart A. [40 CFR 60.4218]

SECTION 4. APPENDICES (DRAFT)

Contents

Appendix A. Citation Formats and Glossary of Common Terms

Appendix B. General Conditions

SECTION 4. APPENDIX A (DRAFT)

Citation Formats and Glossary of Common Terms

CITATION FORMATS

The following illustrate the formats used in the permit to identify applicable requirements from permits and regulations.

Old Permit Numbers

Example: Permit No. AC50-123456 or Permit No. AO50-123456

Where: “AC” identifies the permit as an Air Construction Permit
“AO” identifies the permit as an Air Operation Permit
“123456” identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: “099” represents the specific county ID number in which the project is located
“2222” represents the specific facility ID number for that county
“001” identifies the specific permit project number
“AC” identifies the permit as an air construction permit
“AF” identifies the permit as a minor source federally enforceable state operation permit
“AO” identifies the permit as a minor source air operation permit
“AV” identifies the permit as a major Title V air operation permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: “PSD” means issued pursuant to the preconstruction review requirements of the Prevention of Significant Deterioration of Air Quality
“FL” means that the permit was issued by the State of Florida
“317” identifies the specific permit project number

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

GLOSSARY OF COMMON TERMS

° F: degrees Fahrenheit

AAQS: Ambient Air Quality Standard

acf: actual cubic feet

acfm: actual cubic feet per minute

ARMS: Air Resource Management System (DEP database)

BACT: best available control technology

bhp: brake horsepower

Btu: British thermal units

CAM: compliance assurance monitoring

CEMS: continuous emissions monitoring system

cfm: cubic feet per minute

SECTION 4. APPENDIX A (DRAFT)

Citation Formats and Glossary of Common Terms

CFR: Code of Federal Regulations	NESHAP: National Emissions Standards for Hazardous Air Pollutants
CAA: Clean Air Act	NO_x: nitrogen oxides
CMS: continuous monitoring system	NSPS: New Source Performance Standards
CO: carbon monoxide	O&M: operation and maintenance
CO₂: carbon dioxide	O₂: oxygen
COMS: continuous opacity monitoring system	Pb: lead
DARM: Division of Air Resource Management	PM: particulate matter
DEP: Department of Environmental Protection	PM₁₀: particulate matter with a mean aerodynamic diameter of 10 microns or less
Department: Department of Environmental Protection	ppm: parts per million
dscf: dry standard cubic feet	ppmv: parts per million by volume
dscfm: dry standard cubic feet per minute	ppmvd: parts per million by volume, dry basis
EPA: Environmental Protection Agency	QA: quality assurance
ESP: electrostatic precipitator (control system for reducing particulate matter)	QC: quality control
EU: emissions unit	PSD: prevention of significant deterioration
F.A.C.: Florida Administrative Code	psi: pounds per square inch
F.A.W.: Florida Administrative Weekly	PTE: potential to emit
F.D.: forced draft	RACT: reasonably available control technology
F.S.: Florida Statutes	RATA: relative accuracy test audit
FGD: flue gas desulfurization	RBLC: EPA's RACT/BACT/LAER Clearinghouse
FGR: flue gas recirculation	SAM: sulfuric acid mist
Fl: fluoride	scf: standard cubic feet
ft²: square feet	scfm: standard cubic feet per minute
ft³: cubic feet	SIC: standard industrial classification code
gpm: gallons per minute	SIP: State Implementation Plan
gr: grains	SNCR: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)
HAP: hazardous air pollutant	SO₂: sulfur dioxide
Hg: mercury	TPD: tons/day
I.D.: induced draft	TPH: tons per hour
ID: identification	TPY: tons per year
kPa: kilopascals	TRS: total reduced sulfur
lb: pound	UTM: Universal Transverse Mercator coordinate system
MACT: maximum achievable technology	VE: visible emissions
MMBtu: million British thermal units	VOC: volatile organic compounds
MSDS: material safety data sheets	
MW: megawatt	

SECTION 4. APPENDIX B (DRAFT)

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 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
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 403.987(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and 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 and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
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 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 noncompliance; and
 - 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 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.

SECTION 4. APPENDIX B (DRAFT)

General Conditions

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. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.
11. This permit is transferable only upon Department approval in accordance with 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 (not applicable);
 - b. Determination of Prevention of Significant Deterioration (not applicable); and
 - c. Compliance with New Source Performance Standards (applicable).
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 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:
 - (a) The date, exact place, and time of sampling or measurements;
 - (b) The person responsible for performing the sampling or measurements;
 - (c) The dates analyses were performed;
 - (d) The person responsible for performing the analyses;
 - (e) The analytical techniques or methods used;
 - (f) 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 the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

P.E. CERTIFICATION STATEMENT

PERMITTEE

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

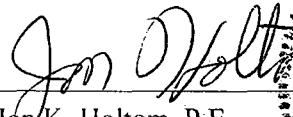
Project No. 0250003-015-AC
Turkey Point Nuclear Plant
Minor Source Air Construction Permit
Replacement of Emergency Diesel
Engines
Miami-Dade County, Florida

PROJECT DESCRIPTION

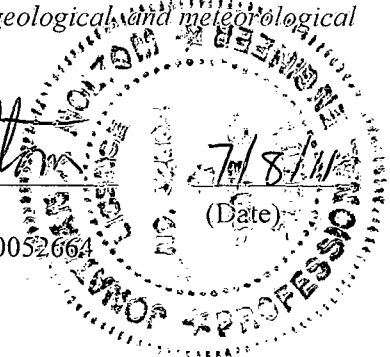
This project authorizes replacement of two emergency diesel engines for instrument air compressors at the facility. In the event station power is lost, Turkey Point Units 003 and 004 (nuclear reactors) have emergency generators (Unit 005) that supply critical systems including electric power for the instrument air compressors. In the event that the emergency generators cannot supply electric power for instrument air, the diesel engines provide backup power to instrument air compressors (i.e., the new instrument air compressor diesel engines are a backup to a backup system).

The Department's full review of the project and rationale for issuing the draft permit is provided in the Technical Evaluation and Preliminary Determination.

***I HEREBY CERTIFY** that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify any other aspects of the proposal (including, but not limited to, the electrical, mechanical, structural, hydrological, geological, and meteorological features).*



Jon K. Holtom, P.E.
Registration Number 0052664


7/18/14
(Date)

Friday, Barbara

To: gabriel.mendoza@fpl.com
Cc: 'kevin_washington@fpl.com'; 'KKosky@Golder.com'; 'wongp@miamidade.gov'; Anderson, Lennon; Kathleen Forney; Searce, Lynn; Cascio, Tom
Subject: Florida Power & Light Company - Turkey Point Nuclear Plant - 0250003-015-AC
Attachments: 0250003015ACSignedWrittenNoticeofIntent.pdf

Dear Sir/ Madam:

Attached is the official **Written Notice of Intent to Issue Air Permit** for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send".

Note: We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Attention: Tom Cascio

Owner/Company Name: FLORIDA POWER and LIGHT (PTF)
Facility Name: TURKEY POINT POWER PLANT
Project Number: 0250003-015-AC
Permit Status: DRAFT
Permit Activity: CONSTRUCTION
Facility County: MIAMI-DADE

Click on the following link to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0250003.015.AC.D_pdf.zip

“The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Access these documents by clicking on the link provided above, or search for other project documents using the “*Air Permit Documents Search*” website at <http://approd.dep.state.fl.us/air/emission/apds/default.asp>”

Permit project documents that are addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation.

Barbara Friday
Permitting and Compliance Section
Division of Air Resource Management (DARM)
(850)717-9095

Friday, Barbara

From: Friday, Barbara
Sent: Tuesday, August 02, 2011 2:18 PM
To: 'gabriel.mendoza@fpl.com'
Subject: FLORIDA POWER & LIGHT COMPANY - TURKEY POINT NUCLEAR PLANT ;
0250003-015-AC
Attachments: 0250003015ACSignedWrittenNoticeofIntent.pdf

Mr. Mendoza,

I have not received confirmation that you were able to access this July 11th attached document. Please confirm receipt by opening the attachment and sending a reply to me.

The Division of Air Resource Management is sending electronic versions of these documents rather than sending them Return Receipt Requested via the US Postal service. Your "receipt confirmation" reply serves the same purpose as tracking the receipt of the signed "Return Receipt" card from the US Postal Service. Please let me know if you have any questions.

Thank you,

Air Permitting and Compliance Section
Division of Air Resources Management (DARM)
(850)717-9095
Barbara.Friday@dep.state.fl.us

Friday, Barbara

From: Microsoft Exchange
To: 'gabriel.mendoza@fpl.com'
Sent: Tuesday, August 02, 2011 2:18 PM
Subject: Relayed: FLORIDA POWER & LIGHT COMPANY - TURKEY POINT NUCLEAR PLANT ; 0250003-015-AC

Delivery to these recipients or distribution lists is complete, but delivery notification was not sent by the destination:

'gabriel.mendoza@fpl.com'

Subject: FLORIDA POWER & LIGHT COMPANY - TURKEY POINT NUCLEAR PLANT ; 0250003-015-AC

Sent by Microsoft Exchange Server 2007

Friday, Barbara

From: Mendoza, Gabriel [Gabriel.Mendoza@fpl.com]
To: Friday, Barbara
Sent: Tuesday, August 02, 2011 2:47 PM
Subject: Read: FLORIDA POWER & LIGHT COMPANY - TURKEY POINT NUCLEAR PLANT ;
0250003-015-AC

Your message was read on Tuesday, August 02, 2011 2:47:14 PM (GMT-05:00) Eastern Time (US & Canada).

Friday, Barbara

From: Microsoft Exchange
To: 'gabriel.mendoza@fpl.com'; 'kevin_washington@fpl.com'
Sent: Monday, July 11, 2011 2:14 PM
Subject: Relayed: Florida Power & Light Company - Turkey Point Nuclear Plant - 0250003-015-AC

Delivery to these recipients or distribution lists is complete, but delivery notification was not sent by the destination:

'gabriel.mendoza@fpl.com'

'kevin_washington@fpl.com'

Subject: Florida Power & Light Company - Turkey Point Nuclear Plant - 0250003-015-AC

Sent by Microsoft Exchange Server 2007

Friday, Barbara

From: Mendoza, Gabriel [Gabriel.Mendoza@fpl.com]
To: Friday, Barbara
Sent: Monday, July 11, 2011 4:37 PM
Subject: Read: Florida Power & Light Company - Turkey Point Nuclear Plant - 0250003-015-AC

Your message was read on Monday, July 11, 2011 4:36:50 PM (GMT-05:00) Eastern Time (US & Canada).

Friday, Barbara

From: Washington, Kevin [Kevin.Washington@fpl.com]
To: Friday, Barbara
Sent: Monday, July 11, 2011 3:34 PM
Subject: Read: Florida Power & Light Company - Turkey Point Nuclear Plant - 0250003-015-AC

Your message was read on Monday, July 11, 2011 3:34:18 PM (GMT-05:00) Eastern Time (US & Canada).

Friday, Barbara

From: Kosky, Ken [Ken_Kosky@golder.com]
To: Friday, Barbara
Sent: Monday, July 11, 2011 2:17 PM
Subject: Read: Florida Power & Light Company - Turkey Point Nuclear Plant - 0250003-015-AC

Your message was read on Monday, July 11, 2011 2:16:50 PM (GMT-05:00) Eastern Time (US & Canada).

Friday, Barbara

From: Wong, Patrick (DERM) [WongP@miamidade.gov]
To: Friday, Barbara
Sent: Monday, July 11, 2011 2:49 PM
Subject: Read: Florida Power & Light Company - Turkey Point Nuclear Plant - 0250003-015-AC

Your message was read on Monday, July 11, 2011 2:49:10 PM (GMT-05:00) Eastern Time (US & Canada).

Friday, Barbara

From: Microsoft Exchange
To: Cascio, Tom; Searce, Lynn; Anderson, Lennon
Sent: Monday, July 11, 2011 2:14 PM
Subject: Delivered: Florida Power & Light Company - Turkey Point Nuclear Plant - 0250003-015-AC

Your message has been delivered to the following recipients:

Cascio, Tom

Searce, Lynn

Anderson, Lennon

Subject: Florida Power & Light Company - Turkey Point Nuclear Plant - 0250003-015-AC

Sent by Microsoft Exchange Server 2007

Friday, Barbara

From: Cascio, Tom
To: Friday, Barbara
Sent: Monday, July 11, 2011 2:15 PM
Subject: Read: Florida Power & Light Company - Turkey Point Nuclear Plant - 0250003-015-AC

Your message was read on Monday, July 11, 2011 2:15:27 PM (GMT-05:00) Eastern Time (US & Canada).

Friday, Barbara

From: Scarce, Lynn
To: Friday, Barbara
Sent: Monday, July 11, 2011 2:53 PM
Subject: Read: Florida Power & Light Company - Turkey Point Nuclear Plant - 0250003-015-AC

Your message was read on Monday, July 11, 2011 2:52:54 PM (GMT-05:00) Eastern Time (US & Canada).



TRANSMITTAL

Date: June 15, 2011
To: Elizabeth Walker
From: Ken Kosky
cc:
Email:
RE:

Project No.: 10387-6151-0100
Company: FDEP
Address: 2600 Blair Stone Road MS 5505
Tallahassee, Florida 32399-2400

RECEIVED
JUN 16 2011
BUREAU OF
AIR REGULATION

- | | |
|--|--|
| <input checked="" type="checkbox"/> Federal Express (priority, standard, 2-day, 3-day) | <input type="checkbox"/> U.S. Mail |
| <input type="checkbox"/> UPS | <input type="checkbox"/> Courier |
| <input type="checkbox"/> DHL | <input type="checkbox"/> Hand Delivery |
| <input type="checkbox"/> Email _____ | <input type="checkbox"/> Other _____ |

Quantity	Item	Description
1	Document	Professional Engineer Signature Document

Notes:

Please advise us if enclosures are not as described.

ACKNOWLEDGEMENT REQUIRED:

- Yes No

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Golder Associates Inc.
6026 NW 1st Place
Gainesville, FL 32607 USA

Tel: (352) 336-5600 Fax: (352) 336-6603 www.golder.com

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