

PMTurkeyCOLPEm Resource

From: Orthen, Richard [Richard.Orthen@fpl.com]
Sent: Thursday, April 21, 2011 1:37 PM
To: Brown, Alison; Bortone, Pilar; Matthews, David; Franzone, Steve; Hamrick, Steven; Madden, George; Maher, William; Comar, Manny; Orthen, Richard; Ross, Mitch; Stewart, Scott; McCree, Victor; Kugler, Andrew
Subject: L-2011-161 dated 04-21-1011 RAI Ltr 1103092 eRAI 5595 Response
Attachments: L-2011-161 dated 04-21-1011 RAI Ltr 1103092 eRAI 5595 Response.pdf

Re: Florida Power & Light Company
Proposed Turkey Point Units 6 and 7
Docket Nos. 52-040 and 52-041
Response to NRC Environmental Request for Additional Information Letter 1103092 (RAI 5595)
Environmental Standard Review Plan
Section 3.4.4 – Non-Radioactive Waste Systems

Reference:

1. NRC Letter to FPL dated March 9, 2011, Environmental Request for Additional Information Letter 1103092 Related to ESRP Section 3.4.4, Non-Radioactive Waste Systems, for the Combined License Application Review for Turkey Point Units 6 and 7

Florida Power & Light Company (FPL) provides, as an attachment to this letter, its response to the Nuclear Regulatory Commission's (NRC) Environmental Request for Additional Information (RAI) 3.4.4-1, 3.4.4-2, 3.4.4-3, and 3.4.4-4 provided in the referenced letter. The attachment identifies changes that will be made in a future revision of the Turkey Point Units 6 and 7 Combined License Application (if applicable).

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From: Orthen, Richard

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April 21, 2011

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Re: Florida Power & Light Company
Proposed Turkey Point Units 6 and 7
Docket Nos. 52-040 and 52-041
Response to NRC Environmental Request for Additional Information Letter
1103092 (RAI 5595) Environmental Standard Review Plan
Section 3.4.4 – Non-Radioactive Waste Systems

Reference:

1. NRC Letter to FPL dated March 9, 2011, Environmental Request for Additional Information Letter 1103092 Related to ESRP Section 3.4.4, Non-Radioactive Waste Systems, for the Combined License Application Review for Turkey Point Units 6 and 7

Florida Power & Light Company (FPL) provides, as an attachment to this letter, its response to the Nuclear Regulatory Commission's (NRC) Environmental Request for Additional Information (RAI) 3.4.4-1, 3.4.4-2, 3.4.4-3, and 3.4.4-4 provided in the referenced letter. The attachment identifies changes that will be made in a future revision of the Turkey Point Units 6 and 7 Combined License Application (if applicable).

If you have any questions, or need additional information, please contact me at 561-691-7490.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 21, 2011.

Sincerely,

A handwritten signature in blue ink, appearing to read 'William Maher', is written over a horizontal line.

William Maher
Senior Licensing Director – New Nuclear Projects

WDM/RFO

Proposed Turkey Point Units 6 and 7
Docket Nos. 52-040 and 52-041
L-2011-161 Page 2 of 2

Attachment 1: FPL Response to NRC RAI No. 3.4.4-1 (RAI 5595)
Attachment 2: FPL Response to NRC RAI No. 3.4.4-2 (RAI 5595)
Attachment 3: FPL Response to NRC RAI No. 3.4.4-3 (RAI 5595)
Attachment 4: FPL Response to NRC RAI No. 3.4.4-4 (RAI 5595)

cc:

PTN 6 & 7 Project Manager, AP1000 Projects Branch 1, USNRC DNRL/NRO
Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant 3 & 4

NRC RAI Letter No. 1103092 Dated March 9, 2011

SRP Section: EIS 03.04.04 – Nonradioactive Waste Systems

Question from Environmental Technical Support Branch

NRC RAI Number: EIS 03.04.04-1 (e-RAI 5595)

Provide, in a citable reference, more specific information on the expected 3600 pounds per year of hazardous waste (ER Section 3.6.3.3) with respect to the waste types, quantities, and concentrations that would be recycled, sent to a hazardous waste disposal facility, or managed in some other manner.

FPL RESPONSE:

As discussed in ER Section 3.6.3.3, the expected quantity of hazardous waste was based on 2009 data for the five units at Turkey Point. While no citable reference is known to exist, this response is based on 2010 data for Units 3 & 4, which is more representative of the expected hazardous waste generation at Units 6 & 7.

The nonradioactive hazardous waste generation rate expected from Turkey Point Units 6 & 7 is based on the waste generation rate from Turkey Points Units 3 & 4. The total generation of nonradioactive hazardous waste from Turkey Point Units 3 & 4 was approximately 4800 pounds for the year 2010. Assuming that Turkey Point Units 6 & 7 will produce similar quantities of nonradioactive hazardous waste to Units 3 & 4, the total generation rate from Turkey Point Units 6 & 7 will be approximately 4800 pounds per year of nonradioactive hazardous waste.

The type of nonradioactive hazardous waste generated at Turkey Point Units 6 & 7 is expected to be similar to that generated at Turkey Point Units 3 & 4 and will consist primarily of expired paint and laboratory chemicals, and to a much lesser extent, spent solvents. The nonradioactive hazardous waste will be collected and stored onsite until it is sent for disposal at an offsite licensed commercial waste facility where the majority of waste will be incinerated

Turkey Point Units 3 & 4 generated approximately 1550 gallons of used oil in 2010. Based on this generation rate, Turkey Point Units 6 & 7 would produce approximately 1550 gallons of used oil. The used oil at Turkey Point Units 3 & 4 is transported offsite by a licensed contractor and recycled for heat reclamation. It is anticipated that similar practices would be followed for Turkey Point Units 6 & 7.

This response is PLANT SPECIFIC.

References:

None

ASSOCIATED COLA REVISIONS:

ER Section 3.6.3.2 will be updated in a future revision, as shown in the following text change, to reflect the updated projection of used oil generation at Units 6 & 7.

The turbine building sump pumps route the wastewater from either of the two sumps to the oil separator for removal of oily waste. The diesel fuel oil area sump pump also discharges wastewater to the oil separator. A bypass line allows for the oil separator to be out of service for maintenance. The oil separator has a small reservoir for storage of the separated oily waste that flows by gravity to the waste oil storage tank. The waste oil storage tank provides temporary storage before shipment for offsite disposal. Turkey Point ~~1 through 5~~ **Units 3 & 4** generated approximately ~~5820~~ **1550** gallons of used oil in ~~2010~~ **2009**. Based on this generation rate, Turkey Point Units 6 & 7 would produce approximately ~~2300~~ **1550** gallons of used oil. The used oil was transported offsite by a licensed contractor and recycled for heat reclamation. It is anticipated that similar practices would be followed for Units 6 & 7.

ER Section 3.6.3.3 will be updated in a future revision, as shown in the following text change, to reflect the updated projection of used nonradioactive hazardous waste generation at Units 6 & 7.

Approximately ~~11,000~~ **4800** pounds of nonradioactive hazardous waste was generated from Turkey Point Units ~~1 through 5~~ **3 & 4** in ~~2010~~ **2009**. The majority of this waste was ~~expired paint waste and solvents~~ **laboratory chemicals**. Based on this current waste generation rate, Turkey Points Units 6 & 7 would be expected to generate approximately ~~4400~~ **4800** pounds annually of nonradioactive hazardous waste. These wastes would be collected and stored onsite until disposed of at an offsite licensed commercial waste facility or recovered at an offsite permitted recycling facility. Currently, the majority of the nonradioactive hazardous waste is incinerated at a permitted offsite facility.

ASSOCIATED ENCLOSURES:

None

NRC RAI Letter No. 1103092 Dated March 9, 2011

SRP Section: EIS 03.04.04 – Nonradioactive Waste Systems

Question from Environmental Technical Support Branch

NRC RAI Number: EIS 03.04.04-2 (e-RAI 5595)

Provide, in a citable reference, more specific information on the disposition of waste generated from the removal of access roads. Specify the expected types and quantities of materials expected to be generated during removal of the access roads, clarify whether they would be disposed of onsite or offsite, and, if offsite, indicate the method of disposition.

FPL RESPONSE:

While no citable reference is known to exist, FPL anticipates that materials to be generated during removal of the access roads will include fill, road base, asphalt, guard rails, culverts, concrete curbs and gutters, traffic controls, and signage. Estimated quantities for the major materials are listed as follows:

- Fill – 400,000 to 700,000 cubic yards
- Limerock road base – 45,000 to 85,000 cubic yards
- Asphalt – 12,000 to 25,000 cubic yards

Based on the current conceptual nature of roadway design, estimates for the remaining materials would be made at a later date when design level detail is available.

It is FPL's current intent to make available for re-use such materials as the fill and road base. Asphalt and/or concrete would be recycled. Steel materials such as guardrails, culverts, signage, etc. may be salvaged. If these methods of re-use were not utilized due to economic or other reasons, the materials would be disposed of offsite at a certified commercial waste facility in accordance with state/local regulations.

This response is PLANT SPECIFIC.

References:

None

ASSOCIATED COLA REVISIONS:

No COLA changes have been identified as a result of this response.

ASSOCIATED ENCLOSURES:

None

NRC RAI Letter No. 1103092 Dated March 9, 2011

SRP Section: EIS 03.04.04 – Nonradioactive Waste Systems

Question from Environmental Technical Support Branch

NRC RAI Number: EIS 03.04.04-3 (e-RAI 5595)

Confirm that the current proposal includes sending 435 tons per day of wastewater treatment solids to local landfills and explain whether disposal capacity will be available for the life of the project. The staff notes that

http://www.miamidade.gov/dswm/library/master_plan_presentation.pdf, states that one of the two county-operated landfills is projected to reach capacity between 2012 and 2014 and the other between 2017 and 2020.

FPL RESPONSE:

As discussed in Subsection 3.6.3.3, approximately 435 tons of sludge will be produced per day from the FPL reclaimed water treatment facility when reclaimed water is used for makeup to the circulating water system at Turkey Point Units 6 & 7. The sludge produced will be disposed of in a permitted landfill.

The Miami-Dade County Department of Solid Waste Management has indicated that there is sufficient capacity available to handle the disposal of sludge generated from Turkey Point Units 6 & 7 and that the county is currently planning for long-term landfill expansion and/or construction of new disposal facilities. Under the Florida Solid Waste Management Act of 1988, the counties are responsible for adequately planning and providing efficient, environmentally acceptable resource recovery and management in Florida. Because the counties are responsible for the provision and operation of solid waste disposal facilities under the Act, Miami-Dade County is in the process of developing a Solid Waste Master Plan that will identify new facilities and technologies to provide sustainable solid waste services to Miami-Dade County for the next 50 years. The Plan, scheduled for completion in the summer of 2012, will specifically address the development of new solid waste management operations and facilities as well as a strategy for their implementation.

This response is PLANT SPECIFIC.

References:

Miami-Dade County Solid Waste Management Master Plan, Available at http://www.miamidade.gov/dswm/master_plan.asp, (Accessed 3/22/2011).

ASSOCIATED COLA REVISIONS:

No COLA changes have been identified as a result of this response.

ASSOCIATED ENCLOSURES:

None

NRC RAI Letter No. 1103092 Dated March 9, 2011

SRP Section: EIS 03.04.04 – Nonradioactive Waste Systems

Question from Environmental Technical Support Branch

NRC RAI Number: EIS 03.04.04-4 (e-RAI 5595)

Provide, in a citable reference, the estimated emissions from the diesel storage tanks for the diesel generators and diesel-driven fire pumps.

FPL RESPONSE:

As discussed in Subsection 3.6.3.1, each unit contains two standby diesel generators, two ancillary diesel generators, and one diesel-driven fire pump. Each standby diesel generator will have a 60,000 gallon fuel oil storage tank and a 1300 gallon fuel oil storage day tank. The two ancillary diesel generators will have a common 650 gallon fuel oil storage tank, and the diesel-driven fire pump will have a 240 gallon fuel oil storage tank.

Hydrocarbon emissions from the diesel storage tanks located at Turkey Point Units 6 & 7 were calculated using the EPA TANKS Program (Version 4.0.9d) and the results were submitted as part of the Air Permit Application and Prevention of Significant Deterioration (PSD) Analysis for the Turkey Point Units 6 & 7 Project (available at <http://arm-permit2k.dep.state.fl.us/psd/0250003/00003E3E.pdf>). The projected annual hydrocarbon emissions from the diesel storage tanks at Turkey Point Units 6 & 7 are summarized below.

	Standby Diesel Generator Fuel Oil Storage Tanks (60,000 gallons ea.)	Standby Diesel Generator Fuel Oil Storage Day Tanks (1300 gallons)	Ancillary Diesel Generator Fuel Oil Storage Tanks (650 gallons)	Diesel-Driven Fire Pump Fuel Oil Storage Tanks (240 gallons)
Hydrocarbon emissions per tank (lbs/yr)	4.33	1.86	0.37	0.22
Number of Tanks	4	4	2	2
Total hydrocarbon emissions by tank category (lbs/yr)	17.32	7.44	0.74	0.44
Total hydrocarbon emissions from diesel storage tanks at Turkey Point Units 6 & 7			25.94 lbs/yr (0.013 tons/yr)	

The maximum annual throughput for each standby generator diesel fuel oil storage tank and day tank (27,802 gallons/year) was determined using a fuel consumption rate of approximately

290 gallons of diesel fuel per hour for each standby generator. The maximum annual throughput for each ancillary diesel generator fuel oil storage tank (278 gallons/year) was determined using a fuel consumption rate of approximately 2.9 gallons per hour for the ancillary generators. The maximum annual throughput for each diesel-driven fire pump fuel oil storage tank (1650 gallons/year) was determined using a fuel consumption rate of approximately 17 gallons per hour for the fire pump. All diesel fuel powered equipment was assumed to operate up to 96 hours per year.

This response is PLANT SPECIFIC.

References:

Air Permit Application and Prevention of Significant Deterioration (PSD) Analysis for the Turkey Point Units 6 & 7 Project, available at <http://arm-permit2k.dep.state.fl.us/psd/0250003/00003E3E.pdf>

ASSOCIATED COLA REVISIONS:

ER Section 3.6.3.1 will be updated in a future revision, as shown in the following text change, to reflect the estimated emissions from the diesel storage tanks.

Each unit contains two standby diesel generators, two ancillary diesel generators, and one diesel-driven fire pump. During normal operation of the plant, the operation of this equipment is infrequent and typically limited to periodic testing. Plant operation would result in small amounts of nonradioactive gaseous emissions to the environment from the equipment associated with the plant auxiliary system. Table 3.6-4 shows the projected annual emission (tons/year) from the diesel generators and the diesel-driven fire pumps. The standby diesel generators are located in the diesel generator building. The diesel-driven fire pump is located in the diesel-driven fire pump enclosure. The ancillary diesel generators are located in the annex building. **Each standby diesel generator has a 60,000 gallon fuel oil storage tank and a 1300 gallon fuel oil storage day tank. The two ancillary diesel generators have a common 650 gallon fuel oil storage tank, and the diesel-driven fire pump has a 240 gallon fuel oil storage tank. The projected annual hydrocarbon emissions from the diesel storage tanks at Turkey Point Units 6 & 7 are shown in Table 3.6-5.**

Table 3.6-5 will be added in a future revision, as shown in the following text change, to reflect the estimated emissions from the diesel storage tanks.

Table 3.6-5 Annual Estimated Emissions from Diesel Fuel Oil Storage Tanks for Two Units

Pollutant Discharged	Four 60,000 Gallon Standby Diesel Generator Fuel Oil Storage Tanks^(a)	Four 1300 Gallon Standby Diesel Generator Fuel Oil Storage Day Tanks^(a)	Two 650 Gallon Ancillary Diesel Generator Fuel Oil Storage Tanks^(b)	Two 240 Gallon Diesel-Driven Fire Pump Fuel Oil Storage Tanks^(c)
Hydrocarbons^(d) (lbs/yr)	17.32	7.44	0.74	0.44

(a) Based on total fuel throughput of 27,802 gal/yr for each tank.

(b) Based on total fuel throughput of 278 gal/yr for each tank.

(c) Based on total fuel throughput of 1650 gal/yr for each tank.

(d) Hydrocarbon emissions from the diesel fuel oil storage tanks were calculated using the EPA TANKS Program (Version 4.0.9d).

ASSOCIATED ENCLOSURES:

None