



Carlos A. Gimenez, Mayor

Department of Regulatory and Economic Resources  
Environmental Resources Management  
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July 7, 2017

Mr. Matthew Raffenberg, Director  
Environmental Licensing and Permitting  
Environmental Services Department  
Florida Power & Light Company  
700 Universe Boulevard (JES/JB)  
Juno Beach, FL 33408

CERTIFIED MAIL NO.: 7001 2510 0001 1765 4244  
RETURN RECEIPT REQUESTED

Re: Site Assessment Report (SAR) dated March 17, 2017 and submitted pursuant to Paragraph 34.b. of Addendum 1 to the October 7, 2015 Consent Agreement for FPL's Turkey Point facility located at, near, or in the vicinity of 9700 SW 344 Street, Unincorporated Miami-Dade County, Florida (DERM IW-3, IW-16, IW5-6229, DWO-10, CLI-2014-0312, CLI-2016-0303, HWR-851)

Dear Mr. Raffenberg:

The Department of Regulatory and Economic Resources-Division of Environmental Resources Management (DERM) has reviewed the referenced submittal received on March 17, 2017. Based on the data and information provided, DERM does not concur at this time with the conclusions and recommendations presented in the report. The following is required to allow for further evaluation of the SAR conclusions and recommendations:

1. The sediment data referenced in DERM's Site Assessment Plan (SAP) approval letter dated December 21, 2016 shall be provided.
2. The results of the tritium analysis per DERM's April 20, 2017 request shall be provided.
3. Maps scaled for E-sized sheets showing groundwater elevation contours shall be provided.
4. Maps scaled for E-sized sheets showing ammonia concentration contours for shallow wells (less than 16 ft.) and separately for intermediate depth wells (20 to 30 ft.) sampled shall be provided.
5. A single map scaled for E-sized sheet showing the concentrations of all the nitrogen species evaluated (measured and calculated) in groundwater as well as surface water shall be provided.
6. Please provide specific data and information used to support the following two statements in paragraph 3 of page ES-1: "... *The areas studied at Turkey Point which possess these attributes and elevated ammonia are similar to many locations in Coastal Southeast Florida. Regional studies of background surface water quality data for Biscayne Bay indicate that ammonia can be detected at many locations greater than 0.5 mg/L and that the concentrations can vary both temporally and spatially.*"

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7. Please provide data and information from the Site Conceptual Model referenced in paragraph 2 of page 13 that supports the following statement: "... Groundwater gradient data presented in the Site Conceptual Model for PTN (CRA, 2009) indicates that groundwater flows for shallow wells are from the Plant Complex towards the Turning Basin or Intake Canal so the wells do not appear to be influenced by quality in the Turning Basin..." Also please clarify the last part of the statement regarding the wells not being influenced by quality in the Turning Basin.
8. Please provide the correlation of Turkey Point data to regional background data referenced in the 4<sup>th</sup> bullet of paragraph 1 of page 19. The submittal shall include all supporting data and information used for the correlation.
9. Please provide data and information to support the statement on page 22 of the SAR "that the ammonia appears to be limited in extent". Is this statement limited to the ammonia that has been detected in surface waters under the Site Assessment Plan?
10. Please provide the specific data from the studies referenced in the second paragraph of page 22 that support the conclusion that the SAR results, including where the high ammonia concentrations have been detected, are consistent with background data for Biscayne Bay. In addition, copies of all other reports cited in the SAR and listed in Attachment B shall be provided in hardcopy or by electronic means.
11. All information required pursuant to the December 21, 2016 Site Assessment Plan approval shall be provided. Clarification is also required for the conclusion regarding the ammonia source FPL attributes to "the decomposition of wetland and aquatic plant material". During the May 10, 2017 meeting in the DERM offices, FPL explained that this conclusion refers to wetland vegetation "outside" the cooling canal system (CCS) and not the seagrass or mangrove vegetation that has died within the CCS. Therefore FPL shall clarify what it has concluded concerning the wetland and aquatic plant material that has decomposed within the CCS. FPL shall explain the degree to which it considers the wetland and aquatic plant material that has decomposed within the CCS to be a source of ammonia in the ground water or surface water at and adjacent to the FPL facility. In addition, FPL shall describe the fate of the organic nitrogen in the surface water as that water leaves the CCS and provide all data and information to support the conclusion. FPL shall provide all available information in support of any conclusion that the CCS is not an ammonia source pursuant to the requirements of the consent agreement and the approved Site Assessment Plan. This information shall include an evaluation of available tritium data including data required pursuant to item 2 above in support of SAR conclusions regarding ammonia sources.

Additionally, based on the groundwater characteristics documented in the area of the wastewater treatment plant and the fuel tank farm (MW South, MW North, FTF-SW, FTF-NW) DERM requires resampling of these wells for the parameters listed on Attachment A. FPL shall provide a minimum of fifteen (15) working days written notice to allow DERM the option to split samples. If resampling confirms the data previously submitted, further evaluation of the ammonia source(s) may be required for this area.

Be advised that DERM has the option to split any samples deemed necessary with the consultant or laboratory at the subject site. The consultant collecting the samples shall perform field sampling work in accordance with the Standard Operating Procedures provided in Chapter 62-160, Florida Administrative Code (FAC), as amended. The laboratory analyzing the samples shall perform laboratory analyses pursuant to the National Environmental Laboratory Accreditation Program (NELAP) certification requirements. If the data



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submitted exhibits a substantial variance from DERM split sample analysis, a complete resampling using two independent certified laboratories will be required.

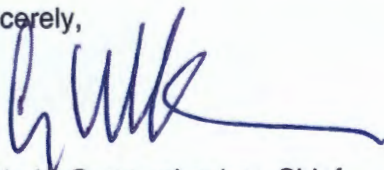
DERM shall be notified in writing a minimum of 15 working days prior to the implementation of any additional sampling or field activities. Email notifications shall be directed to [DERMPCD@miamidade.gov](mailto:DERMPCD@miamidade.gov) as well as [Barbara.brown@miamidade.gov](mailto:Barbara.brown@miamidade.gov). Please include the DERM file number on all correspondence.

Therefore, within ninety (90) days of receipt of this letter, FPL is hereby required to submit to DERM for review the additional data and information requested above in paper as well as electronic format (except for the requested reports in Appendix B, which may be provided solely in electronic format). Please provide all numerical data (laboratory analysis results, physical water quality, etc.) in Excel® format. Failure to adhere to the items and timeframes stipulated above may result in further enforcement action for this site.

Any person aggrieved by any action or decision of the DERM Director may appeal said action or decision to the Environmental Quality Control Board (EQCB) by filing a written notice of appeal along with submittal of the applicable fee, to the Code Coordination and Public Hearings Section of DERM within fifteen (15) days of the date of the action or decision by DERM.

Please contact me at (305) 372-6522 if you have any questions regarding this matter.

Sincerely,



Craig K. Grossenbacher, Chief  
Water Resources Coordination Division

Attachment A: sampling parameters  
Attachment B: list of reports and publications

c: Scott Burns, FPL  
Alan Katz, FPL  
Lee Hefty, DERM Director  
Lisa Spadafina, DERM  
Barbara Brown, DERM  
Wilbur Mayorga, DERM  
Virginia Walsh, WASD

## ATTACHMENT A

In addition to the parameters listed in Table 1 of the SAP (SAP Parameter List, on page TP-13), the following parameters\* shall also be sampled as part of the follow up sampling:

<b>Parameter/Analyte</b>	<b>Procedure</b>
Fecal Coliform	Laboratory
Caffeine	Laboratory
Sucralose	Laboratory
Chlorine	Laboratory

\*additional parameters may be required pending completion of data review by WASD

## **ATTACHMENT B**

Please provide an electronic copy of the below literature cited in the SAR:

Naturally Occurring Ammonia: South Florida Coast; Jerald S. Ault, Ph.D., Professor and Chair  
University of Miami Department of Marine Ecosystems and Society, April 2016

Ecosummary Biscayne Bay; FDEP Southeast District, December 2002

Brown and Caldwell, NW 33rd Street Suite 100 Miami, Florida 33122; Report to Miami-Dade County  
Department of Solid Waste Management titled "*Biscayne Bay Shoreline Model Technical  
Memorandum; Old South Dade Landfill Closure Enhancement Miami-Dade County, Florida,  
December, 1999*".

CRA. 2009, November. *Site Conceptual Model, Turkey Point Facility*. Prepared for the Florida Power  
and Light Company.

Gardner, WS, and MJ McCarthy. 2009. *Nitrogen dynamics at the sediment-water interface in shallow,  
sub-tropical Florida Bay: why denitrification efficiency may decrease with increased eutrophication*.  
*Biogeochemistry* 95:185-198.

Thamdrup, B. 2012. *New Pathways and Processes in the Global Nitrogen Cycle*. *Ann. Rev. Ecol. Evol.  
Syst.* 2012. 43:407-28

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