



FPL

July 21, 2011

FPLDEP-11-0298

Cindy Mulkey, Program Administrator
Office of Siting Coordination
Florida Department of Environment Protection
3900 Commonwealth Boulevard
Tallahassee, FL 32399-2400



Re: FPL Turkey Point Units 6 & 7 Project
5th Round Power Plant Completeness Responses

Dear Ms. Mulkey:

Enclosed please find Florida Power & Light Company's (FPL) responses to the Florida Department of Environmental Protection's (Department) "Fifth Determination that the Power Plant Portion of Application is Incomplete" for the Turkey Point Units 6 & 7 Project dated May 23, 2011. FPL is concurrently distributing copies of these responses to the statutory parties, and to others who have received copies of the Site Certification Application (Application). A copy of the distribution list is attached. Under the agreed upon schedule, the deadline for Miami-Dade County (County) to submit its recommendations regarding the completeness of the plant and non-transmission portion of the Application in response to this submittal is September 6, 2011.

FPL has endeavored to work with the County to clarify the requests and to provide the information sought, where available. Although not stated for each fifth round plant and non-transmission response, FPL maintains its objections to those incompleteness questions identified in the first, second, third, and fourth round Plant and Non-Transmission completeness responses. FPL would like to highlight the following:

- The FPL Turkey Point Units 6 & 7 Project Mitigation Plan (Rev. 0) submitted with the Site Certification Application (SCA) in June 2009 and amended (Rev. 1) in May, 2010 identified several mitigation opportunities for consideration that collectively provide more functional lift than required to offset the Project's wetland impacts. The Plan has been refined through continued agency consultation to focus upon those mitigation options that have received a positive reception from regulatory agency staff and cumulatively provide the functional lift required to offset the Project's wetland impacts. The refined Plan, Turkey Point Units 6 & 7 Wetland Mitigation Plan, (SCA Appendix 10.4, Section 2, Attachment E, Rev. 2) is provided on the CD attached to this submittal at *Attachments\5-MDC-A-25*.

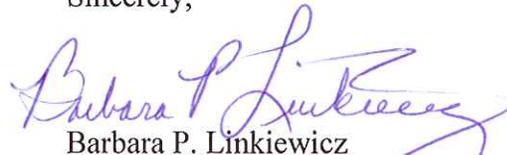
- FPL submitted the FPL Turkey Point Units 6 & 7 Threatened and Endangered Species Evaluation and Management Plan as part of the Application in June 2009 (SCA Appendix 10.7.1.3, Rev. 0, June 2009). FPL has met repeatedly with DERM representatives, FWC, and the USFWS regarding the contents of the Plan. FPL has refined the Plan based upon agency input. The Plan preserves, to the maximum extent possible, all habitats identified as critical to these species. The refined Plan is included on the CD attached to this submittal at *Attachments\5-MDC-A-23*.
- A revised Turkey Point Units 6 & 7 Exotic Vegetation Management Plan is included on the CD attached to this submittal at *Attachments\5-MDC-D-9-10*. The Plan has been revised to include comments received from MDC in correspondence to FPL dated June 15, 2011.

Before submission of the Application in June of 2009, and throughout the past two years of completeness review, it has been FPL's objective to provide information that will assist reviewing agencies in accomplishing their objectives, while remaining consistent with the process established by the Power Plant Siting Act (PPSA). Nonetheless, the responses provided include all information relevant to the questions posed. Through the information provided to date, FPL has provided all of the information necessary for the County, and other reviewing agencies, to prepare their agency reports. Thus, the Application should be determined complete.

While achieving completeness would mark an important step in the PPSA process, it by no means indicates an end to information exchange and productive dialogue related to the Project. In the next step of the PPSA process, leading to the final certification hearing, agencies and local governments will continue their review as they develop their agency reports. This period will allow for continued productive exchange that improves the understanding of the proposed Project and sharpens language of proposed conditions of certification.

If have any questions about this submittal, please contact me at 561-691-7518 or Matt Raffenberg at 561-691-2808.

Sincerely,


Barbara P. Linkiewicz
Director of Environmental Licensing

cc: Michael Tammaro, FPL
Dianne Hughes, DEP Southeast District Office
Toni Sturtevant, DEP OGC
Peter Cunningham, Hopping Green and Sams
Carolyn Raepple, Hopping Green and Sams
Distribution List (attached)

**DISTRIBUTION LIST FOR
FLORIDA POWER & LIGHT COMPANY
TURKEY POINT UNITS 6 & 7 PROJECT
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46. Michelle Niemeyer, Esquire, Counsel for Coconut Grove Village Council, 3250 Mary Street, Suite 302, Coconut Grove, Florida 33133 (1 CD)
47. Robert B. Shillinger, Chief Assistant County Attorney, Monroe County, 1111 12th Street, Suite 408, Key West, Florida 33040 (1 CD)
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50. William C. Garner/Gregory T. Stewart, Co-Counsel for Village of Pinecrest, Nabors, Giblin & Nickerson, P.A., 1500 Mahan Drive, Suite 200, Tallahassee, Florida 32308 (2 CDs)
51. David Lyons, President Kendale Homeowners Association, 10310 SW 103rd Ct., Kendall, FL (1 CD)
52. Kerri L. Barsh, Edward O. Martos, Greenberg Traurig, Miami-Dade Limestone Products Association, 333 Avenue of the Americas, Miami, FL 33131 (1 CD)

INTRODUCTION

FPL provides the following responses to the Florida Department of Environmental Protection's (Department) "Fifth Determination that the Power Plant Portion of Application is Incomplete" for the Turkey Point Units 6 & 7 Project dated May 23, 2011 (Determination). Only Miami-Dade County (MDC) has remaining completeness comments. FPL has endeavored to work with the County to clarify the requests and to provide the information sought, where available.

In the Determination, the Department noted that "the Power Plant Siting Act does not require FPL to respond to those questions . . . that go beyond the statutory purpose for completeness review." Under the PPSA, "completeness" means that "the application has addressed all applicable sections of the prescribed application format, and that those sections are sufficient in comprehensiveness of data or in quality of information provided to allow the department [FDEP] to determine whether the application provides the reviewing agencies adequate information to prepare the reports required by s. 403.507 [agency reports]." § 403.503(10), Fla. Stat. (emphasis added). Thus, completeness questions must be limited to information needed by the agency to prepare its agency report. The proper subject of MDC's agency report is MDC's view of the Project's "consistency . . . with all applicable local ordinances, regulations, standards, or criteria that apply to the proposed electrical power plant, including any applicable local environmental regulations," § 403.507(2)(a)(3), Fla. Stat. (emphasis added). These constitute the "nonprocedural requirements" of MDC relevant in this certification proceeding. See § 403.503(21), Fla. Stat. Through the information previously submitted, along with the responses below, FPL has provided MDC with the information necessary to assess the Project's consistency with all of the non-procedural requirements of MDC and thus the SCA should be determined complete.

For purposes of the Application, in order to be conservative, FPL modeled and included the results for the radial collector well system operating 24 hours per day, 365 days per year. However, the radial collector wells are in fact proposed solely as a backup water supply that will be used only when the MDC reclaimed water supply is not available in sufficient quantity or quality and for operational testing and periodic maintenance. FPL has proposed the concept of a use restriction consistent with that imposed for the FPL West County Energy Center (up to 90 days during a calendar year). It is anticipated that the final nature and limitations of a use restriction will be established by a condition of certification.

SECTION A - PLANT SITE FOR UNITS 6 & 7 INCLUDING BARGE AREA**5-MDC-A-3 (Fifth Round)**

This item remains incomplete. The applicant has still not provided information previously requested in order for the County to determine whether the proposed project meets the requirements of the Miami-Dade County Code, zoning regulations, including Resolution Z-56-07, and the CDMP, in order to prepare the reports required by section 403.507 F.S. Pursuant to condition 15 of Z-56-07, FPL is required to develop a proposed study to be reviewed by DERM for compliance with Chapter 24 of the Miami-Dade County Code. Additionally, pursuant to condition 5 of I-56-07, data must be based upon groundwater modeling that uses a methodology approved by WASD in consultation with DEP, SFWMD and DERM. Miami-Dade County reiterates from meetings and past completeness responses that the model proposed by FPL has not been approved by WASD. It is not adequate and the APT is not an acceptable hydrologic study under Chapter 24. FPL's statement that, "The APT is one element of the hydrologic study" and " ...the APT together with the modeling does address those impacts," is not in compliance with Condition 15. FPL still must provide all of the requested information and clarify the statements in the latest response relating to the use of isotopes for delineation of water types such as the industrial wastewater plume emanating from the cooling canals. If FPL has identified a more useful isotope for this purpose, please provide the information including delineation of water sources based on this isotope and associated information demonstrating that such isotope data will provide the conclusive information requested in this regard. An identification and delineation of water types based on isotopes (or some other method agreed to by the Agencies) shall be provided.

RESPONSE:

With respect to Condition 5, FPL has provided the information necessary to demonstrate compliance with the requirements of this condition. In particular, with the approval of the Joint Participation Agreement by MDC's Board of County Commissioners on July 20, 2010 for the supply of reclaimed water as the primary cooling water makeup source for the Turkey Point Units 6 & 7 Project, FPL has demonstrated compliance with provision of Condition 5, including the primary requirement that it "utilize reclaimed or reuse water to the maximum extent possible..." Additionally, as required by Condition 5, FPL has provided MDC with an alternative water sources plan, which outlines all sources of water not supplied by WASD through reuse. Because FPL is not proposing the use of water from the Floridan Aquifer, groundwater modeling of the Floridan Aquifer under Condition 5 is neither relevant nor necessary.

In addition, FPL has provided the following five reports to MDC:

1. *Analysis of Baseline Water Source Technical Review Report* (HDR, December 2007);
2. *Initial Water Source Alternative Screening Technical Review Report* (HDR, March 2008);
3. *Water Source Alternative Characterization and Scope Technical Review Report* (HDR, March 2008);
4. *Conceptual Engineering of Cooling Water Supply and Disposal for Turkey Point Units 6 & 7* (HDR, June 30, 2008); and
5. *Cooling Water Supply and Disposal Design Report* (HDR, March 2009).

These reports were also summarized in SCA Appendix 10.9 (June 2009), Water Supply Alternative Analysis and Water Conservation Plan.

Additional information related to Condition 5 was presented in previous rounds of completeness:

- 1st Round Completeness Responses (October 2009): MDC-B-1;
- 2nd Round Part A Completeness Responses: 2-MDC-B-1 (April 2010);
- 2nd Round Part B Completeness Responses: 2-MDC-C-24-AWS (July 2010);
- 3rd Round Completeness Responses (July 2010): 3-MDC-B-3, 3-MDC-C-24; and
- 4th Round Completeness Responses (February 2011): 4-MDC-A-3.

With respect to Condition 15 of the Unusual Use Approval, FPL has previously provided comprehensive and significant information on the potential hydrologic impacts of the Turkey Point Units 6 & 7 Project features that are subject to Condition 15 of the Zoning Resolution. Since the application was submitted, FPL has also met with MDC on multiple dates to discuss Condition 15, the appropriate Project-related hydrologic study requirements, and the completeness questions and responses related to Project features that may affect surface or groundwater and that are subject to Condition 15. Multiple features were discussed in these meetings, but in general the focus was on the back-up water supply (radial collector wells), stormwater management, the onsite sanitary treatment plant and onsite construction dewatering. It is FPL's assertion that the information included in the SCA and information provided following submission satisfies the substantive information requested in the hydrologic study of Condition 15. FPL has provided the following information to MDC:

SCA Sections and Appendices (June 2009) - 3.3.1 Geohydrology, 3.3.2 Subsurface Hydrology, 3.3.3 Site Water Budget and Area Users, 3.3.4 Surficial Hydrology, 4.5.1 Heat Dissipation System, 4.5.2 Domestic/Sanitary Wastewater, 4.5.3 Potable Water Systems, 4.5.4 Process Water Systems, 5.2 Impact on Surface water Bodies and Uses, 5.3 Groundwater Impacts, 6.1 Effects of Operation of the Heat Dissipation System, 6.2 Effects of Chemical and Biocide Discharges, 6.3.1 Surface water, 6.3.2 Groundwater, 6.3.3 Drinking Water, 6.3.5 Measurement Programs, R.9.3.4 Access Roads, R9.3.7.2 Affected Waters and Wetlands, R9.4 Effects of ROW Preparation and Construction, Appendix 10.8, Appendix 10.9.

1st Round Completeness Responses (October 2009): MDC-A-3, MDC-A-7, MDC-A-9, MDC-A-14, MDC-A-22, MDC-C-1, MDC-C-2, MDC-C-8, MDC-C-11, MDC-C-19, MDC-C-20, MDC-C-21, MDC-D-1, MDC-D-12, MDC-D-27, MDC-G-9, MDC-G-29, MDC-G-41, FDEP-I-C-4, FDEP-I-C-5, FDEP-I-D-6, FDEP-II-A-3, FDEP-II-A-9, FDEP-II-A-10, FDEP-II-A-14, FDEP-II-A-23, FDEP-II-A-25, FDEP-II-A-26, FDEP-II-A-28, FDEP-II-A-30, FDEP-II-A-31, FDEP-II-A-32, FDEP-II-A-34, FDEP-II-A-35, FDEP-II-A-36, FDEP-II-A-37, FDEP-II-A-39, FDEP-II-B-44, FDEP-II-B-52, FDEP-II-B-56, FDEP-II-B-58, FDEP-II-B-61, FDEP-II-B-65, FDEP-II-B-66, FDEP-II-B-73, FDEP-III-1, FDEP-IV-A-1, FDEP-IV-A-2, FDEP-VI-A-4, FDEP-VI-A-5, FDEP-VI-A-6, FDEP-VI-A-7, FDEP-VI-A-8, FDEP-VI-A-9, FDEP-VI-A-10, FDEP-VI-A-15, FDEP-VI-B-1, FDEP-VI-B-2, FDEP-VI-B-3, FDEP-VI-B-4, FDEP-VI-B-5, SFWMD-B-6, SFWMD-B-9, SFWMD-B-11, SFWMD-B-15, SFWMD-B-21, SFWMD-B-25, SFWMD-B-27, SFWMD-B-29, SFWMD-B-30, SFWMD-B-34, SFWMD-B-35, SFWMD-B-36, SFWMD-B-39, SFWMD-B-40, SFWMD-B-42, SFWMD-B-43, SFWMD-B-44, SFWMD-B-45, SFWMD-B-46, SFWMD-B-47, SFWMD-B-48, SFWMD-B-50, SFWMD-B-53, SFWMD-B-54, SFWMD-B-55, SFWMD-B-63, SFWMD-B-66, SFWMD-B-68, SFWMD-B-

70, SFWMD-B-71, SFWMD-B-81, SFWMD-B-85, SFWMD-B-87, SFWMD-B-89, SFWMD-B-91, SFWMD-B-93, SFWMD-D-119, SFWMD-H-153.

Reports

- Groundwater Model Development and Analysis: Units 6 & 7 Dewatering and Radial Collector Well Simulations, Rev. 0 (Bechtel Power Corporation, 2009).
- Groundwater Model Development and Analysis: Units 6 & 7 Dewatering and Radial Collector Well Simulations, Rev. 1 (Bechtel Power Corporation, 2011).
- HDR Engineering, Inc., 2009. FPL Turkey Point Exploratory Drilling and Aquifer Performance Test Program Report.
- HDR Engineering, Inc., 2009. Cooling Water Supply and Disposal Design Report. March 2009.
- HDR Engineering, Inc., 2008. Report - Conceptual Engineering of Cooling Water Supply and Disposal for Turkey Point Units 6 & 7. June 30, 2008.
- HDR Engineering, Inc., 2007. Work Order #1 – Task 1.4 Analysis of Baseline Water Source Technical Review Report. December 2007.
- HDR Engineering, Inc., 2008. Work Order #2 – Task 1 Initial Water Source Alternative Screening Technical Review Report. March 2008.
- HDR Engineering, Inc., 2007. Work Order #2 – Tasks 2 and 3 Water Source Alternative Characterization and Scope Technical Review Report. March 2008.

2nd Round Completeness Responses (Part A) (April 2010): 2-MDC-A-6, 2-MDC-A-11, 2-MDC-A-22, 2-MDC-A-33, 2-MDC-C-6-APT-1, MDC-C-6-APT-3, MDC-C-6-Conc-1, 2-MDC-C-24-RCW, 2-MDC-D-1, 2-MDC-D-27, 2-FDEP-VI-CAMA-6, 2-FDEP-VI-CAMA-7, 2-FDEP-VI-CAMA-8, 2-FDEP-VI-COC-2, 2-SFWMD-B-15(10)h, 2-SFWMD-B-25(28), 2-SFWMD-B-26(16), 2-SFWMD-B-26(21), 2-SFWMD-B-29(25)b, 2-SFWMD-B-29(25)g, 2-SFWMD-B-34(27), 2-SFWMD-B-39(30), 2-SFWMD-B-40(31), 2-SFWMD-B-40(32), 2-SFWMD-B-40(33), 2-SFWMD-B-40(35), 2-SFWMD-B-42(40), 2-SFWMD-B-44(42), 2-SFWMD-B-53(52), 2-SFWMD-B-57(55), 2-SFWMD-B-66(65), 2-SFWMD-B-70(69), 2-SFWMD-H-153(98)a.

2nd Round Completeness Responses (Part B) (July 2010): 2-MDC-A-3, 2-MDC-A-5, 2-MDC-C-6-GWM-5, 2-FDEP-VI-CAMA-2, 2-FDEP-VI-CAMA-4, 2-FDEP-VI-CAMA-5, 2-FDEP-SED-III-2, 2-SFWMD-B-3(2), 2-SFWMD-B-3(3), 2-SFWMD-B-4(4), 2-SFWMD-B-15(10)c, 2-SFWMD-B-15(10)e, 2-SFWMD-B-26(17), 2-SFWMD-B-29(25)a, 2-SFWMD-B-36(29), 2-SFWMD-B-42(39), 2-SFWMD-B-44(43), 2-SFWMD-B-92(78).

3rd Round Completeness Responses (July 2010): 3-MDC-A-3, 3-MDC-A-5, 3-MDC-A-6, 3-MDC-A-13, 3-MDC-A-18-9, 3-MDC-B-2, 3-MDC-B-3, 3-MDC-C-6, 3-MDC-D-1(a), 3-MDC-G-41, 3-FDEP-VI-CAMA-4, 3-FDEP-VI-CAMA-5, 3-FDEP-VI-CAMA-6, 3-SFWMD-B-57(55), 3-SFWMD-D-119(87).

4th Round Completeness Responses (February 2011): 4-MDC-A-6, A-7, A-8, 4-MDC-A-20-2, 4-MDC-A-21, 4-MDC-B-2, 4-MDC-B-3, 4-MDC-C-1, 4-MDC-C-2, 4-MDC-C-3, 4-MDC-C-6, 4-MDC-C-6-GWM-2, 4-MDC-C-6-GWM-3, 4-MDC-C-6-GWM-4, 4-MDC-C-6-GWM-5, 4-MDC-C-6-Conc-2, 4-MDC-C-6-Conc-4, 4-MDC-C-6-Conc-6, 4-MDC-C-6-Conc-End, 4-

information necessary to assess the Project's consistency with the requirements of Conditions 5 and 15 and thus the SCA should be determined complete.

As stated in previous completeness responses, FPL recognizes that the conditions of MDC's Unusual Use Approval are independent of the Site Certification process. It is FPL's intent to demonstrate compliance (or the ability to comply in the future) with Conditions 5 and 15 through the certification process. MDC should be able to reach this conclusion when FPL has demonstrated that the Project meets all substantive requirements in the certification process.

5-MDC-A-6, 5-MDC-A-7, and 5-MDC-A-8 (Fifth Round)

This item remains incomplete. Based on the information provided in the *Technical Memorandum: Florida Power & Light, Turkey Point Plant: On-Site Sanitary Wastewater Treatment Plant - Rev. 1*, FPL must clarify its statement relating to phase out of septic tanks at the land utilization facility. FPL must confirm that the statement refers to both the Land Use Building and the Land Use Shop as depicted in Figure 1 and therefore the only two facilities that are not proposed to be connected to the proposed wastewater treatment plant are the Day Care facility and the McGregor cottage.

Miami-Dade County acknowledges that a hydrologic study is not required under Condition 6 of Z-56-07. The reference to a hydrologic study under this condition was in error; the intended reference was to the wastewater discharge plan required by this condition. This discharge plan must be consistent with Chapter 24 and it must, at a minimum, address the type and quality of the discharge and shall also justify potential variances from Chapter 24, if necessary. The wastewater discharge plan must also demonstrate that the proposed location for disposal of the wastewater is appropriate. Given FPL's proposal to utilize deep wells, the geologic appropriateness of this disposal technique must be demonstrated including data generated from the ongoing UIC testing including all hydrologic and geologic information required by DEP under applicable state regulations necessary for this demonstration. A complete and detailed wastewater disposal plan that includes this basic information will enable Miami-Dade County to determine whether variances from Chapter 24 are required and whether they are justified as stated in Condition 6.

RESPONSE:

The domestic wastewater generated at the Land Utilization facility will be conveyed to the new domestic wastewater treatment facility that is proposed as part of the Turkey Point 6 & 7 construction and includes both the Land Use Building and the Land Use Shop. The only two facilities that are not proposed to be connected to the proposed wastewater treatment plant are the FPL Day Care facility on Palm Drive and the McGregor cottage on the Turkey Point peninsula.

With respect to Condition 6 of the unusual use approval granted under Resolution No. Z-56-07 ("Unusual Use Approval"), FPL has previously provided a wastewater discharge plan that addresses the substantive requirements of Chapter 24, Miami-Dade County Code. The wastewater discharge plan was presented and provided to Miami-Dade County in the following documents:

- The SCA (June 2009) Sections 4.5, 4.6, 4.8, 5.2, 5.3, 6.1, 6.2, 6.3, 6.5 and 6.11, SCA Appendices 10.2.8, 10.8, 10.9 and associated figures and tables;

- Technical Memorandum: *Florida Power & Light, Turkey Point Plant: On-Site Sanitary Wastewater Treatment Plant - Rev. 1* (July 2010);
- Wastewater presentation made by FPL to MDC at meeting on August 3, 2010 and provided on the attached CD at \Attachments\5-MDC-A-6-7-8, including type and quality (water balances) of the discharge and the proposed location for disposal of the wastewater;
- Exploratory Well Permit Application in SCA Appendix 10.2.8 (June 2009), permit 0293962-001-UC, FPL Turkey Point Units 6 & 7 – Class V Exploratory Well & Dual Zone Monitoring Well Construction and Testing of a Class V, Group 9 Exploratory Well, and weekly reports available on FDEP SCO website; and
- Responses to Completeness comments:
 - 1st Round Completeness Responses (October 2009): MDC-A-6, MDC-A-7, MDC-A-8, MDC-A-9, MDC-A-14, MDC-A-22, MDC-B-1, MDC-G-1, MDC-G-14, FDEP II-A-1, FDEP II-A-34, FDEP II-A-38, FDEP II-A-39, FDEP II-B-51, FDEP II-B-84, FDEP –III-2, FDEP-IV-1, FDEP-V-11, FDEP-VI-A-11, SFRPC-B-2, SFRPC-B-2a, SFRPC-B4g, SFRPC-B-5, SFWMD-B-32, SFWMD-B-41, SFWMD-B-42, SFWMD-B-52, SFWMD-B-54, SFWMD-B-70, SFWMD-B-73, SFWMD-B-85, SFWMD-B-93, SFWMD-K-172, SFWMD-K-177;
 - 2nd Round Completeness Responses (April 2010): 2-MDC-A-6, 2-MDC-A-9, 2-MDC-A-11, 2-MDC-A-14, 2-SFWMD-B-70(69), 2-SFRPC-ECO-3, 2-COM-C-2, 2-COM-C-5;
 - 3rd Round Completeness Responses (July 2010): 3-MDC-A-6, 3-MDC-A-7, 3-MDC-A-8, 3-MDC-A-13, 3-MDC-G-12, 3-COM-C); and
 - 4th Round Completeness Responses (February 2011): 4-MDC-A-6, 7, 8.

The information referenced above provides MDC adequate information to prepare its agency report, including with regard to Condition 6. Under the PPSA, “completeness” means that “the application has addressed all applicable sections of the prescribed application format, and that those sections are sufficient in comprehensiveness of data or in quality of information provided to allow the department to determine whether the application provides the reviewing agencies adequate information to prepare the reports required by s. 403.507 [agency reports].” § 403.503(10), Fla. Stat. (emphasis added). Thus, completeness questions must be limited to information needed by the agency to prepare its agency report. The proper subject of MDC’s agency report is MDC’s view of the Project’s “consistency . . . with all applicable local ordinances, regulations, standards, or criteria that apply to the proposed electrical power plant, including any applicable local environmental regulations.” § 403.507(2)(a)(3), Fla. Stat. (emphasis added). These constitute the “nonprocedural requirements” of MDC relevant in this certification proceeding. See § 403.503(21), Fla. Stat. Although the requirement to submit a wastewater discharge plan is essentially procedural in nature, FPL has provided MDC with the information necessary to assess the Project’s consistency with the requirements of Condition 6. Through the information provided to date, FPL has provided information adequate to assess the Project’s consistency with all of MDC’s nonprocedural requirements and thus the SCA should be determined complete.

As stated in previous completeness responses, FPL recognizes that the conditions of MDC’s Unusual Use Approval are independent of the Site Certification process. It is FPL’s intent to demonstrate compliance (or the ability to comply in the future) with Condition 6 through the certification process MDC should be

able to reach this conclusion when FPL has demonstrated that the Project meets all substantive requirements in the certification process.

5-MDC-A-13 (Fifth Round)

Please see MDC's Fifth Round response to items MDC-A-6, MDC-A-7, and MDC-A-8.

RESPONSE:

Please see Response 5-MDC-A-6, 5-MDC-A-7, and 5-MDC-A-8 above.

5-MDC-A-17 (Fifth Round)

Please see MDC's Fifth Round response to item MDC-A-18.

RESPONSE:

Please see Response MDC-A-18 below.

5-MDC-A-18 (Fifth Round)

This item remains incomplete. Miami-Dade County acknowledges the data and additional information provided in response to this item and considers these data and information satisfactory as related to the proposed Reclaimed Water Treatment Facility site, the proposed Units 6 & 7 Plant site, and the Clear Sky Substation and its Parking area. However, this item remains incomplete because similar information is lacking for the proposed Nuclear Administration Building, Training Building, and east and west site Parking Areas. Specifically, FPL must provide the conceptual drawings with the hydrological sub-basins and drainage system and water release to the industrial wastewater facility. These drawings and calculations should provide the same level of detail as the drawings presented for the Units 6 & 7 plant area, Clear Sky Substation, and its Parking lot in FPL's 4th completeness submittal.

RESPONSE:

FPL previously provided the requested information for the nuclear administration building, training building and east and west parking areas in the attachment to 4th Round Response 4-MDC-A-18 (February 2011). The grading plans, the drainage system and the release points to the industrial wastewater facility for these hydrologic sub-basins are shown as insert drawings in the Site Finished Grading Plan (SCA Figure 6). The sub-basin areas and runoff calculations are described in SCA Appendix 10.8.1.2 of the Stormwater Management Plan and Calculations [Appendix 10.8 Rev.1, (February 2011)] and values are shown in Tables 13 through 16.

Through the information provided to date, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

5-MDC-A-20-1 (Fifth Round)

Please see MDC's Fifth Round response to item MDC-A-18.

RESPONSE:

Please see Response 5-MDC-A-18 above.

5-MDC-A-20-2 and 5-MDC-A-21 (Fifth Round)

Please see MDC's Fifth Round response to items MDC-C- 2, 3, 4, 5, 8, 9, 10, 11, 12, 14, 15, 16, 17, 19, 22 and 23.

RESPONSE:

Please see Responses to Items 5-MDC-C-2, 3, 4, 5, 8, 9, 10, 11, 12, 14, 15, 16, 17, 19, 22 and 23 below.

5-MDC-A-23 (Fifth Round)

This item remains incomplete. FPL must provide information previously requested to enable the County to determine whether the proposed project meets the requirements of Miami-Dade County Code, zoning regulations, including Resolution Z-56-07, and the CDM, in order to prepare the reports required by section 403.507 F.S. FPL, in its responses to this question over several rounds of completeness, has not provided the requested information, but has instead substituted opportunistic observations, short term surveys for limited wildlife guilds, and has referenced data that were collected decades ago, while onsite observations indicate that conditions may have substantially changed over time.

Miami-Dade County has previously questioned FPL's characterization of the proposed plant site as "sparsely-vegetated hypersaline mud flats" which "provide limited habitat for aquatic biota due to fluctuations in water levels and salinity associated with the cooling canal system" (Units 6 & 7 SCA), based on staff observations over a small number of visits that indicated the site is apparently more variable, can be substantially more vegetated, and potentially supports more wildlife than described. In addition, Miami-Dade County staff has observed utilization of the site by species protected by the State of Florida. Miami-Dade County therefore reiterates its request for a current, comprehensive, systematic characterization of both flora and fauna that occur within the proposed plant site boundary in advance of the certification decision in order to determine the local and regional ecological role of this unusual habitat, and especially whether the site provides critical habitat to threatened or endangered wildlife species. This characterization must take into account the fluctuating water levels on the site. Please see also MDC's response to MDC-A-26-2 Fifth Round.

RESPONSE:

A refined Turkey Point Units 6 & 7 Threatened and Endangered Species Evaluation and Management Plan (SCA Appendix 10.7.1.3 Rev. 1, July 2011) is included on the attached CD at *Attachments\5-MDC-A-23*. The plan has been refined to include comments and suggestions received in meetings with USFWS, FWC and MDC DERM. The plan preserves to the maximum extent possible all habitat critical to listed species and addresses short-term measures to be taken during construction and permanent measures necessary to protect critical habitat. The management plan addresses potential impacts from the Project to

several listed species, including the American crocodile, Eastern indigo snake, wood stork and other listed bird species, Florida manatee, and the Florida panther.

- With respect to wildlife impacts, FPL has previously provided the following information to MDC: SCA (June 2009) Sections 3.3.6, 5.4.1.4, 5.4.2, 6.1.2, 6.1.4 and 6.8. SCA Appendix 10.7.1.3; and
- Responses to Completeness comments:
 - 1st Round Completeness Responses (October 2009): MDC-A-26, MDC-A-30, MDC-G-2, MDC-G-23, MDC-G-40, FFWCC- A-1, SFWMD-K-168;
 - 2nd Round Completeness Responses (April 2010): 2-MDC-A-23, 2-MDC-A-26-2, 2-MDC-A-29, 2-MDC-D-19, 2-MDC-G-6, 2-MDC-G-11;
 - 3rd Round Completeness Responses (July 2010): 3-MDC-A-23, 3-MDC-A-25, 3-MDC-A-26-2, 3-MDC-G-6; and
 - 4th Round Completeness Responses (February 2011): 4-MDC-A-26-2.

Referencing decades of agency-reviewed documents to supplement recent Florida Natural Areas Inventory (FNAI) data, presence of suitable habitat, and recent observations is an appropriate, conservative methodology for evaluation of listed species utilization. FPL has recognized that the Site is utilized by species listed by the Florida Fish and Wildlife Conservation Commission (FWC) and the U.S. Fish and Wildlife Service (USFWS). FPL has acknowledged utilization of the Site by listed species based on presence of suitable habitat, database queries, previous studies, and direct observations. Additional surveys are unnecessary at this time to demonstrate the potential of listed species utilization of the mudflat habitat as FPL has already recognized this potential. For a project with a construction date several years in the future, the assumption that a given listed species may be present within an area of suitable habitat is a conservative assessment methodology. FPL's commitment to avoid, minimize, and mitigate impacts to the greatest extent practicable is an appropriate means to address the results of the assessment. Prior to actual commencement of construction, FPL will conduct pre-clearing surveys for state and federally listed species during the nesting season; if any nests of listed species are observed, construction in those areas will be scheduled outside of the nesting season, unless otherwise approved by the FWC or USFWS. In addition, FPL will provide compensatory mitigation to offset the loss of wetland habitat at the Site, including provision of sparsely vegetated shorebird habitat as requested by MDC.

MDC's statement that conditions at the proposed Site have substantially changed over time is not supported by historical aerial photographs of the Site, illustrating the long-term use of the area as an industrial wastewater treatment facility on the attached CD at *Attachments\5-MDC-A-23*. The area is and has been sparsely vegetated for over 35 years, as clearly evident through aerial photography. According to the MDC Staff Report on Resolution Z-56-07 (12-20-2007), page 16, MDC staff characterizes the Site as coastal salt and mud flats:

"The area in which the proposed facility is to be located has already been highly disturbed and degraded. As a result, the mangroves in the plant expansion area have been significantly replaced by coastal salt and mud flats."

The area is wholly isolated within the boundaries of the industrial wastewater treatment facility, with no connection to Biscayne Bay for over 35 years. The Site is periodically inundated by hypersaline water used for cooling purposes; the statement that the Site provides limited habitat for aquatic biota is correct, evidenced by the limited number of aquatic taxa that can tolerate hypersaline waters, elevated temperatures, and low dissolved oxygen.

With respect to critical habitat for threatened or endangered wildlife, the current comment requests information that was previously analyzed by MDC and presented in the Staff Report on Resolution Z-56-07, pg 16-17 (12-20-2007):

“A review of the federally and state listed threatened and endangered species in South Florida indicates that at the proposed nuclear plant site, only one species has a federally defined critical habitat, the American crocodile. The proposed expansion site represents a small portion of the overall area designated as critical habitat for this species. Additionally, as stated in the Wetlands Analysis above, the mangrove habitat (cited as the habitat for the crocodile) once documented at the proposed expansion plant site has evolved into a salt flat and, as such, is no longer a portion of the critical habitat for this species. Given the degraded condition of the expansion site and the limited documented nesting that have occurred in this area over the past 30 years, DERM has indicated the development of the expansion area would not materially impact habitat that is critical or important to the conservation of this species; and therefore, the development of this site would not be inconsistent with Policy CM-1E.

The limits of habitat necessary for other listed threatened species and endangered species has not been defined or mapped; however, most of the noted species by the National Park Service, including the indigo snake and the Florida panther, are not known to inhabit the proposed expansion plant site. Additionally, given the vast expanse of high-quality mangrove wetlands that characterize the Biscayne Bay Coastal Wetlands, DERM has indicated that the proposed plant site represents only a small portion of the larger area comprising the species critical habitat. The proposed project therefore does not degrade or destroy habitat essential for the conservation of known or identified threatened or endangered species.”

As to the local and regional ecological role of the Site, it is clear that despite the degraded nature of the system, the area provides foraging opportunities for avian species, including shorebirds. The Mitigation Plan (SCA Appendix 10.4, Section 2, Attachment E, Rev. 2, July 2011) includes mitigation for shorebird habitat.

Through the information provided to date along with the additional information provided in this response, FPL has provided information adequate to assess the Project’s consistency with all of MDC’s nonprocedural requirements and thus the SCA should be determined complete.

5-MDC-A-25 (Fifth Round)

This item remains incomplete. Miami-Dade County acknowledges FPL's commitment to construct in accordance with applicable guidelines to minimize impacts to shorebirds and other wildlife during construction; however, the County reiterates that FPL must provide mitigation specific for the loss of this shorebird habitat. This should be a component of the overall

mitigation plan. The continuing efforts to modify and refine the proposed mitigation are also acknowledged. Please provide the complete and detailed mitigation plan for review.

RESPONSE:

The refined Mitigation Plan (SCA Appendix 10.4, Section 2, Attachment E, Rev. 2, July 2011) is provided on the attached CD at *Attachments\5-MDC-A-25*; habitat suitable for shorebird foraging will be provided within the proposed Northwest Restoration Site and the SW 320th Street Restoration Site.

Through the information provided to date along with the additional information provided in this response, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

5-MDC-A-26-1 (Fifth Round)

This item remains incomplete. An earthwork and materials disposal plan is required by Condition 7 of Miami-Dade County's zoning approval Z-56-07. FPL has not provided the required plan to Miami-Dade County. The County reiterates that FPL must provide the subject plan in order to enable the County to complete its review and evaluation as part of the application completeness process. This plan shall include, at a minimum, an outline of the various types of earthwork, proposed methods and parameters for characterization of disposal materials consistent with MDC soil reuse guidelines and Chapter 24, Miami-Dade County Code, all proposed on-site and off-site disposal sites, and a relative schedule for providing analysis results as part of a post certification submittal.

RESPONSE:

With respect to Condition 7 of the unusual use approval granted under Resolution No. Z-56-07 ("Unusual Use Approval"), the Turkey Point Units 6 & 7 Conceptual Earthwork and Materials Disposal Plan was submitted by FPL to MDC DERM on June 3, 2011 and is also provided on the attached CD at *Attachments\5-MDC-A-26-1*.

FPL has also previously provided the following information to MDC:

- SCA (June 2009) Sections, 5.1, 5.5 and 5.7.4.
- Responses to questions:
 - 1st Round Completeness Responses (October 2009): MDC-A-26, MDC-A-28, MDC-C-21, MDC-D-11, MDC-D-20, MDC-G-4, MDC-G-47, FDEP II-A-15, FDEP II-A-23, FDEP II-A-24, FDEP II-A-27, FDEP II-B-76, FDEP II-B-83, FDEP –V-4 FWCC-C-6, SFWMD-B-29, SFWMD-B-39, SFWMD-B-92, SFWMD-H-156, SFWMD-J-162, SFWMD-K-175;
 - 2nd Round Completeness Responses (April 2010): 2-MDC-A-26-1, 2-MDC-C-21, 2-MDC-D-11, 2-MDC-G-42, 2-FDEP-VI-(CAA)-7, 2-SFWMD-B-29(23), 2-SFWMD-B-29(25), 2-SFWMD-B-42(39), 2-SFWMD-B-47(47), 2-SFWMD-B-92(78), 2-SFWMD-B-93(79), 2-SFWMD-H-156(101), 2-SFWMD-K-179(107);
 - 3rd Round Completeness Responses (July 2010): 3-MDC-A-26-1, 3-MDC-D-11, 3-MDC-G-42;

and

4th Round Completeness Responses (February 2011): 4-MDC-A-26-1, 4-SFWMD-B-29(23), 4-SFWMD-B-29(25), 4-SFWMD-D-119(87).

The information referenced above provides MDC adequate information to prepare its agency report regarding Condition 7. Under the PPSA, “completeness” means that “the application has addressed all applicable sections of the prescribed application format, and that those sections are sufficient in comprehensiveness of data or in quality of information provided to allow the department to determine whether the application provides the reviewing agencies adequate information to prepare the reports required by s. 403.507 [agency reports],” § 403.503(10), Fla. Stat. (emphasis added). Thus, completeness questions must be limited to information needed by the agency to prepare its agency report. The proper subject of MDC’s agency report is MDC’s view of the Project’s “consistency . . . with all applicable local ordinances, regulations, standards, or criteria that apply to the proposed electrical power plant, including any applicable local environmental regulations,” § 403.507(2)(a)(3), Fla. Stat. (emphasis added). These constitute the “nonprocedural requirements” of MDC relevant in this certification proceeding. See § 403.503(21), Fla. Stat. Although the requirement to submit an earthwork and materials disposal plan is essentially procedural in nature, FPL has provided MDC with the information necessary to assess the Project’s consistency with the requirements of Condition 7 and thus the SCA should be determined complete.

As stated in previous completeness responses, FPL recognizes that the conditions of MDC’s Unusual Use Approval are independent of the Site Certification process. It is FPL’s intent to demonstrate compliance (or the ability to comply in the future) with Condition 7 through the certification process. MDC should be able to reach this conclusion when FPL has demonstrated that the Project meets all substantive requirements in the certification process.

5-MDC-A-26-2 (Fifth Round)

This item remains incomplete. FPL has again failed to provide information previously requested to enable the County to determine whether the proposed project meets the requirements of Miami-Dade County Code, zoning regulations, including Resolution Z-56-07, and the CDMP, in order to prepare the reports required by section 403.507 F.S. The information provided in FPL's Turkey Point Threatened and Endangered Species Evaluation and Management Plan, submitted as part of the SCA (Appendix 10.7.1.3), along with subsequent responses during this and previous rounds of completeness, is not sufficient to enable Miami-Dade County to determine whether the proposed project meets the requirements of Condition 2 of MDC Zoning Resolution Z-56-07, Chapter 24 of the Miami-Dade Code, and the Miami-Dade County CDMP. FPL has failed to provide adequate comprehensive, current, and location-specific information on how development of the proposed plant site and associated non-transmission facilities and infrastructure would impact local ecology.

FPL has failed to provide sufficient comprehensive, location-specific surveys to enable the County to verify its assertion that, "The Project will not jeopardize the continued existence of any local or regional populations of state or federally-listed or non-listed species of plants or animals. The number of protected species occurring in the vicinity of the Site and associated non-transmission facilities will not be reduced as a result of the construction and operation of the Project." Miami-Dade County has been clear about the need for comprehensive, systematic, location-specific studies on occurrence and utilization of the proposed plant site and proposed locations for ancillary linear and non-linear facilities by both flora and fauna, including threatened and endangered species. The information must be provided prior to certification to

enable the County to determine whether the proposed project meets the requirements of Miami-Dade County Code and the CDMP in order to prepare the reports required by 403.507 F.S. Miami-Dade County must evaluate the effect of development of the proposed plant site and associated non-transmission facilities and infrastructure on all aspects of the local ecology, including but not limited to threatened or endangered species and their habitats. Miami-Dade County must also evaluate the sufficiency of FPL's efforts to avoid and minimize impacts to local ecology, and especially to habitat critical to threatened and endangered species. FPL's previous responses to this question have included information from opportunistic observations, including information collected by Miami-Dade County staff during a single day's visit to the proposed plant site, short-term sampling that does not account for seasonal or environmentally triggered patterns in occurrence or utilization, and publicly available information for the surrounding region that does not specifically target the locations for the proposed plant site. The field data from one cited source, the Florida Breeding Bird Atlas (FFWCC 2003), for example, was rigorously collected, but is over 20 years old with no indication that any of the data were collected at the existing Turkey Point facility. The Florida Breeding Bird Atlas reports no breeding activity of any kind in the USGS Homestead quad, which includes most of the area where the proposed construction access roads will be located. Miami-Dade County staff, however, observed a wading bird rookery in this quad in September 2005.

FPL stated in their response that "least terns have been documented feeding at the proposed Units 6 & 7 Site; however there is no documentation that least terns have nested within the boundaries of the proposed Site." Miami-Dade County staff observed posted signs cautioning least tern nesting within the boundary of the overall proposed plant complex, in an area that may be developed for access road construction. FPL must provide maps showing the locations of all least tern nesting that have been observed within the overall boundaries for the Plant site and any ancillary linear and non-linear facilities, including but not limited to the locations where there is posted signage.

FPL's assertion that there is "no documentation that least terns have nested within the boundaries of the proposed Site " is an example of why Miami-Dade County is requesting comprehensive flora and fauna occurrence and utilization information. The limited and nontargeted studies that FPL cited are insufficient to support the conclusion that no nesting occurs. Miami-Dade County wishes to clarify that the request for comprehensive, current, and location specific wildlife and vegetation information is not just for the proposed plant site, but for all locations where plant and associated ancillary facilities, including linear and non-linear facilities, are proposed for construction and operation.

RESPONSE:

With respect to Condition 2 of the unusual use approval granted under Resolution No. Z-56-07 ("Unusual Use Approval"), FPL submitted the Turkey Point Threatened and Endangered Species Evaluation and Management Plan (Rev. 1) as part of the SCA in June 2009 (SCA Appendix 10.7.1.3). FPL has met repeatedly with DERM representatives, FWC, and the USFWS regarding the contents of the Plan. FPL has refined the Plan based upon agency input. The refined Plan is provided on the attached CD at *Attachments\5-MDC-A-23*. The refined Plan preserves, to the maximum extent possible, all habitats identified as critical to these species.

FPL has also previously provided the following information to MDC:

- SCA Sections 3.3.6, 5.4.1.4, 5.4.2, 6.1.2, 6.1.4 and 6.8. SCA Appendix 10.7.1.3.
- Responses to Completeness comments:
 - 1st Round Completeness Responses (October 2009): MDC-A-26, MDC-A-30, MDC-G-2, MDC-G-23, MDC-G-40, FFWCC- A-1, SFWMD-K-168;
 - 2nd Round Completeness Responses (April 2010): 2-MDC-A-23, 2-MDC-A-26-2, 2-MDC-A-29, 2-MDC-D-19, 2-MDC-G-6, 2-MDC-G-11;
 - 3rd Round Completeness Responses (July 2010): 3-MDC-A-23, 3-MDC-A-25, 3-MDC-A-26-2, 3-MDC-G-6; and
 - 4th Round Completeness Responses (February 2011): 4-MDC-A-26-2.

FPL has acknowledged the potential presence of all listed species whose habitat preferences include the habitats contained within the Site and associated facilities. As stated previously, the evaluation of the potential utilization of the Site and associated facilities by threatened and endangered species is based upon presence of suitable habitat, field surveys, agency consultation, data from USFWS, FWC, and FNAI, as well as over three decades of data collected at the Turkey Point Plant. For a project with a construction date several years in the future, the assumption that a given listed species may be present within an area of suitable habitat is a conservative assessment methodology. FPL's commitment to avoid, minimize, and mitigate impacts to the greatest extent practicable is an appropriate means to address the results of the assessment. FPL is committed to safeguard the continued existence of local or regional populations of state or federally-listed species of plants or animals, evidenced by but not limited to:

- Use of previously disturbed areas to the greatest extent practicable in all aspects of the Project, including location of the Site within the industrial wastewater treatment facility, use of existing roadways and transmission infrastructure, and maximizing use of existing roadways and rights-of-way for pipeline corridors.
- Commitment to conduct pre-clearing surveys within all construction areas.
- Where nests of listed species are observed within areas of proposed construction activities, appropriate avoidance and minimization efforts will be undertaken to avoid disturbing any active nests in consultation with the FWC and USFWS.
- Commitment to schedule construction outside of the nesting season in those areas.
- Where populations of listed plants are observed within areas of proposed construction, commitment to relocate individuals, as feasible.
- Commitment to fully compensate for all impacts to wetland wildlife habitat through the Project's refined Mitigation Plan (SCA Appendix 10.4, Section 2, Attachment E, Rev. 2) supporting restoration of over 2,000 acres of wetlands, including coastal mangrove, freshwater herbaceous sawgrass and wet prairie, and mixed wetland hardwood forests through applicant-sponsored mitigation activities and the use of mitigation banks.

As to the statement that MDC staff observed a wading bird rookery based on field surveys, there are no wading bird rookeries within the proposed temporary construction access road areas. Repeated

consultation with USFWS and FWC has not indicated any presence of wading bird rookeries within the temporary construction access road area, nor is there any documentation of a wading bird rookery within this area in the FNAI database.

The purpose of the least tern nesting area signage is to alert vehicular traffic as to the potential for nests to occur within gravel portions of the Turkey Point plant property. Currently FPL does not monitor locations of least tern nesting within the boundaries of the Turkey Point plant property. As previously stated, least terns are ground-nesting species and utilize artificial nesting sites, such as dredged material deposits and construction sites. These habitat types will remain on the Turkey Point plant property following construction of the Project. FPL will conduct pre-clearing surveys prior to construction and will comply with the applicable FWC and USFWS regulations. No adverse impact to least tern populations is anticipated.

The information referenced above provides MDC adequate information to prepare its agency report, including with regard to Condition 2. Under the PPSA, “completeness” means that “the application has addressed all applicable sections of the prescribed application format, and that those sections are sufficient in comprehensiveness of data or in quality of information provided to allow the department to determine whether the application provides the reviewing agencies adequate information to prepare the reports required by s. 403.507 [agency reports].” § 403.503(10), Fla. Stat. (emphasis added). Thus, completeness questions must be limited to information needed by the agency to prepare its agency report. The proper subject of MDC’s agency report is MDC’s view of the Project’s “consistency . . . with all applicable local ordinances, regulations, standards, or criteria that apply to the proposed electrical power plant, including any applicable local environmental regulations,” § 403.507(2)(a)(3), Fla. Stat. (emphasis added). These constitute the “nonprocedural requirements” of MDC relevant in this certification proceeding. See § 403.503(21), Fla. Stat. Although the requirement to submit a Threatened and Endangered Species Management Plan is essentially procedural in nature, FPL has provided MDC with the information necessary to assess the Project’s consistency with the requirements of Condition 2. Through the information provided to date along with the additional information provided in this response, FPL has provided information adequate to assess the Project’s consistency with all of MDC’s nonprocedural requirements and thus the SCA should be determined complete.

As stated in previous completeness responses, FPL recognizes that the conditions of MDC’s Unusual Use Approval are independent of the Site Certification process. It is FPL’s intent to demonstrate compliance (or the ability to comply in the future) with Condition 2 through the certification process. MDC should be able to reach this conclusion when FPL has demonstrated that the Project meets all substantive requirements in the certification process.

5-MDC-A-27 (Fifth Round)

Please refer to MDC's Fifth Round response to item MDC-A-26-1.

RESPONSE:

Please see Response 5-MDC-A-26-1 above.

5-MDC-A-29 (Fifth Round)

Please see MDC's Fifth Round response to item MDC-A-26-2.

RESPONSE:

Please see Response 5-MDC-A-26-2 above.

5-MDC-A-30 (Fifth Round)

Please see MDC's Fifth Round response to items MDC-A-23 and MDC-A-26-2.

RESPONSE:

Please see Responses 5-MDC-A-23 and 5-MDC-A-26-2 above.

SECTION B - WASTEWATER REUSE**5-MDC-B-2 (Fifth Round)**

This item remains incomplete and information previously requested must be provided to enable the County to determine whether the proposed project meets the requirements of Miami-Dade County Code, zoning regulations, including Resolution Z-56-07, and the CDMP, in order to prepare the reports required by section 403.507 F.S. FPL states in its latest response to this item that the installation of the reclaimed water pipeline requires a 75 foot wide temporary construction area and that the SW 107 Avenue ROW is insufficient in width because it is approximately 50 feet wide. FPL must clarify the currently proposed location of the pipeline within the FPL transmission line ROW in relation to the recently installed FGT gas line and describe whether the required 75 foot wide temporary construction area is available without having to use land not owned by FPL outside the existing 330 foot wide transmission corridor during construction.

Miami-Dade County acknowledges FPL's commitment in its latest response to design and construct the reclaimed water pipeline to maintain existing sheet flow throughout its final right of-way; however, FPL has not provided the requested information specific to improvements to sheet flow that FPL will construct and Miami-Dade County reiterates its request for this specific information.

With regard to FPL's identification of another potential site for the reclaimed water treatment facility, FPL must provide all details and information on this potential site from past surveys and assessments including information on usage by crocodiles and any other listed species and provide copies of any covenants, conservation easements, or other documents that may relate to protection of any portion of this land as a result of past regulatory decisions. Please also see response MDC-G-12.

RESPONSE:

With respect to the reclaimed water pipeline and sheetflow, FPL has previously provided the following information to MDC:

- 1st Round Completeness Responses (October 2009): SFWMD-D-119;
- 3rd Round Completeness Responses (July 2010): 3-MDC-B-2; and

- 4th Round Completeness Responses (February 2011): 4-MDC-B-2.

As illustrated in SCA Figure P9.3.2-3 (June 2009), the reclaimed water pipeline will be installed underneath the existing patrol road adjacent to the FGT gas pipeline within the 330-foot wide transmission line right-of-way; installation within this area will not require use of land not owned by FPL.

With respect to Condition 17 of the unusual use approval granted under Resolution No. Z-56-07 (“Unusual Use Approval”), FPL will design and construct the reclaimed water pipeline to not adversely affect improvements to sheet flow made or planned in connection with FPL’s transmission facilities throughout its final right-of-way. The exact locations of proposed culverts are not available at this time as final engineering design will not be completed until the post-certification review process authorized by Section 403.5113(2), F.S., and Rule 62-17.191, F.A.C.

As part of the initial Project design and layout, the location of the FPL reclaimed water treatment facility was determined based on a number of considerations including plant operations, land availability, construction feasibility, and potential environmental impacts. FPL has identified a potential alternative location for construction of the reclaimed water treatment facility in response to MDC’s request. If MDC and the other reviewing agencies prefer this alternative location for the reclaimed water treatment facility and that alternative location is selected during the ongoing permitting proceedings, then FPL would be willing to accept a condition of certification specifying the alternative location and requiring submittal of final design details on the reclaimed water treatment facility and its location as part of the post-certification submittals for the Project.

The potential alternative location for the FPL reclaimed water treatment facility was historically dredged in association with the test cooling canal evaluations, and currently consists of upland spoil piles dominated by Australian pine, excavated open water canals, an upland access pathway, sawgrass marsh, dwarf mangroves, and exotic wetland hardwoods. No crocodile nesting has been observed within this area, as the upland spoil piles are densely vegetated with exotic vegetation and do not provide suitable nesting substrate. Although the area is not utilized for nesting, sub-adult crocodiles have been observed utilizing portions of the open water areas. These excavated canals and ditches would be impacted; however, this area is not located within federally-designated critical habitat for the crocodile. No significant adverse impact to the crocodile is anticipated due to the loss of excavated canals and ditches within the potential alternative reclaimed water treatment facility location, as large areas of similar excavated open water habitat occur to the east (test cooling canals under the restrictive covenants) and south (interceptor ditch). Similar to the original reclaimed water treatment facility location proposed in the SCA submitted in June 2009, areas of sawgrass marsh and dwarf mangroves provide suitable foraging habitat for wading birds classified by the FWC as species of special concern, such as the little blue heron, white ibis, snowy egret, roseate spoonbill, and tricolored heron. Although upland spoil piles dominated by Australian pine are poor wildlife habitat, eastern indigo snakes may potentially occur within these areas within the potential FPL reclaimed water treatment facility alternative location. FPL will conduct pre-clearing surveys and comply with the USFWS Standard Protection Measures for the Eastern Indigo Snake to minimize and avoid any impacts to the eastern indigo snake. Unlike the test cooling canals located further eastward, the alternative location for the reclaimed water treatment facility is not subject to any conservation easements or restrictive covenants. The restrictive covenant for the test cooling canals (April 26, 2005) is provided on the attached CD at *Attachments\5-MDC-B-2*.

FPL will continue to evaluate the design for the FPL reclaimed water treatment facility alternative location as it relates to existing vegetative community types, the construction access roadway corridor,

and existing features to determine whether further reduction of impacts to wetlands and quality habitat is feasible.

Please also refer to Response 5-MDC-G-12 below.

The information referenced above provides MDC adequate information to prepare its agency report, including with regard to Condition 17. Under the PPSA, “completeness” means that “the application has addressed all applicable sections of the prescribed application format, and that those sections are sufficient in comprehensiveness of data or in quality of information provided to allow the department to determine whether the application provides the reviewing agencies adequate information to prepare the reports required by s. 403.507 [agency reports].” § 403.503(10), Fla. Stat. (emphasis added). Thus, completeness questions must be limited to information needed by the agency to prepare its agency report. The proper subject of MDC’s agency report is the Project’s “consistency . . . with all applicable local ordinances, regulations, standards, or criteria that apply to the proposed electrical power plant, including any applicable local environmental regulations.” § 403.507(2)(a)(3), Fla. Stat. (emphasis added). These constitute the “nonprocedural requirements” of MDC relevant in this certification proceeding. See §403.503(21), Fla. Stat. Through the information provided to date along with the additional information provided in this response, FPL has provided information adequate to assess the Project’s consistency with all of MDC’s nonprocedural requirements and thus the SCA should be determined complete.

As stated in previous completeness responses, FPL recognizes that the conditions of MDC’s Unusual Use Approval are independent of the Site Certification process. It is FPL’s intent to demonstrate compliance (or the ability to comply in the future) with Condition 17 through the certification process. MDC should be able to reach this conclusion when FPL has demonstrated that the Project meets all substantive requirements in the certification process.

5-MDC-B-3 (Fifth Round)

Complete with respect to information requests for atmospheric deposition from the proposed cooling towers. Miami-Dade County has determined that the information provided is sufficient for review. All outstanding information requests related to the proposed reclaimed water treatment facility, including the requirement for an Unusual Use approval and siting requirements, are addressed in MDC-B-2 and MDC-G-12 for response.

RESPONSE:

Completion acknowledged. Please see Responses 5-MDC-B-2 above and 5-MDC-G-12 below.

SECTION C- RADIAL WELLS

5-MDC-C-1 (Fifth Round)

This item remains incomplete. FPL must clarify the following statement: "approximately 97.8 percent will originate from boundaries representing Biscayne Bay, approximately 1.9 percent will originate from boundaries representing the cooling canal system and approximately 0.3 percent will be from boundaries representing precipitation onshore." For the percentage originating from the boundaries of Biscayne Bay, does this mean that this 97.8 percent would come from the groundwater under the bay, from the surface water of the bay, or a combination of both? For the percentage originating from the boundaries of the cooling canal system, does this mean that this 1.9 percent would come from the cooling canal system (CCS) plume that is emanating from the CCS, or the surface waters of the CCS? Please also provide a graphic or map that shows

the spatial extent of the boundaries for the "precipitation onshore" category. With regard to FPL's response on the requested information for tritium and other isotopes, FPL must clarify how the "other isotopes" provided in the APT report differentiate the various sources of water and whether this isotopic differentiation was used to determine the recharge sources or confirm the model results. FPL must explain how the MDC comments and suggestions were incorporated into the APT, and explain the rationale for any suggestions that were not incorporated. For operation of the radial collectors, please show in a graphic or map the maximum extent of horizontal flows simulated in the model at the point steady state is achieved for each layer and confirm whether this horizontal extent remains constant after that time or continues to expand. Also please clarify the following statements: "FPL decided to use other isotopes during the pump test to address this question. The results of the isotope analysis were provided in the APT report (HDR, 2009)." FPL must explain what conclusions were drawn from these data to address this question. In particular, FPL must explain which isotopes were found to be suitable for differentiation of water sources and provide all related information including the proportion of each water source captured during the APT as indicated by the isotope data.

RESPONSE:

With respect to the aquifer performance test (APT), as previously stated in 3rd Round Completeness Response 3-MDC-A-3 (July 2010), a draft of the APT plan was provided to Miami-Dade County and reviewed with the County during a meeting at Miami-Dade County Department of Environmental Resources Management (DERM) on February 4, 2009 and at a follow-up meeting on March 20, 2009. In addition, the South Florida Water Management District (SFWMD) was also provided a copy of the plan and a meeting was held on March 6, 2009 to discuss the plan. The only sampling recommendation that MDC made that was not included was sampling the well water for tritium. Use of tritium as a tracer was not necessary for the intended use of the APT to determine the aquifer characteristics for developing and calibrating the groundwater model. FPL chose to use other isotopes during the pump test based on professional judgment. The results of the analysis of isotopes were provided in the APT report (HDR, 2009). The isotope data were used to determine the origin of water pumped during the APT as described in Response 2-MDC-A-5 (July 2010) and 4-MDC-A-5 (February 2011). Response 2-SFWMD-B-26(17) (July 2010) presents additional discussion of the analysis and use of isotope data collected to determine the origin of water withdrawn during the pumping of the APT. The groundwater model was used to determine the origin of the water during operation of the radial collector wells.

When the radial collector wells begin to pump, water will be taken initially from the saline aquifer below the bay. The first water withdrawn will be the water closest to the radial collector wells. The reduced pressure in the aquifer will cause water from the bay to move down into the aquifer (i.e., to recharge the aquifer). When the pumps are first started, 100 percent of the water will come from the aquifer below the bay. Within a few hours the flow patterns will be established. When steady-state flow patterns are established, streamlines ending at the radial collector wells will originate at a specific model boundary and the streamline pattern will not change with time. When this condition is reached, the total flow entering the aquifer from the boundary cells that are connected by a streamline to the radial collector wells equals the flow pumped from the radial collector wells. While the steady-state pressure distribution and flow patterns are established in just a few hours, this does not mean that a particle of water will move from the boundary cell to the radial collector wells in a few hours; it may take weeks, months or even years for a particle of water to transit the distance from the boundary to the radial collector wells.

The steady-state contributions from the various model boundaries that would ultimately contribute flow to the radial collector wells were determined by particle tracking analysis. As noted above, the use of steady-

state model requires that the water supplying the radial collector wells must come from a source other than storage (e.g., recharge, bay, canal, lateral boundary, etc.). To identify these sources and quantify the associated flow, particles were placed in all potential boundary source cells in the groundwater flow model. Forward particle tracking was then conducted, and all particle tracks that terminated at the radial collector wells were identified along with their associated boundary cell of origination. The results of this analysis show that Biscayne Bay, the cooling canal system, and onshore recharge are the only sources that would contribute to the radial collector wells. Flows from each of the contributing source cells were then summed over each contributing boundary, which were then divided by the total radial collector well flow rate to determine the contributions on a percentage basis. The results indicate that on a steady state basis, 97.8 percent of the water entering the aquifer to replace the water that is pumped will come from Biscayne Bay, 1.9 percent will come from the cooling canals and 0.3 percent will come from precipitation recharge in onshore areas. As was the case for the Biscayne Bay contribution, the ultimate source of the 1.9 percent originating from the cooling canals will be from the boundary cells that represent surface water. The areas contributing these flows were shown in Figures 61 and 62 of the Groundwater Modeling Report (Bechtel Power Corporation, February 2011).

Regarding the source water origination boundaries, the groundwater model shows that approximately 97.8 percent of the water will originate from boundaries representing Biscayne Bay under steady-state conditions. Based on results from the APT, it is clear that the pressure distribution in the aquifer reaches equilibrium within just a few hours after pumping starts. When the pressure distribution has stabilized, steady-state flow patterns are established. Figures 59 and 60 in the Groundwater Modeling Report (Bechtel, February 2011) show the steady-state drawdown contours created by the radial collector wells in the top layer and the pumped layer of the aquifer, respectively.

Through the information provided to date, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

Reference

Bechtel Power Corporation, 2011. *Groundwater Model Development and Analysis: Units 6 & 7 Dewatering and Radial Collector Well Simulations, Rev. 1*, February 2011.

5-MDC-C- 2,3,4,5,8,9,10, 11, 12, 14, 15, 16, 17, 19, 22 and 23 (Fifth Round)

This item remains incomplete. Despite the additional information provided by FPL on the existing model in its 4th completeness response, the County reiterates that this model is not appropriate to fully evaluate the proposed project's impact on water resources, including water quality and quantity and ecology. The modeling effort is not sufficient to accurately simulate the existing or proposed condition because it does not include a water quality or density component. The hydrologic data and information as well as any information generated from modeling should be sufficient to enable Miami-Dade County to evaluate the following: 1) surface and groundwater impacts including quality, quantity, timing and distribution, 2) ecological impacts, 3) water table elevation within the adjacent areas of the Model Land Basin, 4) contaminant concentrations from the CCS including from combined operations of all existing and proposed power units, and 5) influences on salt front dynamics under different scenarios (baseline and post-construction conditions with all proposed operations, for a wet, dry, and average year), and 6) the information shall also be sufficient to support development of an appropriate surface/groundwater modeling effort with methodology approved by Miami-Dade County as required pursuant to condition 5 of Z-56-07.

Please provide the following information:

- [a] **What are the cumulative impacts on water resources, including withdrawal of all water from the combined operation of the existing cooling canal system (CCS) intake and simultaneous operation of the radial collector wellfield (RCW) including the influences of the Uprate Project (and associated additional evaporation from the CCS), and salt deposition from operation of the Units 6 & 7 cooling towers when the RCW is in use?**

RESPONSE:

Potential impacts from operation of the existing cooling canal system and the Uprate Project are being evaluated currently as part of a separate process. The water resource related impacts associated with the Turkey Point Units 6 & 7 Project elements have been carefully evaluated through the Site Certification process. The evaluations have consistently shown potential impacts to be insignificant, immeasurably small, or not adverse to human health, the resource or the environment. Cumulative impacts need to be quantified only when the incremental impact is at least marginally significant, measurable and adverse. If the incremental impact is insignificant, or not measurable, the future cumulative condition will be virtually the same as the existing condition. If the incremental impact is significant and measurable but not adverse, the future cumulative condition will improve. Therefore, the Uprate monitoring data are not necessary to a complete assessment of impacts of the Turkey Point Units 6 & 7 Project.

With respect to salt deposition from the operation of the Units 6 & 7 cooling towers, FPL has previously provided the following information to MDC: 4-MDC-B-3 (February 2011), 3-MDC-B-3 (July 2011), 2MDC-B-3, MDC-G-3 and MDC-B-3 (April 2010). These completeness responses identified many other completeness responses providing information on salt deposition. Nonetheless, additional deposition analyses were conducted for this response to determine salt deposition within the cooling canal system from this Project. The radial collector wells are a backup water source that has been proposed by FPL to be used up to 90 days during a calendar year. Using the techniques described in the SCA and completeness responses, the average deposition within the cooling canal system from cooling tower deposition when the radial collector wells are in use would be 3.45 kg/ha/month. For comparison, as described in previous completeness responses, the natural background deposition from proximity to the coastal environment is 4.5 kg/ha/month. Using information from the Uprate Project SCA and modeling report (Golder Associates Inc. 2008), the net outflow from the cooling canal system to groundwater was estimated at 2,313 acre-feet/month and the cooling canal volume is approximately 12,236 ac-ft. Based on the net outflow, the change in TDS solely due to the added salt deposition from the circulating water cooling towers would be 2.9 mg/L (an increase of about 0.005 percent over average TDS values), if salt water from the radial collector wells was used as the primary supply (365 days per year) beyond the proposed 90-day per calendar year restriction. If the radial collector wells are used for only 90 days, the increase would be less than 1.2 mg/L assuming no inflow or outflow to the cooling canal system. To put this in perspective, the average TDS concentration in the cooling canal system based on salinity reported to FDEP as part of Industrial Water Discharge Monitoring Reports for 2010 was approximately 60,000 mg/L. The predicted concentrations from cooling tower deposition are more than four orders of magnitude lower than the existing TDS concentration of the water in the cooling canal system and would be immeasurable in the cooling canal system and the groundwater below.

Through the information provided to date along with the additional information provided in this response, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

Reference

Golder Associates Inc. 2008. *Cooling Canal System Modeling Report, January 13, 2008.*

• **[b] How does operation of the radial collector wellfield affect the fate of surface and ground water as it moves southeasterly towards the Turkey Point area and interacts with the hypersaline plume from the cooling canal system? Please provide water quality data and maps to support all assertions.**

RESPONSE:

With respect to the operation of the radial collector well system and its effects on the movement of groundwater in the Turkey Point area and the interaction with the cooling canal system, FPL has previously provided the following information to MDC: FDEP-VI-A-9, FDEP-VI-G-1, SFWMD-B-15, SFWMD-B-89 (October 2009), 2SFWMD-B-29(25)(b) (April 2010), 4-2SFWMD-B-3(3)(a), 4-2SFWMD-B-15(10)(b), 4-2SFWMD-B-15(10)(i) 4-MDC-C-2, 4-MDC-C-6, and 4-MDC-C-13 (February 2011).

More specifically, Figures 59 and 60 in the revised Groundwater Modeling Report submitted with the fourth round of responses (Bechtel Power Corporation, 2011) show the steady-state drawdown contours in two different layers (i.e., the cone of influence for the radial collector wells). These drawdown contours represent the differences in groundwater levels with and without the radial collector wells in operation. These contours define the extent of the aquifer affected by radial collector well operation. Figures 61 and 62 in the revised Groundwater Modeling Report show the origin of the flow to the radial collector wells. Comparing the locations of the 0.1 ft drawdown contours in Figures 59 and 60 with the areas of the cooling canal system contributions shown in Figures 61 and 62 clearly demonstrates that the radial collector wells are not inducing additional flow from the cooling canal system. Please also see Response 5-MDC-C-7 below. Table 11 in the revised Groundwater Modeling Report indicates that only a small fraction, about 1.9 percent, of the water supplying the radial collector wells will originate from boundaries representing the cooling canal system. Hypersaline water intercepted by the radial collector wells will remain at depth within the saltwater (G-III) aquifer. This is due to the placement of the radial collector well laterals approximately 25 to 40 ft below the seabed and due to the higher density of the canal water relative to saltwater. While operation of the radial collector wells may change the distribution of the hypersaline water in the aquifer, it will not cause hypersaline water to move to the surface. Therefore, the withdrawals will not cause adverse impacts to groundwater or surface water.

Through the information provided to date, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

Reference

Bechtel Power Corporation, 2011. *Groundwater Model Development and Analysis: Units 6 & 7 Dewatering and Radial Collector Well Simulations, Rev. 1, February 2011.*

• **[c] Please provide projected water quality of the CCS for the first five years after the Units 6 & 7 project becomes operational including chlorides, sulfate, sodium, specific conductivity and total dissolved solids. This projection shall take into account all planned inputs and changes to water quality within the CCS including the additional salt loading**

from evaporation increases caused by the Uprate Project as well as the atmospheric deposition of salt into the CCS from operation of the proposed radial collector wellfield and cooling towers.

RESPONSE:

As previously discussed in the SCA as well as 1st through 4th Round Completeness Responses including MDC-A-14 and 2MDC-A-14, when Turkey Point Units 6 & 7 become operational, only stormwater from the Site and the nuclear administration building, training building and parking area will be routed to the cooling canal system. Stormwater from equipment areas will be routed through oil/water separators before it is released. The stormwater system will be designed to meet applicable standards of Chapter 24-42 and no measurable changes in chlorides, sulfate, sodium, specific conductance and total dissolved solids will occur as a result of stormwater released to the cooling canal system due to the operation of Turkey Point Units 6 & 7.

Regarding salt deposition from the operation of Units 6 & 7 cooling towers, as described in the completeness response to 5-MDC-C- 2, 3, 4, 5, 8, 9, 10, 11, 12, 14, 15, 16, 17, 19, 22 and 23 (Fifth Round)[a] the average deposition within the cooling canal system is 3.45 kg/ha/month resulting in no measurable changes to the TDS concentration in the cooling canal system with continuous (365 days per year) operation of the radial collector wells. As described in the Introduction to the 3rd Round of completeness responses and suggested as a possible condition of certification [see 4-2SFWMD-B-15(10)(k) (February 2011)], the radial collector wells are a backup supply that is proposed to be used for up to 90 days during a calendar year. Even in the unlikely event the radial collector wells are operated at the maximum proposed withdrawal each year, during any annual period the average atmospheric deposition within the cooling canal system will be about four orders of magnitude lower than the existing concentration of TDS in the cooling canals. As a result, atmospheric deposition from cooling tower drift will cause no measurable change in the cooling canal system's water quality, including TDS, chlorides, sodium, and sulfate concentrations, and specific conductance.

Through the information provided to date, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

• [d] A comprehensive water budget as well as a salt budget is needed to perform the required cumulative impacts analysis under Chapter 24 of the Miami-Dade County Code for both the "with project" and "without project" scenarios. These budgets must include analysis of the additional water consumption and salt effects of the Uprate project, since it is scheduled to be on-line before Units 6 and 7 would become operational. Please describe, characterize and quantify the source(s) of the groundwater currently being drawn into the CCS (from operation of the CCS intake pumps). What is the total daily or weekly volume drawn in, what portion remains in the CCS, and what is the fate of the remainder? What changes to these proportions will occur when both the CCS pumps and the RCW are operating simultaneously taking into account the interactions of these pumps and simultaneous operation of the radial collector wells (which would withdraw water from a nearby location within the same aquifer).

RESPONSE:

Water budgets for “without Project” and “with Project” scenarios are contained in the water budgets in the MODFLOW output files that were supplied to MDC with FPL’s 4th Round Completeness responses. These water budgets are for the region covered by the Units 6 & 7 groundwater model domain. The simulations that develop these water budgets incorporate operation of the radial collector wells and cooling canal system as appropriate, and therefore the interaction between the effects of the cooling canal system intake pumps and radial collector well pumps is addressed with the model. Note that for quantification of water budgets for specific sub-regions of interest, the analyst can employ Zone Budget (Harbaugh, 1990) or similar software within Visual MODFLOW or Groundwater Vistas. One such sub-regional water budget is the one that pertains to the impacts of the Units 6 & 7 Project. This water budget indicates that 97.8 percent of the water pumped by the radial collector originates from Biscayne Bay, with smaller amounts, 1.9 percent and 0.3 percent, originating from the cooling canal system and recharge, respectively. A salt balance for the Project can be approximated by assigning a TDS concentration to each source (cooling canal system = 70,000 mg/L, Biscayne Bay = 35,000 mg/L, recharge = 0 mg/L) and multiplying each source by its water flow rate to obtain a mass flux. Water and salt balances determined for the Project by this method are shown below. Note that “without Project” water and salt balances are irrelevant since no water (or salt) is pumped and hence no water (or salt) is withdrawn from source areas.

The 1.9 percent of radial collector well flow that originates from the cooling canal system is equal to 3.7 cfs. This amount is small in relation to the 4,250 cfs (Golder, 2008) circulated water in the cooling canal system and therefore any change in the water balance or salt balance of the cooling canal system due to operation of the radial collector wells will be minimal.

Inputs to the groundwater flow model include surface water stages and heads. The difference between pre-Uprate and post-Uprate values of these boundaries is miniscule and well within the calibration criteria of the model. Hence the groundwater flow model is valid for both pre- and post-Uprate conditions. The difference between pre-Uprate and post-Uprate values of concentration in the cooling canal system is also small. The use of a TDS concentration of 70,000 mg/L in the salt budget conservatively accounts for both pre- and post-Uprate conditions.

The approximate water and salt balance for the Units 6 & 7 Project during radial collector well operation is as follows:

	WATER	SALT¹
INFLOW	gallons / day	lbs / day
Biscayne Bay	122,250,000	35,703,414
Cooling Canal System	2,375,000	1,387,249
Recharge	375,000	0
TOTAL	125,000,000	37,090,664
OUTFLOW		
Radial Collector Wells	125,000,000	37,090,664
TOTAL	125,000,000	37,090,664

¹ assumes TDS is all salt

Through the information provided to date, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

References

Golder, 2008. Cooling Canal System Modeling Report, January 13, 2008.

Harbaugh, A.W., 1990. A computer program for calculating subregional water budgets using results from the U.S. Geological Survey modular three-dimensional ground-water flow model: U.S. Geological Survey Open-File Report 90-392, 46.

• [e] **Please provide complete and detailed information on the Interaction between ground and surface waters, including recharge and exchange, in the areas around the facility including portions landward of the bay and in the areas surrounding the proposed radial collector wellfield location. Please provide data and maps to support all assertions.**

RESPONSE:

With respect to the interaction between groundwater and surface water in the areas around the facility, including portions landward of the bay and in areas surrounding the proposed location of the radial collector wells, FPL has previously provided the following information to MDC in 4th Round Responses 4-MDC-A-20-2, 4-MDC-A-21, 4-2MDC-C-6-GWM-4, and 4-2SFWMD-B-15(10)(b) (February 2011).

The responses cited above are based on results included in the revised Groundwater Modeling Report (Bechtel Power Corporation, 2011) submitted with the 4th Round of completeness responses (February 2011). In particular, Section 3.2.5 of the report describes the river boundary conditions used to represent interaction between groundwater and surface waters comprising the cooling canal system, the L-31E canal, the C-107 canal, Card Sound Canal, and the Florida City Canal. The locations of the river boundary conditions used to represent these surface water features and their associated surface water stage, bed conductance, and bottom elevation are provided on a cell-by-cell basis in the groundwater model input files transmitted to MDC with the 4th Round Completeness responses. Section 3.2.5 of the report also describes the general-head boundary conditions used to represent the exchange of water between the surface water of Biscayne Bay and the underlying groundwater. The locations of the general-head boundary conditions and their associated surface water stage and bed conductance are included in groundwater model input files. The groundwater model output files, also provided with the transmittal of the 4th Round Completeness responses to the agencies, contain cell-by-cell flows that include the fluxes between surface water and groundwater.

The areas that have the potential for groundwater / surface water interactions are those where an interface occurs between the groundwater and surface water. Near the facility, these areas are the cooling canal system, Biscayne Bay, and local canals. These areas are discussed below. Quantification of recharge and exchange between groundwater and surface water is generally not possible by direct measurement and hence estimates are made through evaluation of data and integration of these data into models.

The Golder Associates Inc. (2008) water balance specifically addresses pre-Project interactions between the cooling canal system and the surrounding groundwater. It shows a gain from groundwater of 3,351 ac-ft/mo or 36.4 mgd and a loss to groundwater of 2,313 ac-ft/mo or 25.1 mgd. These quantities are used in the Unit 6 & 7 groundwater flow model as soft calibration targets. The groundwater flow model shows

a pre-Project gain of 39.3 mgd from groundwater and a loss of 32.9 mgd to groundwater. Figure 37 of the groundwater flow model report shows the configuration of the water table surface in the vicinity of the cooling canal system and indicates inflow and outflow. Figures 37 through 44 of the Groundwater Modeling Report show that there is also inflow and outflow through the base of the cooling canal system.

Flow of groundwater into Biscayne Bay is very limited regionally due to the presence of L31-E, which intercepts seaward flowing groundwater. In addition, Langevin (2001) reports that most groundwater flow into the Bay takes place north of Structure S-123, which is well north of Turkey Point. Locally, groundwater inflow to the Bay is limited due to the presence of the L-31E Canal, the cooling canal system, and the potentiometric low created within the cooling canal system by the intake to the Plant (Figure 37 of the Groundwater Modeling Report).

The periodic pumping of the Units 6 & 7 radial collector wells will change groundwater / surface water interactions in the Bay near the radial collector wells and in the near shore area as described in the Groundwater Modeling Report. The radial collector wells are a backup water source that has been proposed by FPL to be used up to 90 days during a calendar year. When in use, the area of influence of the radial collector wells on groundwater and hence overlying surface water is very limited, as shown in Figure 59 of the Groundwater Modeling Report. The effective radius of influence of the wells is approximately 6000 ft and a drawdown of less than 0.5 ft extends onshore. Approximately 97.8 percent of the water pumped by the radial collector wells will be induced from the Bay into groundwater and then into the wells. The relative amounts of water are proportional to the velocities shown in Figure 64 of the modeling report. Another 1.9 percent flows from the cooling canal system through groundwater before it is captured by the radial collector wells. The groundwater model shows that the radial collector wells will not change the interaction between ground and surface waters in the interceptor ditch or the L-31E Canal or further west (see Figures 59 and 60 in the Groundwater Modeling Report).

Through the information provided to date, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

References

Bechtel Power Corporation, 2011. *Groundwater Model Development and Analysis: Units 6 & 7 Dewatering and Radial Collector Well Simulations, Rev. 1*, February 2011.

Golder Associates Inc., 2008. *Final Report on Florida Power & Light Company. Turkey Point New Nuclear Project Cooling Canal Data and Analysis Report*.

Langevin, C.D., 2001. *Simulation of Ground-Water Discharge to Biscayne Bay, Southeastern Florida*, U.S. Geological Survey Water-Resources Investigations Report 00-4251.

• [f] Please provide a delineation of the existing industrial wastewater plume that emanates from the CCS and include the distance between the plume and the proposed wellfield in plan view and with cross sections. Quantify how much of this plume would be drawn into the radial collector wellfield and describe how the shape and location of the plume would change. Also, please provide information sufficient to determine if the quality of the groundwater would change during operation of the radial collector wellfield (RCW) as a result of any saline portions or hypersaline portions of the plume being drawn into it? Please provide information that describes whether any portion of this plume in portions

of the aquifer below the proposed RCW would be drawn upward when the RCW is operating. Since the Uprate project is scheduled to be completed and operational prior to Units 6 & 7, the plume characteristics resulting from the Uprate project shall be included in the assessment of plume response to the Unit 6 & 7 Project including but not limited to the extent to which the plume would be affected by operation of the proposed radial collector wells. Will any of the plume be intercepted by the groundwater withdrawals from this wellfield? Will plume dynamics be impacted by groundwater withdrawals? Is the plume affecting the Model Lands, the Florida Keys National Marine Sanctuary, Biscayne National Park or the Biscayne Bay or Card Sound Aquatic Preserve? As the plume grows in spatial extent will assumed water quality characteristics in the area of the aquifer targeted by the radial collectors change? Information and data are needed not only for the direct impacts in any areas of plume discharge to ground waters but also indirect impacts such as whether the plume has replaced or contaminated lower salinity (natural) water on which the ecosystem depends. Information on the spatial extent of chloride and sodium contamination is therefore required for the evaluation including how the plume will be affected by the operation of the radial collector wellfield.

RESPONSE:

The completeness comments posed above may be grouped into two categories. The first group includes the following questions:

- **Please provide a delineation of the existing industrial wastewater plume that emanates from the CCS and include the distance between the plume and the proposed wellfield in plan view and with cross sections.**
- **Is the plume affecting the Model Lands, the Florida Keys National Marine Sanctuary, Biscayne National Park or the Biscayne Bay or Card Sound Aquatic Preserve?**
- **As the plume grows in spatial extent will assumed water quality characteristics in the area of the aquifer targeted by the radial collectors change?**

Potential impacts from operation of the existing cooling canal system and the Uprate Project are being evaluated currently as part of a separate process. The water resource related impacts associated with the Turkey Point Units 6 & 7 Project elements have been carefully evaluated through the Site Certification process. Proposed Units 6 & 7 will not use the cooling canal system for plant cooling or as a source of cooling tower makeup water, or as a receiving water body for cooling tower blowdown. Only stormwater runoff (freshwater) from the Units 6 & 7 Site and the nuclear administration building, training building and parking area would be released into the cooling canal system during operation of Units 6 & 7. As discussed in paragraphs 5-MDC-C-2 ...23 (a) and (c) above, salt deposition from the cooling towers when the radial collector wells are in operation will cause no measurable change. Therefore, the operation of radial collector wells will have no adverse impacts on the salinity of the cooling canal system.

The second group of questions posed in this completeness comment includes the following:

- **Quantify how much of this plume would be drawn into the radial collector wellfield and describe how the shape and location of the plume would change.**
- **Also, please provide information sufficient to determine if the quality of the groundwater would change during operation of the radial collector wellfield (RCW) as a result of any saline portions or hypersaline portions of the plume being drawn into it?**

- **Please provide information that describes whether any portion of this plume in portions of the aquifer below the proposed RCW would be drawn upward when the RCW is operating.**
- **Will any of the plume be intercepted by the groundwater withdrawals from this wellfield?**
- **Will plume dynamics be impacted by groundwater withdrawals?**

With respect to the interaction between the cooling canal system and the radial collector wells, FPL has previously provided the following information to MDC: 4-MDC-C-2, 4-2MDC-C-6-Conc-6, 4-MDC-C-13 (February 2010), FDEP-VI-A-9, FDEP-VI-G-1 (October 2009), 4-2SFWMD-B-3(3)(a), 4-2SFWMD-B-15(10)(b), 4-2SFWMD-B-15(10)(i) (February 2011), and 2SFWMD-B-29(25)(b) (April 2010).

In addition, results presented in the revised Groundwater Modeling Report submitted with the fourth round of responses (Bechtel Power Corporation, 2011) indicate that only about 1.9 percent of the water supplying the radial collector wells originates from boundaries representing the cooling canal system as indicated in Table 11 of the report. Water drawn towards the radial collector well system will remain at depth within the salt water (G-III) aquifer due to the placement of the radial collector well laterals approximately 25 to 40 ft below the seabed and due to its higher density relative to saltwater. Therefore, intermittent pumping of the radial collector wells is not expected to adversely affect the groundwater beneath the cooling canals.

See also Response 5-MDC-C-2...23[b] above.

Through the information provided to date, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

Reference

Bechtel Power Corporation, 2011. *Groundwater Model Development and Analysis: Units 6 & 7 Dewatering and Radial Collector Well Simulations, Rev. 1*, February 2011.

• [g] Please fully describe and characterize all changes to surface water quality and/or quantity that will result from operation of the RCW in all areas landward of the shoreline. This shall include a description of all existing gradients and flow directions in the area of Turkey Point and a description of all gradient changes that will result from operation of the RCW. Site specific gradient information and direction(s) of groundwater flow in the area of the facility including the cooling canal system are also needed. Any changes in distribution of groundwater flow to surface waters that would result from operation of the radial collectors shall also be identified including a detailed discussion of the changes in directions and gradients when each of the systems (the existing pumps for units 1, 2, 3 and 4 as well as the RCW) are operating without the other and when operating simultaneously. Since flow pathways are density dependent in this area and gradients are complex and change rapidly due to plant operations, the modeling effort is not sufficient to determine the existing or proposed condition since it does not include a water quality or density component. Site specific gradient information and directions(s) of surface water and groundwater flow in the area of the existing and proposed facilities including the cooling canal system must be detailed and comprehensive.

RESPONSE:

With respect to changes to surface water quality and/or quantity in areas landward of the shoreline from operation of the radial collector wells, FPL has previously provided the following information to MDC: Figures 37 through 44 in the Groundwater Modeling Report (Bechtel Power Corporation, 2011) show the simulated groundwater contours around Turkey Point facility in each of the hydrostratigraphic units. From this information, the existing gradient and flow direction at any location, including inside the cooling canal system, can be determined. The predominant flow direction is from west to east.

Figures 59 and 60 in the Groundwater Modeling Report (Bechtel Power Corporation, 2011) show the drawdown that will be produced by operation of the radial collector wells in the top layer of the aquifer and in the pumped layer, respectively. As shown in Figure 23 of the Groundwater Modeling Report, the top layer of the model represents muck onshore and either sediment or Miami Limestone offshore. The pumped layer of the model represents the highly transmissive zone located at the interface of the Miami Limestone and the Key Largo, termed the “Upper Higher Flow Zone” in the Groundwater Modeling Report. Based on the drawdown distributions illustrated in Figures 59 and 60 of the Groundwater Modeling Report, it is obvious that changes in the gradient or the flow direction landward of the shoreline will be insignificant.

Figures 61 and 62 in the Groundwater Modeling Report (Bechtel Power Corporation, 2011) show the areas that contribute flow when the radial collector wells are operating under steady-state conditions. As discussed in this report and in many of the previous completeness responses, approximately 1.9 percent of the flow will originate from the cooling canal system and only 0.3 percent will originate from rainfall recharge west of the shoreline. Biscayne Bay will contribute the remaining 97.8 percent. Comparing the locations of the 0.1 ft drawdown contours in Figures 59 and 60 with the areas of the cooling canal system contributions shown in Figures 61 and 62 clearly demonstrate that the radial collector wells will not induce additional flow from the cooling canal system.

The constant density model likely overestimates the small contributions from inland sources and the cooling canal system. The radial collector well laterals will be located approximately 25 to 40 ft below the seabed. Rainfall recharge contributed by inland areas tends to be fresher than sea water. This water enters at the surface and buoyant forces tend to resist vertical downward movement. Water from the cooling canal system is more saline and more dense than sea water. It moves to the bottom of the aquifer and buoyant forces tend to resist vertical movement upward. Consequently, the hydraulic gradients that move water to the radial collector wells must counter the buoyant forces associated with these two water sources. Since the model does not account for these forces, it will tend to overestimate the flow from these sources and underestimate the contribution from the bay.

Through the information provided to date, FPL has provided information adequate to assess the Project’s consistency with all of MDC’s nonprocedural requirements and thus the SCA should be determined complete.

Reference

Bechtel Power Corporation, 2011. *Groundwater Model Development and Analysis: Units 6 & 7 Dewatering and Radial Collector Well Simulations, Rev. 1*, February 2011.

• [h] Please provide additional information and supporting data to evaluate Impacts to the Biscayne Aquifer including changes to ground water quality and/or quantity impacts to salt intrusion - a determination of salt intrusion attributable to natural causes and determination of salt intrusion due to existing operations to establish current conditions as well as impacts to surface and groundwater salinity changes in the area from proposed operations including cumulative impacts is needed. Please also provide information and supporting data sufficient to determine whether the volumes and stages of freshwater in the areas west and north of the cooling canals are still adequate to prevent migration of high chloride water emanating from the CCS. If they are not, please also provide the required stages and volumes of additional water needed to prevent further migration landward within the Biscayne Aquifer from Turkey Point operations including the cumulative effects of all existing and proposed operations including the additional salt loading projected from the Uprate Project due to increased evaporation and the additional salt loading from the proposed cooling towers when the RCW is operating.

RESPONSE:

The design of the radial collector wells minimizes onshore impacts because they are located approximately 1,800 ft seaward of the regional shoreline (i.e., the shoreline excluding the Turkey Point peninsula). Operation of the radial collector wells cannot cause an adverse impact on salinity intrusion in the Biscayne Aquifer because the radial collector wells are located several miles seaward of the salinity transition zone between fresh and salt water in the Biscayne Aquifer. The hydraulic gradient in the Biscayne Aquifer west of the regional shoreline that is created by the radial collector wells will be small and directed offshore. As the radial collector wells are seaward of the salinity transition zone in the aquifer, the only impact on salinity intrusion would be positive, as discussed in 1st Round Responses SFWMD-B-15 and SFWMD-B-89 (October 2009).

Potential impacts from operation of the existing cooling canal system and the Uprate Project are being evaluated currently as part of a separate process. The water resource related impacts associated with the Turkey Point Units 6 & 7 Project elements have been carefully evaluated through the Site Certification process. The evaluations have consistently shown potential impacts to be insignificant, immeasurably small, or not adverse to human health, the resource or the environment. Cumulative impacts need to be quantified only when the incremental impact is at least marginally significant, and measureable and adverse. If the incremental impact is insignificant, or not measureable, the future cumulative condition will be virtually the same as the existing condition.

The Turkey Point Units 6 & 7 Project elements, including the radial collector wells, will have no measurable or adverse impact on the stages and volumes of freshwater in the areas west and north of the cooling canals. This has been demonstrated through the groundwater modeling and through the pre- and post-development runoff analyses for the FPL reclaimed water treatment facility presented in the Stormwater Management Calculations (SCA Appendix 10.8, June 2009). Salt loading impacts from the cooling towers when the radial collector well system is operating has been addressed both inside and outside the cooling canal system and shown to be insignificant in both cases [see Responses 5-MDC-C-2...23(a) and 5-MDC-C-2...23(c) above]. A regional water balance and salt balance based on the groundwater model results is presented in 5-MDC-C-2...23(d) above. As discussed in 5-MDC-C-2...23(k) below, the Turkey Point Units 6 & 7 Project elements will, in fact, increase the average annual freshwater contribution to the surface waters and groundwater.

Through the information provided to date, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

- [i] **Please provide a volumetric and spatial determination for each source of water that would recharge the area of the Biscayne Aquifer when the radial collector well field is operational and identification of each recharge source and water quality characterization of each source. The extent of the groundwater flux must be determined given the placement of the caissons associated with the radial collector well system at the depth of a high transmissivity zone within the Biscayne Aquifer.**

RESPONSE:

With respect to the water sources that would recharge the Biscayne Aquifer when the radial collector well field is operational, FPL has previously provided the following information to MDC: 4-MDC-A-20-2, 4-MDC-C-2, 4-2MDC-C-6-GWM-2, 4-2MDC-C-6-Conc-2, 4-2MDC-C-6-Conc (February 2011), 4-2SFWMD-B-3(2), 4-2SFWMD-B-3(3)(a), 4-2SFWMD-B-15(10)(a), and 4-2SFWMD-B-15(10)(b) (February 2011).

The responses cited above are based on results included in the revised Groundwater Modeling Report (Bechtel Power Corporation, 2011) submitted with the 4th Round of Completeness responses. Specifically, the volumes of water contributed from each source recharging the Biscayne Aquifer when the radial collector wells are operating are summarized in Table 11 of the referenced report, while the spatial distributions of these sources are delineated in Figures 61 and 62. As described in Section 5.2.1 of the report, the water sources include Biscayne Bay, water originating from the cooling canal system, and that originating from recharge by precipitation. The quality of the water originating from Biscayne Bay, the cooling canal system, and precipitation is expected to be saline (97.8 percent), hypersaline (1.9 percent), and fresh (0.3 percent), respectively. The extent of the groundwater flux has been determined recognizing the placement of the radial collector well laterals at the depth of the high transmissivity zone within the Biscayne Aquifer. In determining the characteristics of the areas recharging the Biscayne Aquifer, the placement of the radial collector well laterals in a high transmissivity zone within the Biscayne Aquifer was explicitly accounted for as described in Sections 3.2.4 and 5.2 of the referenced report.

Through the information provided to date, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

Reference

Bechtel Power Corporation, 2011. *Groundwater Model Development and Analysis: Units 6 & 7 Dewatering and Radial Collector Well Simulations, Rev. 1*, February 2011.

- [j] **How will the benthic communities in these nearby areas be impacted by intermittent or extended draw-through of surface water into the substrate during operation of the radial collectors? Please provide a characterization of current substrate (pore) water quality as well as a comparison to the projected water quality in the pore waters as surface water is drawn into the substrate during operation of the well field in order to evaluate the**

resultant changes during operation of the radial collectors. Any seasonal variations shall be included.

RESPONSE:

Discussion of the potential impacts of construction and operation of the radial collector wells to benthic communities was provided in responses 2SFWMD-B-36(29)(b), FDEP-II-B-56 and 57; FDEP-VI-C-1, 2, 3, 4, and 6; SFWMD-B-39, SFWMD-B-51; FFWCC-A-1; 2-FDEP-VI(CAMA)-7, 4-2SFWMD-B-51(51), and 4-2SFWMD-F-145(92).

Porewater is typically lower in dissolved oxygen and higher in nutrient concentration as compared to surface waters. Characterization of phosphorus concentrations in porewater has been conducted at Florida Bay, in areas with similar seagrass communities as Biscayne Bay. The median value of soluble reactive phosphorus (SRP) concentrations in porewaters throughout Florida Bay was 0.011 mg SRP / liter (Fourqurean et al., 1992). The median value for SRP for porewaters in *Thalassia testudinum* meadows was 0.015 mg SRP / liter. The median value for SRP for surface waters in Biscayne Bay is 0.001 mg SRP / liter (Caccia and Boyer, 2005). On average, porewater SRP concentrations are up to 10 to 15 times higher than concentrations in surface water. As surface water is drawn into the substrate during operation of the radial collector wells an increase in porewater oxygen concentration is expected, which reduces the potential for deleterious effects related to sulfides, and a potential decrease in porewater nutrient concentration. The radial collector wells are proposed as a backup water supply, with operation limited to a maximum of 90 days per calendar year, therefore any changes in porewater quality will be temporary in nature.

The Project is not anticipated to cause adverse impacts to aquatic systems in Biscayne Bay, as demonstrated in the SCA and these completeness responses. FPL anticipates that monitoring may be required to confirm the analysis presented in the SCA and these responses. FPL will work with the appropriate agencies to develop appropriate monitoring plans.

FPL has provided MDC adequate information to prepare its agency report. Through the information provided to date along with the additional information provided in this response, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

References

Fourqurean, J. W., J. C. Zieman, and G. V. N. Powell. 1992. Relationships between porewater nutrients and seagrasses in a subtropical carbonate environment, *Marine Biology* 114: 57-65.

Caccia, V. G. and J. N. Boyer (2005) Spatial patterning of water quality in Biscayne Bay, Florida as a function of land use and water management, *Marine Pollution Bulletin* 50: 1416-1429.

• [k] Please provide a comprehensive water budget to include a determination of total water consumption from ground and surface waters in the area around Turkey Point as a result of current permitted operations including the Uprate Project as well as a cumulative determination of total water consumption at Turkey Point as a result of all combined operations including existing and proposed - this should include all evaporative losses as

well as the rainfall volumes that will be lost to the area as a result of the reservoir as well as the open process tanks at the water treatment facility and other similar losses such as the current injection of wastewater into the Biscayne Aquifer that would be eliminated if the project is approved. A determination of the source(s) and quantities of the water consumed in the "with project" and "without project" scenarios in comparison with the amount of water projected to be delivered to the wetlands in the Turkey Point Model Lands area as a result of the CERP BBCW project is also needed as a component of this evaluation to determine consistency with the goals and objectives of the CERP BBCW project. A determination of: 1) the current volume of water being drawn into the CCS from under Biscayne Bay via operation of the CCS intake pumps, 2) the source(s) of this water including volumetric determination of each source, and 3) the cumulative volume (and sources) during operation of both systems (CCS pumps and radial collector wellfield) is needed as a component of the requested information and data.

RESPONSE:

Water budgets for the existing cooling canal system and the Uprate Project are being evaluated currently as part of a separate process. The water resource related impacts associated with the Turkey Point Units 6 & 7 Project elements have been carefully evaluated through the Site Certification process. The evaluations have consistently shown potential impacts to be insignificant, immeasurably small, or not adverse to human health, the resource or the environment. Cumulative impacts need to be quantified only when the incremental impact is at least marginally significant, measureable and adverse. If the incremental impact is insignificant, or not measureable, the future cumulative condition will be virtually the same as the existing condition. If the incremental impact is significant and measurable but not adverse, the future cumulative condition will improve. Therefore, information regarding the Uprate Project is not necessary to a complete assessment of impacts of the Turkey Point Units 6 & 7 Project.

The Turkey Point Units 6 & 7 Project will increase the annual average fresh water contribution to surface waters and groundwater. Therefore, a comprehensive water budget is not necessary to evaluate the Turkey Point Units 6 & 7 Project. The Turkey Point Units 6 & 7 Project will have a positive impact on the cooling canal system, the wetlands around the FPL reclaimed water treatment facility and the overall hydrologic system. Since the net fresh water contribution will be positive, there will be no adverse impact from the Turkey Point Units 6 & 7 Project and thus the Project is not inconsistent with the CERP BBCW project objectives.

The "with Project" and "without Project" fresh water contributions for the Turkey Point Units 6 & 7 Project elements are shown in Table 1 (attached). These budgets include rainfall and evaporative losses (and gains) to the cooling canal system and the area around the reclaimed water treatment facility from land cover/land use changes. The budgets also include fresh water reductions caused by the open process tanks, the makeup water reservoir, the radial collector wells and the septic tank replacement. The Turkey Point Units 6 & 7 Project elements that drain to the cooling canal system include the Site, the nuclear administration building and training building and the associated parking area.

The fresh water contribution are calculated using the following water budget:

$$\text{Rainfall} - \text{Evaporation} = \text{Runoff} + \text{Infiltration},$$

where runoff plus infiltration equals the fresh water contributed to the surrounding hydrologic system.

Annual average rainfall is approximately 46 inches/year based on 30 years of data from Station S20F, which is located near Homestead Bayfront Park. Based on studies conducted by the SFWMD (Abteu et al., 2003), the annual average potential evapotranspiration (ET_p) near the Turkey Point facility is approximately 54 inches/year. Potential evapotranspiration is defined as the amount of water that will be lost if there is no soil moisture deficiency. This value is also a reasonable estimate for areas with standing water. The SFWMD ERP BOR (July 2010) provides information on changes in evaporation with depth to the water table and this reference gives an extinction depth of 4 ft. Using this information, the evapotranspiration rate for wetland areas (i.e., water table <0.5 ft bls) is estimated to be approximately 48 in/yr. Similarly, evapotranspiration in upland areas (i.e., average water table 1.5 to 2 ft bls) is estimated to be approximately 36 in/yr. Evaporation rates for impervious and gravel surfaces were estimated using the curve number method and daily rainfall data from Station S20F. The values are shown in Table 1 along with an explanation for the basis of each value. This analysis shows that the Turkey Point 6 & 7 Project elements will increase the fresh water flow to the hydrologic system by approximately 0.57 MGD.

Through the information provided to date, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

Reference

Abteu, Wossenu, Jayantha Obeysekera, Michelle Trizzary-Ortiz, Danielle Lyonos, Anna Reardon. January 2003. Evapotranspiration Estimation for South Florida. South Florida Water Management District, West Palm Beach, FL.

5-MDC-C-6 (Fifth Round)

This item remains incomplete. Further information and clarifications are needed based on FPL's response with regard to wetlands impacts and water losses (changes to water quality, quantity, stage and/or wetland hydroperiod). FPL states in response C-6 the following: *"The reduction of this fresher water lens by operation of the radial collector wells will have no adverse environmental impacts on the surrounding Bay. If the radial collector wells are operated for 1 to 2 weeks, the pumping will remove most of the fresher water lens below the peninsula. The removal of this fresher water lens will have no adverse environmental impact on the surrounding Bay. Over time, when the radial collector wells are not operating, rainfall infiltration will recharge the aquifer below the peninsula and this fresher water lens will be re-established."* What is the spatial extent of the water that would be removed by this pumping below the peninsula? If most of the fresher water lens would be removed by pumping, please explain and provide data to document why the water stage in these wetlands or the water quality in or over the lens will not be impacted at least in the area of the peninsula if not further. Would this impact hydroperiod within the wetlands, at least in some areas? In addition, information is needed to verify the stated claim that *"The removal of this fresher water lens will have no adverse environmental impact on the surrounding Bay"*. Is this lens that FPL has identified a part of the lens that exists under the coast all along the mangrove fringe of Biscayne Bay? If so, isn't this the source of the fresher groundwater inputs into Biscayne Bay?

Please also clarify these statements given the relatively thin lens of fresher water and therefore the relatively small volume of this water likely to be within the relatively small area of the peninsula. Given that most of the water is projected (based on the FPL modeling) to infiltrate the RCW from above via vertical or near vertical flow paths, why would so little of this water be removed from under the peninsula in comparison to the water removed from the adjacent

areas of Biscayne Bay? With regard to FPL's statements relating to recharge of the groundwater under the land when the radial collector wells stop operating: wouldn't this area be "recharged" by salt water from the bay during the dry season when there is no rain (in the absence of rainfall infiltration) and if so, wouldn't the water that reestablishes be saltier, not a "fresher water lens" in and under the wetlands in this area? Clarification of these statements and supporting data are needed.

RESPONSE:

As stated in Response 3MDC-C-6 (July 2010) the lens of fresher groundwater should not extend much past the shoreline of the Turkey Point peninsula. Based on the formulas given in Fetter (1994), the fresher water lens under the Turkey Point peninsula would extend only a few inches past the shoreline. Furthermore, because the Turkey Point peninsula has a very small upland area and is almost completely surrounded by the bay, it contributes very little fresh water to the bay. Landward of the peninsula shoreline (i.e., in the upland areas above the fresher water lens) there are no freshwater wetlands that depend on the water table or the presence of the fresher water lens. Seaward of the shoreline, the hydroperiod of the saltwater wetlands is controlled by tidal fluctuations in the bay, which are not impacted by the operation of the radial collector wells. The fresher water lens under the peninsula represents a small quantity of fresh water that infiltrated the uplands, and over time accumulated in the aquifer under the peninsula. It does not represent a significant hydrologic source of fresh water to the bay, or to the surrounding wetlands. This lens is a local phenomenon and is not part of the regional groundwater flow that generally moves from west to east through the upper portions of the Biscayne Aquifer toward the shoreline of Biscayne Bay. Consequently, removing this fresher water lens will have no adverse environmental impact on the surrounding Bay.

When the radial collector wells are operating, water in the aquifer under the Turkey Point peninsula will move down toward the radial collector wells and the aquifer will be recharged laterally by salt water from the bay. Within a few days to weeks, most of the fresher water lens under the peninsula will be removed and replaced with salt water from the bay. When the pumping is stopped, rainfall infiltration over time will re-establish the fresher water lens under the upland areas of the peninsula. How quickly the fresher water lens will be re-established depends on rainfall patterns and other factors.

Through the information provided to date, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

Reference

Fetter, C.W. (1994). Applied Hydrology. New York: Macmillan College Publishing Co., Inc.

5-MDC-C-7 (Fifth Round)

This item remains incomplete Information previously requested must be provided to enable the County to determine whether the proposed project meets the requirements of Miami-Dade County Code, zoning regulations, including Resolution 2-56-07, and the CDMP, in order to prepare the reports required by section 403.507 F.S. Miami-Dade County reiterates its requests for delineations of the industrial wastewater plume emanating from the CCS, including delineation of the heat plume and underground directional travel of this heated water which has not been provided. The extent to which this plume would be affected by the proposed groundwater withdrawals from the radial collector wellfield is not documented. In addition, no direct information or data has been

provided to evaluate potential affects of inducing groundwater flow from the plume towards the proposed RCW. The applicant needs to provide information as required under condition 15 of 2-56-07, that shall include but not be limited to delineation of the existing plume that emanates from the CCS . The existing heat plume must also be delineated to determine whether warmer (or saltier) water would be induced into the RCW. Please also see response MDC-A-3 with regard to delineation.

RESPONSE:

Potential impacts from operation of the existing cooling canal system and the Uprate Project are being evaluated currently as part of a separate process. The water resource related impacts associated with the Turkey Point Units 6 & 7 Project elements have been carefully evaluated through the Site Certification process. For the reasons discussed further below, a detailed delineation of the industrial wastewater from the cooling canal system and its direction of travel are not necessary to evaluate the Turkey Point Units 6 & 7 Project. First, the groundwater beneath the cooling canal system is always more dense than the groundwater under Biscayne Bay when accounting for both temperature and salinity. Consequently, the hypersaline heated-water from the cooling canal system will flow to the bottom of the aquifer. Second, the radial collector wells do not induce additional flow from the cooling canal system to the aquifer. Third, while pumping from the radial collector wells may change the distribution of the hypersaline water in the aquifer, it will not cause hypersaline water to move to the surface. Rather, the hypersaline water intercepted by the radial collector wells will remain at a depth no shallower than the radial collector wells within the saltwater (G-III) aquifer. Therefore, withdrawals from the radial collector wells will not cause adverse impacts to groundwater or surface water. These conclusions are valid for the radial collector wells operating continuously. If operation of the radial collector wells is limited to 90 days per calendar year, the potential for impact will be even less.

The fact that groundwater under the cooling canal system is always more dense than groundwater under Biscayne Bay, accounting for temperature and salinity, can be demonstrated from the following calculation. Table 1 attached to this response shows the density calculation. The values of salinity and temperature used in the calculation were selected to maximize the density of the groundwater under Biscayne Bay (T=25.8°C, S= 39 PSU) and to minimize the density of the groundwater emanating from the cooling canal system (T= 42°C S= 63 PSU). The reference table shown in Figure 2 gives the density of water as a function of temperature and salinity. Table 1 shows the interpolation for the two conditions. The two points on Figure 2 show the minimum density in the cooling canals system and the maximum density in Biscayne Bay. Accounting for both temperature and salinity, groundwater under the cooling canal system is at least 1.2 percent more dense than groundwater under the bay. To put this difference in perspective, sea water is approximately 2.5 percent more dense than fresh water. Therefore, the density difference between groundwater under the cooling canal system and groundwater under Biscayne Bay is at least 1/2 the density difference between freshwater and sea water. This density difference will ensure that any water moving east from the cooling canal system will move to the bottom of the aquifer.

The conclusion that the radial collector wells will not induce additional flow from the cooling canal system is based on results from the groundwater model. Figures 59 and 60 in the revised Groundwater Modeling Report submitted with the fourth round of responses (Bechtel Power Corporation, 2011) show the steady-state drawdown contours in two different layers. These drawdown contours represent the differences in groundwater levels between the pre-construction condition and the post-construction condition when the radial collector wells are operational. The 0.1 ft contour defines the extent of the aquifer affected by radial collector well operation (i.e., the zone of influence for the radial collector

wells). Figures 61 and 62 in the revised Groundwater Modeling Report show the origin of the flow to the radial collector wells. Comparing the zone of influence with the cooling canal source areas shows that the source areas will be outside the radial collector well zone of influence. This indicates that the radial collector wells will not induce additional flow from the cooling canal system.

The radial collector wells will be located east of the Units 1 through 4 intake canals and the laterals will be approximately 25 to 40 ft below the bay bottom. Groundwater between the cooling canals and the radial collector wells is classified as G-III. If hypersaline water is located within the zone of influence of the radial collector wells the hypersaline water may be moved within the aquifer, or intercepted by the wells. However, because the hydraulic gradient between the laterals and the bay will always be downward when the radial collector wells are operating, the radial collector wells cannot cause high salinity water from the cooling canal system to flow to surface waters. When the radial collector wells are not operating the hypersaline water will move down toward the bottom of the aquifer in response to its higher density. The drawdown contours, the particle tracking results and the zone budget analysis from the groundwater model show that 1.9 percent of the withdrawal may originate from the cooling canal system and flow through the groundwater toward the radial collector wells. This minor groundwater movement will not cause an adverse impact to groundwater or surface water.

With respect to Condition 15 of the Unusual Use Approval FPL has previously provided comprehensive and significant information on the potential hydrologic impacts of the Turkey Point Units 6 & 7 Project features that are subject to Condition 15 of the Zoning Resolution. Since the application was submitted, FPL has also met with MDC on multiple dates to discuss Condition 15, the appropriate Project-related hydrologic study requirements, and the completeness questions and responses related to Project features that may affect surface or groundwater and that are subject to Condition 15. Multiple features were discussed in these meetings, but in general the focus was on the back-up water supply (radial collector wells), stormwater management, the onsite sanitary treatment plant and onsite construction dewatering.

FPL has provided the following information to MDC related to Condition 15:

SCA Sections and Appendices (June 2009) - 3.3.1 Geohydrology, 3.3.2 Subsurface Hydrology, 3.3.3 Site Water Budget and Area Users, 3.3.4 Surficial Hydrology, 4.5.1 Heat Dissipation System, 4.5.2 Domestic/Sanitary Wastewater, 4.5.3 Potable Water Systems, 4.5.4 Process Water Systems, 5.2 Impact on Surface water Bodies and Uses, 5.3 Groundwater Impacts, 6.1 Effects of Operation of the Heat Dissipation System, 6.2 Effects of Chemical and Biocide Discharges, 6.3.1 Surface water, 6.3.2 Groundwater, 6.3.3 Drinking Water, 6.3.5 Measurement Programs, R.9.3.4 Access Roads, R9.3.7.2 Affected Waters and Wetlands, R9.4 Effects of ROW Preparation and Construction, Appendix 10.8, Appendix 10.9.

1st Round Completeness Responses (October 2009): MDC-A-3, MDC-A-7, MDC-A-9, MDC-A-14, MDC-A-22, MDC-C-1, MDC-C-2, MDC-C-8, MDC-C-11, MDC-C-19, MDC-C-20, MDC-C-21, MDC-D-1, MDC-D-12, MDC-D-27, MDC-G-9, MDC-G-29, MDC-G-41, FDEP-I-C-4, FDEP-I-C-5, FDEP-I-D-6, FDEP-II-A-3, FDEP-II-A-9, FDEP-II-A-10, FDEP-II-A-14, FDEP-II-A-23, FDEP-II-A-25, FDEP-II-A-26, FDEP-II-A-28, FDEP-II-A-30, FDEP-II-A-31, FDEP-II-A-32, FDEP-II-A-34, FDEP-II-A-35, FDEP-II-A-36, FDEP-II-A-37, FDEP-II-A-39, FDEP-II-B-44, FDEP-II-B-52, FDEP-II-B-56, FDEP-II-B-58, FDEP-II-B-61, FDEP-II-B-65, FDEP-II-B-66, FDEP-II-B-73, FDEP-III-1, FDEP-IV-A-1, FDEP-IV-A-2, FDEP-VI-A-4, FDEP-VI-A-5, FDEP-VI-A-6, FDEP-VI-A-7, FDEP-VI-A-8, FDEP-VI-A-9, FDEP-VI-A-10, FDEP-VI-A-15, FDEP-VI-B-1, FDEP-VI-B-2, FDEP-VI-B-3, FDEP-VI-B-4, FDEP-VI-B-5, SFWMD-B-6, SFWMD-B-9, SFWMD-B-11, SFWMD-B-15, SFWMD-B-21, SFWMD-B-25, SFWMD-B-27, SFWMD-B-29, SFWMD-B-30, SFWMD-B-34, SFWMD-B-35, SFWMD-B-

36, SFWMD-B-39, SFWMD-B-40, SFWMD-B-42, SFWMD-B-43, SFWMD-B-44, SFWMD-B-45, SFWMD-B-46, SFWMD-B-47, SFWMD-B-48, SFWMD-B-50, SFWMD-B-53, SFWMD-B-54, SFWMD-B-55, SFWMD-B-63, SFWMD-B-66, SFWMD-B-68, SFWMD-B-70, SFWMD-B-71, SFWMD-B-81, SFWMD-B-85, SFWMD-B-87, SFWMD-B-89, SFWMD-B-91, SFWMD-B-93, SFWMD-D-119, SFWMD-H-153.

Reports

- Groundwater Model Development and Analysis: Units 6 & 7 Dewatering and Radial Collector Well Simulations, Rev. 0 (Bechtel Power Corporation, 2009).
- Groundwater Model Development and Analysis: Units 6 & 7 Dewatering and Radial Collector Well Simulations, Rev. 1 (Bechtel Power Corporation, 2011).
- HDR Engineering, Inc., 2009. FPL Turkey Point Exploratory Drilling and Aquifer Performance Test Program Report.
- HDR Engineering, Inc., 2009. Cooling Water Supply and Disposal Design Report. March 2009.
- HDR Engineering, Inc., 2008. Report - Conceptual Engineering of Cooling Water Supply and Disposal for Turkey Point Units 6 & 7. June 30, 2008.
- HDR Engineering, Inc., 2007. Work Order #1 – Task 1.4 Analysis of Baseline Water Source Technical Review Report. December 2007.
- HDR Engineering, Inc., 2008. Work Order #2 – Task 1 Initial Water Source Alternative Screening Technical Review Report. March 2008.
- HDR Engineering, Inc., 2007. Work Order #2 – Tasks 2 and 3 Water Source Alternative Characterization and Scope Technical Review Report. March 2008.

2nd Round Completeness Responses (Part A) (April 2011): 2-MDC-A-6, 2-MDC-A-11, 2-MDC-A-22, 2-MDC-A-33, 2-MDC-C-6-APT-1, MDC-C-6-APT-3, MDC-C-6-Conc-1, 2-MDC-C-24-RCW, 2-MDC-D-1, 2-MDC-D-27, 2-FDEP-VI-CAMA-6, 2-FDEP-VI-CAMA-7, 2-FDEP-VI-CAMA-8, 2-FDEP-VI-COC-2, 2-SFWMD-B-15(10)h, 2-SFWMD-B-25(28), 2-SFWMD-B-26(16), 2-SFWMD-B-26(21), 2-SFWMD-B-29(25)b, 2-SFWMD-B-29(25)g, 2-SFWMD-B-34(27), 2-SFWMD-B-39(30), 2-SFWMD-B-40(31), 2-SFWMD-B-40(32), 2-SFWMD-B-40(33), 2-SFWMD-B-40(35), 2-SFWMD-B-42(40), 2-SFWMD-B-44(42), 2-SFWMD-B-53(52), 2-SFWMD-B-57(55), 2-SFWMD-B-66(65), 2-SFWMD-B-70(69), 2-SFWMD-H-153(98)a;

2nd Round Completeness Responses (Part B) (July 2011): 2-MDC-A-3, 2-MDC-A-5, 2-MDC-C-6-GWM-5, 2-FDEP-VI-CAMA-2, 2-FDEP-VI-CAMA-4, 2-FDEP-VI-CAMA-5, 2-FDEP-SED-III-2, 2-SFWMD-B-3(2), 2-SFWMD-B-3(3), 2-SFWMD-B-4(4), 2-SFWMD-B-15(10)c, 2-SFWMD-B-15(10)e, 2-SFWMD-B-26(17), 2-SFWMD-B-29(25)a, 2-SFWMD-B-36(29), 2-SFWMD-B-42(39), 2-SFWMD-B-44(43), 2-SFWMD-B-92(78);

3rd Round Completeness Responses (July 2011): 3-MDC-A-3, 3-MDC-A-5, 3-MDC-A-6, 3-MDC-A-13, 3-MDC-A-18-9, 3-MDC-B-2, 3-MDC-B-3, 3-MDC-C-6, 3-MDC-D-1(a), 3-MDC-G-41, 3-FDEP-VI-CAMA-4, 3-FDEP-VI-CAMA-5, 3-FDEP-VI-CAMA-6, 3-SFWMD-B-57(55), 3-SFWMD-D-119(87);

5-MDC-C-13 (Fifth Round)

This item remains incomplete and information previously requested must be provided to enable the County to determine whether the proposed project meets the requirements of Miami-Dade County Code, zoning regulations, including Resolution Z-56-07, and the CDMP, in order to prepare the reports required by section 403.507 F.S. Contrary to FPL's assertion in its latest response to C-13 that the contents of the SCA and subsequent completeness submittals meet the intent of condition 4 of Z-56-07. Condition 4 of Resolution Z-56-07 provides that FPL shall "not apply for any water withdrawals from the Biscayne Aquifer as a source of cooling water for the proposed facilities". FPL did not appeal the County Commission's resolution. However, pursuant to the application subsequently filed by FPL, the proposed project would withdraw water from this aquifer for cooling water purposes when the proposed radial collector wellfield is in operation. In addition, the information and submittals are also inconsistent with condition 5 of the aforementioned resolution because FPL has elected to use a model that has not been approved by Miami-Dade County. Miami-Dade County acknowledges the improvements to the model as submitted in FPL's latest response. However, this model remains inadequate. Please provide all requested information.

RESPONSE:

With respect to the portion of this completeness comment regarding Condition 4 of the unusual use approval granted under Resolution No. Z-56-07 ("Unusual Use Approval") FPL notes that MDC has not requested additional information.

With respect to Condition 5 of the unusual use approval granted under Resolution No. Z-56-07 ("Unusual Use Approval"), FPL has previously provided the following information to MDC:

- The following five reports:
 - *Analysis of Baseline Water Source Technical Review Report* (HDR, December 2007);
 - *Initial Water Source Alternative Screening Technical Review Report* (HDR, March 2008);
 - *Water Source Alternative Characterization and Scope Technical Review Report* (HDR, March 2008);
 - *Conceptual Engineering of Cooling Water Supply and Disposal for Turkey Point Units 6 & 7* (HDR, June 30, 2008); and
 - *Cooling Water Supply and Disposal Design Report* (HDR, March 2009).

These reports were summarized in SCA Appendix 10.9, Water Supply Alternative Analysis and Water Conservation Plan.

- Responses to Completeness comments:
 - 1st Round Completeness Responses (October 2009): MDC-B-1;
 - 2nd Round Completeness Responses (April 2010): 2-MDC-B-1, 2-MDC-C-24-AWS;
 - 3rd Round Completeness Responses (July 2010): 3-MDC-B-3, 3-MDC-C-24; and
 - 4th Round Completeness Responses (February 2011): 4-MDC-A-3.

As FPL explained in 4-MDC-A-3:

“[W]ith the approval of the Joint Participation Agreement by MDC’s Board of County Commissioners on July 20, 2010 for the supply of reclaimed water as the primary cooling water makeup source for the Turkey Point Units 6 & 7 Project, FPL has demonstrated compliance with the primary provision of Condition 5 that it ‘utilize reclaimed or reuse water to the maximum extent possible...’ Additionally, as required by Condition 5, FPL has provided MDC with an alternative water sources plan, which outlines all sources of water not supplied by WASD through reuse. Because FPL is not proposing the use of water from the Floridan Aquifer, FPL disagrees that groundwater modeling of the Floridan Aquifer under Condition 5 is required.”

The information referenced above provides MDC adequate information to prepare its agency report regarding Conditions 4 and 5. Under the PPSA, “completeness” means that “the application has addressed all applicable sections of the prescribed application format, and that those sections are sufficient in comprehensiveness of data or in quality of information provided to allow the department to determine whether the application provides the reviewing agencies adequate information to prepare the reports required by s. 403.507 [agency reports]” § 403.503(10), Fla. Stat. (emphasis added). Thus, completeness questions must be limited to information needed by the agency to prepare its agency report. The proper subject of MDC’s agency report is MDC’s view of the Project’s “consistency . . . with all applicable local ordinances, regulations, standards, or criteria that apply to the proposed electrical power plant, including any applicable local environmental regulations,” § 403.507(2)(a)(3), Fla. Stat. (emphasis added). These constitute the “nonprocedural requirements” of MDC relevant in this certification proceeding. See § 403.503(21), Fla. Stat. Although the requirement to submit an Alternative Water Source Plan is essentially procedural in nature, FPL has provided MDC with the information necessary to assess the Project’s consistency with the requirements of Condition 5. FPL has also provided MDC with the information necessary to assess the Project’s consistency with the requirements of Condition 4 and thus the SCA should be determined complete.

As stated in previous completeness responses, FPL recognizes that the conditions of MDC’s Unusual Use Approval are independent of the Site Certification process. It is FPL’s intent to demonstrate compliance (or the ability to comply in the future) with Condition 5. MDC should be able to reach this conclusion when FPL has demonstrated that the Project meets all substantive requirements in the certification process.

5-MDC-C-18 (Fifth Round)

This item remains incomplete. Miami-Dade County wishes to clarify that it does not purport to regulate the consumptive use of water withdrawals regulated by the SFWMD or the Health Department. With regard to consumptive use permitting, please confirm whether a consumptive use permit will be required from the SFWMD based on the water quality in this area of the Biscayne Aquifer. Also for purposes of clarification, the well construction standards apply to both domestic and nondomestic wells. Please provide the requested information.

RESPONSE:

Because this Project is being permitted under the PPSA, no consumptive use permit will be required from the SFWMD. This conclusion is not based on the water quality of the Biscayne Aquifer, but rather on the preemptive effect of the PPSA. See § 403.511(1), Fla. Stat. (specifying that “certification shall constitute the sole license of the state and any agency”).

This question, originating in 1st Round Plant and non-Transmission Completeness, requests construction details for the radial collector wells, including locations, designs, numbers, and pipe sizes. Information regarding the location, design, construction, and operation of the radial collector wells can be found in the Radial Collector Well Summary report provided with the 4th Round Completeness responses (February 2011). As indicated in Rounds 3 and 4 responses (July 2010, February 2011): (1) final well construction details will not be available until post-certification. (2) the cited section of MDC Code Section 24-43.2 applies to domestic well systems and is inapplicable to the radial collector well system proposed to supply backup cooling water supply for the operation of Turkey Point Units 6 & 7; and (3) non-domestic well construction regulation is within the exclusive regulatory authority of the State of Florida under Chapter 373, Florida Statutes.

Through the information provided to date, FPL has provided information adequate to assess the Project’s consistency with all of MDC’s nonprocedural requirements and thus the SCA should be determined complete.

SECTION D - ACCESS ROADS**5-MDC-D-1(a) (Fifth Round)**

This item remains incomplete and information previously requested must be provided to enable the County to determine whether the proposed project meets the requirements of Miami-Dade County Code, zoning regulations, including Resolution Z-56-07, and the CDMP, in order to prepare the reports required by section 403.507 F.S.

Miami-Dade County acknowledges the information provided by FPL referencing locations in the SCA and subsequent Completeness Responses where vegetation and expected wildlife information may be found, however, this information is incomplete because it does not include the requested location-specific evaluation of occurrence and utilization of the area by plants and wildlife, including information on where the proposed access roads cross wildlife corridors. Miami-Dade County has been clear about the need for comprehensive, systematic surveys to determine occurrence and utilization of the proposed access road corridor by both flora and fauna, including threatened and endangered species, in part to verify FPL's assertions on the effects of the project on plants and wildlife. Miami-Dade County must be able to evaluate the effect of development of the proposed access roads on all aspects of the local ecology, including but not limited to threatened or endangered species and their habitats.

FPL states in its response that, "FPL will comply with the applicable FWC, DACS, and USFWS regulations regarding avoidance, minimization, and mitigation of impacts to state and federally listed species, including plants." FPL has not yet provided sufficient specific information on how design, construction, and operation of the temporary access roads will comply with Miami-Dade County's ordinances (including but not limited to Section 24-48.4 of the Miami-Dade County Code), CDMP (including but not limited to Objectives CON-7 and CON-9 and associated

policies), and zoning conditions (including but not limited to Z-56-07, Condition 11) concerning avoidance, minimization, and mitigation of impacts to plants and wildlife, including state and federally-listed species. Please provide the requested information. The information must be provided in advance of the decision on certification to enable the County to determine whether the proposed project meets the requirements of Miami-Dade County Code and the CDMP and prepare the reports required by 403.507 F.S.

FPL's responses to this question have included general information on dominant vegetation along the proposed access road corridor, but FPL has provided only limited information on protected plant species within the proposed corridor, and has not provided requested location specific comprehensive surveys for wildlife occurrence and utilization that would identify where the proposed access roads cross wildlife corridors and enable an evaluation of whether FPL has taken appropriate steps to avoid and minimize impacts to wildlife, including threatened and endangered species. FPL states in its response that "Prior to construction, FPL will conduct pre-clearing listed species surveys within the selected rights-of-way. The surveys will be conducted in consultation with the FWC, USFWS and with MDC. FPL will comply with the applicable FWC, DACS, and USFWS regulations regarding avoidance, minimization, and mitigation of impacts to state and federally-listed species, including plants." These studies are needed in advance of the decision on certification to enable the County to determine whether the proposed project meets the requirements of Miami-Dade County Code and the CDMP and prepare the reports required by 403.507 F.S. In addition to providing the results of the surveys requested by Miami-Dade County, FPL shall submit the management plan for threatened and endangered species necessary to evaluate the proposed project with requirements of Chapter 24, Miami-Dade County Code, and as required pursuant to Condition 11 of Z-56-07.

FPL mentions a six foot box culvert in its response, and indicates its function in the response to MDC-D-21, but does not indicate its specific location. Please indicate the location of the 6-foot box culvert and provide supporting documentation for how this location was selected.

FPL states in its response that "Brazilian pepper, Australian pine, melaleuca and shoe-button ardisia will be removed and eradicated within an area extending up to 50-ft from the edge of pavement on FPL property adjacent to SW 359th Street, and within the public rights-of-way adjacent to construction access roadway improvements along public roadways". Please provide the rationale for these vegetation control zones.

FPL references the "Turkey Point Units 6 & 7 Draft Exotic Vegetation Management Plan" submitted to MDC on February 25, 2011 pursuant to Resolution Z-56-07. Miami-Dade County staff has reviewed this plan and disapproved it. FPL will be receiving a disapproval letter under separate cover.

FPL states in its response that, "At FPL's expense, all temporary roadway improvements south of SW 344th Street will be patrolled by security personnel when in active use. In addition, FPL will maintain security gates or other appropriate security measures during inactive periods on privately-owned roadway improvements." Please indicate where security gates or other security measures will be located on privately-owned roadway improvements and what schedule of maintenance for these measures will be employed.

Please clarify the meaning of the sentence "Miami-Dade County and other agencies with needed access shall, after providing proper notification to FPL, be granted access to FPL's private roadway." How does FPL define "proper notification"? How will FPL address situations where agency staff need immediate access to the privately-owned roadway improvements (e.g. when addressing in-progress illegal activities or evaluating and taking appropriate action on wildfires)? FPL also states in its response that "Any restrictions in accessing EEL lands by County staff during road construction will be temporary." Please clarify this statement. Does FPL expect situations where County staff will be completely restricted from accessing publicly owned land via the privately-owned roadway improvements? If so, what is the anticipated source(s) of such situations and how long would each event be likely to last? Could any such situation prevent County staff from accessing publicly-owned land in an emergency?

RESPONSE:

A refined Turkey Point Units 6 & 7 Exotic Vegetation Management Plan (Rev. 0, 7-13-2011) is included on the attached CD at *Attachments\5-MDC-D-1(a)*. The Plan has been refined to include comments received from MDC.

With respect to the proposed access roads, FPL has previously provided the following information to MDC:

- SCA (June 2009) Sections 3.3.6, 5.4.1.4, 5.4.2, 6.1.2, 6.1.4, 6.8, R 9.3.7.3 and R 9.4.4. SCA Appendix 10.7.1.3.
- Responses to Completeness comments:
 - 1st Round Completeness Responses (October 2009): MDC-D-19, MDC-D-22, SFWMD-F-137;
 - 2nd Round Completeness Responses (April 2010): 2-MDC-D-20, 2-MDC-D-22, 2-MDC-D-27,
 - 3rd Round Completeness Responses (July 2010): 3-MDC-D-20, 3-MDC-D-22, 3-MDC-D-23,
 - 4th Round Completeness Responses (February 2011): 4-MDC-D-22, 4-MDC-D-23.

With respect to Condition 11 of the unusual use approval granted under Resolution No. Z-56-07 ("Unusual Use Approval"), FPL has previously provided the following information to MDC:

Location-specific information on existing vegetation and expected wildlife along the road corridor was provided in SCA Chapter R9, Section R9.3.7, including FLUCFCS codes, dominant vegetation and potential state and federally-listed species. SCA Appendix 10.4 includes over 40 USACE data forms providing specific vegetation observed in the roadway corridor during the wetland surveys.

Wildlife corridors are typically natural linear features that connect areas of significant habitat that are separated or surrounded by human development. Such conditions do not occur within the area of the proposed temporary construction access roadways. Similar habitats occur both north and south of the existing transmission patrol road, although the prevalence of exotic vegetation increases northward towards SW 344th Street. As to the proposed location of the 6-ft box culvert, the presence of upland limerock roadways and ditches provide linear features which may be utilized as preferred travel paths, while areas of forested wetlands may provide additional cover for wildlife movements. FPL has proposed locating the 6-foot box culvert wildlife underpass in an area of mixed wetland hardwoods that extend across both sides of the existing patrol road (see Figure 5-MDC-D-21) because of the increased cover

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provided by the tree canopy compared to the adjacent relatively open sawgrass marsh landscape, and near a north-south upland limerock roadway that leads to a relatively large excavated ditch.

FPL's temporary construction access roadway improvements are consistent with MDC Code Section 24-48.4 which requires mitigation to compensate for unavoidable adverse environmental impacts. FPL's refined Mitigation Plan for the Project provided on the attached CD at *Attachments\5-MDC-A-25*), includes mitigation for temporary construction access roadway impacts as permanent impacts. In addition, following completion of construction of Units 6 & 7, roadway improvements will be removed, excluding the transmission patrol road, and the temporarily impacted wetlands will be restored.

CDMP Objective CON-7 provides for the protection and preservation of biological and hydrological functions of wetlands and mitigation for wetland impacts. FPL's proposal to utilize existing linear features including the temporary widening of the existing transmission patrol road on SW 359th Street and the existing public roadways reflects the minimization of wetland impacts to only that necessary to provide safe transportation during the construction of Units 6 & 7. The installation of larger culverts along SW 359th Street is consistent with CERP Objectives to increase the water levels in the Model Lands Basin by allowing for an additional one foot of surface water flow in the area. In addition, FPL's refined Mitigation Plan is consistent with CDMP Objective CON-7 as it provides for the mitigation for the temporary impacts to wetlands from roadway improvements and includes the restoration of wetlands following the completion of Project construction.

CDMP Objective CON-9 provides for the conservation of fish and wildlife and preservation of their habitat. FPL has identified the presence of and the potential for fish and wildlife, including listed species, to utilize areas of the Project. FPL's refined Threatened and Endangered Species Management Plan (SCA Appendix 10.7.1.3, Rev. 2) and refined Mitigation Plan (SCA Appendix 10.4, Section 2, Attachment E, Rev. 2) are consistent with CDMP Objective CON-9 as they provide for the protection of listed species and the enhancement and creation of their habitats.

The Turkey Point Threatened and Endangered Species Evaluation and Management Plan was submitted as part of the SCA in June 2009 (SCA Appendix 10.7.1.3). FPL has met repeatedly with DERM representatives, FWC, and the USFWS regarding the contents of the Plan. FPL has refined the Plan based upon agency input; the Plan is provided on the attached CD at *Attachments\5-MDC-A-25*. The Plan preserves, to the maximum extent possible, all habitats identified as critical to these species. Additional information regarding specific wildlife protection along SW 359th Street is provided in 5-MDC-D-29 below.

FPL has acknowledged the potential presence of all listed species whose habitat preferences include the habitats contained with the temporary construction access roadways. As stated previously, the evaluation of the potential utilization of the area proposed for the temporary construction access roads by threatened and endangered species is based upon presence of suitable habitat, field surveys, agency consultation, data from USFWS, FWC, and FNAI, as well as over three decades of data collected at the Turkey Point Plant. For a project with a construction date several years in the future, assuming that a given listed species may be present within an area of suitable habitat and proceeding with commitments to avoid, minimize, and mitigate impacts to the greatest extent practicable is an appropriate, conservative assessment methodology. Additional surveys are unnecessary at this time to demonstrate the potential of listed species utilization of the temporary construction access roadways as FPL has already recognized this potential. Prior to actual commencement of construction, FPL will conduct pre-clearing surveys for state and federally listed species during the appropriate seasons and will comply with the applicable FWC and USFWS regulations regarding avoidance, minimization, and mitigation of impacts to listed species.

Appropriate security measures will be located on the privately-owned roadway at the intersections of SW 359th Street and SW 137th Avenue and SW 117th Avenue. The associated maintenance schedules for these security measures will not be available until post-certification.

Prior to the installation of security gates, FPL will meet with MDC to determine the appropriate notification procedures for MDC staff and staff of other agencies needing access along SW 359th Street. FPL does not expect that situations will occur where County staff will be completely restricted from accessing publicly owned land via the privately-owned roadway improvements, nor should such a situation prevent County staff from accessing publicly-owned land in an emergency.

The information referenced above provides MDC adequate information to prepare its agency report. Under the PPSA, “completeness” means that “the application has addressed all applicable sections of the prescribed application format, and that those sections are sufficient in comprehensiveness of data or in quality of information provided to allow the department to determine whether the application provides the reviewing agencies adequate information to prepare the reports required by s. 403.507 [agency reports].” § 403.503(10), Fla. Stat. (emphasis added). Thus, completeness questions must be limited to information needed by the agency to prepare its agency report. The proper subject of MDC’s agency report is MDC’s view of the Project’s “consistency . . . with all applicable local ordinances, regulations, standards, or criteria that apply to the proposed electrical power plant, including any applicable local environmental regulations.” § 403.507(2)(a)(3), Fla. Stat. (emphasis added). These constitute the “nonprocedural requirements” of MDC relevant in this certification proceeding. See § 403.503(21), Fla. Stat. Although the requirements to submit a Threatened and Endangered Species Management Plan and exotic vegetation management plan for the access roads is essentially procedural in nature, FPL has provided MDC with the information necessary to assess the Project’s consistency with the requirements of Conditions 11 and 12. Through the information provided to date along with the additional information provided in this response, FPL has provided information adequate to assess the Project’s consistency with all of MDC’s nonprocedural requirements, including with regard to MDC Code Section 24-48.4, and Objectives CON-7 and CON-9 of the CDMP and thus the SCA should be determined complete.

As stated in previous completeness responses, FPL recognizes that the conditions of MDC’s Unusual Use Approval are independent of the Site Certification process. It is FPL’s intent to demonstrate compliance (or the ability to comply in the future) with Conditions 11 and 12 through the certification process. MDC should be able to reach this conclusion when FPL has demonstrated that the Project meets all substantive requirements in the certification process.

5-MDC-D-1(b) (Fifth Round)

Please see MDC's Fifth Round response to item MDC-D-1(a).

RESPONSE:

Please see Response 5-MDC-d-1(a) above.

5-MDC-D-9 & 10 (Fifth Round)

This item remains incomplete. FPL must confirm whether its reference in this response to an Exotic Vegetation Management Plan that will be submitted under separate cover refers to the "Turkey Point Units 6 & 7 Draft Exotic Vegetation Management Plan" that was submitted to MDC on February 25, 2011. If so, please be advised that as stated above in MDC-D-1 (a) (Fifth Round), Miami-Dade County staff has reviewed this plan and disapproved it. FPL will be receiving a disapproval letter under separate cover.

RESPONSE:

With respect to Condition 12 of the unusual use approval granted under Resolution No. Z-56-07 (“Unusual Use Approval”), the Turkey Point Units 6 & 7 Draft Exotic Vegetation Management Plan submitted to MDC on February 25, 2011 is the plan referenced in the response. FPL will meet with MDC to review and discuss the contents of the Draft Plan.

A refined Turkey Point Units 6 & 7 Exotic Vegetation Management Plan (Rev. 0,7-13-2011) is included on the attached CD at *Attachments\5-MDC-D-1(a)*. The Plan has been refined to include comments received from MDC.

The information referenced above provides MDC adequate information to prepare its agency report regarding condition 12. Under the PPSA, “completeness” means that “the application has addressed all applicable sections of the prescribed application format, and that those sections are sufficient in comprehensiveness of data or in quality of information provided to allow the department to determine whether the application provides the reviewing agencies adequate information to prepare the reports required by s. 403.507 [agency reports].” § 403.503(10), Fla. Stat. (emphasis added). Thus, completeness questions must be limited to information needed by the agency to prepare its agency report. The proper subject of MDC’s agency report is MDC’s view of the Project’s “consistency . . . with all applicable local ordinances, regulations, standards, or criteria that apply to the proposed electrical power plant, including any applicable local environmental regulations.” § 403.507(2)(a)(3), Fla. Stat. (emphasis added). These constitute the “nonprocedural requirements” of MDC relevant in this certification proceeding. See § 403.503(21), Fla. Stat. Although the requirement to submit an exotic vegetation management plan is essentially procedural in nature, FPL has provided MDC with the information necessary to assess the Project’s consistency with the requirements of Condition 12 and thus the SCA should be determined complete.

As stated in previous completeness responses, FPL recognizes that the conditions of MDC’s Unusual Use Approval are independent of the Site Certification process. It is FPL’s intent to demonstrate compliance (or the ability to comply in the future) with Condition 12 through the certification process. MDC should be able to reach this conclusion when FPL has demonstrated that the Project meets all substantive requirements in the certification process.

5-MDC-D-11 (Fifth Round)

This item remains incomplete. Miami-Dade County acknowledges receipt of the tree survey requested under this comment; however, no tree survey was submitted for the proposed construction access road corridor segment along SW 328 Street between SW 137 Avenue and SW 117 Avenue. FPL must clarify whether a tree survey was conducted along this corridor and whether any non-exempt trees were observed, including on the banks of the North Canal. No tree survey was submitted for the proposed treated wastewater pipeline corridor. FPL must clarify whether a tree survey was conducted along this corridor and whether any non-exempt trees were observed along the proposed treated wastewater pipeline corridor.

Miami-Dade County notes that the required tree canopy mitigation plan has not yet been submitted. Until the required plan is submitted, this item remains incomplete.

RESPONSE:

A tree survey was conducted for the proposed construction access road segment between SW 328th Street between SW 137th Avenue and SW 117th Avenue and included with Response 4-MDC-D-11. No non-exempt trees were observed within this area, as it is dominated by the existing roadway, associated cleared right-of-way, wetlands, exotic species, and adjacent tree nurseries. Therefore, this particular area was not represented on the survey maps provided. The tree survey for the segment of the proposed treated reclaimed water pipeline is provided on the attached CD at *Attachments/5-MDC-D-11*.

Per MDC's request, FPL has identified a potential alternate location for the FPL reclaimed water treatment facility in an area northwest of the industrial wastewater treatment facility. If MDC and the other reviewing agencies prefer this alternative location for the reclaimed water treatment facility and that alternative location is selected during the ongoing permitting proceedings, the southern portion of the treated reclaimed water pipeline route within the Turkey Point plant property will be relocated. The pipeline route between the potentially relocated FPL reclaimed water treatment facility and the Site traverses areas of existing Plant access roadways; the tree survey of this area along with the access road segment on SW 328th St. was included on the CD submitted with the 4th Round Completeness Responses (at Attachments/4-MDC-D-11).

According to Section 24-49.4(2), MDC Code, "the Department shall determine the total number of replacement trees required for the issuance of a tree removal permit," based upon the existing canopy coverage and total impacts to non-exempt trees. Calculation of tree impacts will be finalized post-certification, following determination of final rights-of-way and engineering design of the linear facilities. Although FPL will not be obtaining a separate tree removal permit, if the impacts exceed the 10,000 sq ft threshold, FPL will then propose a landscape replacement plan in accordance with MDC Code Sections 24-49.4(3) and (4).

Through the information provided to date along with the additional information provided in this response, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

5-MDC-D-12 (Fifth Round)

Please see MDC's Fifth Round response to items MDC-A-26-2, MDC-D-1, MDC-D-9 and MDC-D-10, and MDC-D-21.

RESPONSE:

Please see Responses to 5-MDC-A-26-2, 5-MDC-D-1, 5-MDC-D-9, 5-MDC-D-10 and 5-MDC-D-21.

5-MDC-D-13 (Fifth Round)

Please see MDC's Fifth Round response to item MDC-D-1.

RESPONSE:

Please see Response 5-MDC-D-1 above.

5-MDC-D-14 (Fifth Round)

Please see MDC's Fifth Round response to items MDC-D-1, MDC-D-9, and MDC-D-12.

RESPONSE:

Please see Responses 5-MDC-D-1, 5-MDC-D-9 and 5-MDC-D-12 above.

5-MDC-D-15 (Fifth Round)

Please see MDC's Fifth Round response to item MDC-A-24.

RESPONSE:

Please see Response 5-MDC-A-24 above.

5-MDC-D-16 (Fifth Round)

Please see MDC's Fifth Round response on items MDC-D-1, MDC-D-9, MDC-D-12, MDC-D-14, and MDC-D-15.

RESPONSE:

Please see Responses 5-MDC-D-1, 5-MDC-D-9, 5-MDC-D-12, 5-MDC-D-14, and 5-MDC-D-15 (5-MDC-A-24) above.

5-MDC-D-20 (Fifth Round)

Please see MDC's Fifth Round response to items MDC-A-23 and MDC-A-26-2.

RESPONSE:

Please see Responses 5-MDC-A-23 and 5-MDC-A-26-2 above.

5-MDC-D-21 (Fifth Round)

This item remains incomplete as requested information has not been submitted. References utilized by FPL as supporting documentation must be provided and submitted through the SCA process to make these data available to all agencies involved in the review process.

FPL states in its response that "Wildlife crossings are typically developed using mortality data and travel corridors of known species." Miami-Dade County concurs with this statement and acknowledges FPL's provision of information regarding wildlife underpasses to accommodate travel corridors for the American crocodile that have been documented east of L-31 E; however, FPL has not provided the requested wildlife surveys that would identify what species, including state or federal threatened and endangered species, are currently utilizing the remainder of the proposed corridor for the temporary construction access roads and where wildlife corridors coincide with or cross the proposed corridor.

FPL states in its response that "FPL will install one six foot high by 24 feet wide box culvert, or similar type of culvert, for wildlife crossing between SW 137th Avenue and SW 117th Avenue". FPL must provide details on how it has selected or will select the location for this box culvert, how it was determined that one box culvert will be sufficient, and what means will be used to direct wildlife to this crossing, especially during the wet season when the bottom of the box culvert would likely be flooded and would be less attractive than the road edge to upland oriented wildlife such as deer.

FPL states in its response that "The new 20-inch arch culverts placed along the length of the road will provide crossing opportunities for a range of species, from small reptiles and amphibians (e.g. snakes, turtles, frogs), to larger reptiles (e.g. alligators) and medium-sized mammals (e.g. raccoons)". FPL must provide details on what means will be used to discourage cold-blooded wildlife such as snakes and reptiles from basking on the roads and using the roads as a wildlife crossing. FPL must provide details on what means will be used to exclude medium-sized mammals from the roads and direct them to the culvert crossings during the wet season when the bottoms of the culverts would likely be flooded.

FPL must advise whether it will install wildlife protection features other than signage on the portions of the access road that are located south of SW 344 Street and within public rights of way. If so, FPL must describe what features will be installed, indicate where these features will be installed, and describe how the location for these features was determined.

FPL states in its response that "FPL can verify the assertion that there will be no adverse impact to Eastern indigo snakes after the proposed access roads have been constructed and are operational through documentation of avoidance of mortality." Please provide details of how FPL will document mortality, or avoidance thereof, for Eastern indigo snakes and other wildlife species. Please include location(s) and frequency of surveys, along with how the surveys will account for and correct for scavenger activity in the vicinity. Miami-Dade County reiterates that information on wildlife occurrence and utilization, and especially for state or federally threatened or endangered species, is required in advance of the certification decision in order to evaluate consistency with provisions of the Miami-Dade County Code that require avoidance and minimization of impacts. Please provide the requested information.

Miami-Dade County has continued to request information on wildlife occurrence and utilization, including identification of all state and federal threatened and endangered species and their utilization patterns, including whether the proposed temporary construction access roads are coincident with or cross wildlife corridors. This information is needed in advance of the certification decision in order to determine whether the proposed project is consistent with the requirements of Miami-Dade County Code (including requirements to avoid and minimize environmental impacts), zoning regulations, including Resolution Z-56-07, and the CDMP (including provisions for protection of habitat for threatened and endangered species), in order to prepare the reports required by section 403.507 F.S. Please provide the requested information.

RESPONSE:

With respect to the impacts of the proposed temporary plant construction access roads on wildlife, FPL has previously provided the following information to MDC:

- SCA (June 2009) Sections 3.3.6, 5.4.1.4, 5.4.2, 6.1.2, 6.1.4, 6.8, R 9.3.7.3 and R 9.4.4. SCA Appendix 10.7.1.3;
- Responses to Completeness comments:
 - 1st Round Completeness Responses (October 2009): MDC-D-19, MDC-D-22, SFWMD-F-137;

2nd Round Completeness Responses (April 2010): 2-MDC-D-20, 2-MDC-D-22, 2-MDC-D-27;

3rd Round Completeness Responses (July 2010): 3-MDC-D-20, 3-MDC-D-22, 3-MDC-D-23;

4th Round Completeness Responses (February 2011): 4-MDC-D-22, 4-MDC-D-23.

FPL provided the location of references used as supporting documentation in Responses 3-MDC-D-21 (July 2010) and 4-MDC-D-21 (February 2011). FPL has acknowledged the potential presence of all listed species whose habitat preferences include the habitats contained with the proposed temporary construction access roadways. As stated previously, the evaluation of the potential utilization of the Site and associated facilities by threatened and endangered species is based upon presence of suitable habitat, field surveys, agency consultation, and data from USFWS, FWC, and FNAI. For a project with a construction date several years in the future, assuming that a given listed species may be present within an area of suitable habitat and proceeding with commitments to avoid, minimize, and mitigate impacts to the greatest extent practicable is an appropriate, conservative assessment methodology. FPL is enacting this approach through incorporation of wildlife protection features, including fencing, culverts, underpasses, speed limits, and training of all contractors, into the temporary construction access roadway design and future use.

Wildlife corridors are typically natural linear features that connect areas of significant habitat that are separated or surrounded by human development. Such conditions do not occur within the proposed temporary construction access roadways. The habitats that occur both north and south of the existing transmission patrol road are similar, although the prevalence of exotic vegetation increases northward towards SW 344th Street. The presence of upland limerock roadways and ditches provide linear features which may be utilized as preferred travel paths, while areas of forested wetlands may provide additional cover for wildlife movements. FPL has proposed locating the 6-ft box culvert wildlife underpass in an area of mixed wetland hardwoods that extend across both sides of the existing patrol road, based on the increased cover provided by the tree canopy compared to the adjacent relatively open sawgrass marsh landscape, and near a north-south upland limerock roadway that leads to a relatively large excavated ditch (see Figure 5-MDC-D-21).

Wildlife will be directed to the 20-inch arch culverts and 6-foot box culvert through the installation of wildlife fencing along the perimeter of the temporary construction access roadway on SW 359th St. The proposed 8-foot high fencing will be designed to prevent wildlife access to the roadway, with a fine mesh along the bottom 3-feet to discourage small herpetofauna or mammals from passing through. Based on the nature of the habitat currently available within the temporary construction access roadway area, the presence of water within the culverts during the rainy season is not anticipated to deter wildlife utilization, as wildlife in the area are accustomed to wetland hydrology.

In accordance with guidance received from the USFWS and MDC during meetings conducted in September, October, and December 2010, the north-south temporary construction access roadways on SW 137th Avenue and SW 117th Avenue will not include wildlife fencing. However, as is the case with SW 359th Street, speed limits will be enforced, signage will be posted, all contractors will receive wildlife training, and the appropriate number and sized culverts will be installed to maintain hydrology, which may also allow wildlife access underneath the roadways.

As to the documentation of wildlife mortality, all construction personnel will receive mandatory wildlife training to include identification of protected species potentially occurring within the construction areas/access roads and notice to stop work and notify FPL environmental managers if protected species are observed within the work area. In addition, contractors will be required to report any wildlife mortality observed on the temporary construction access roadways to FPL environmental managers. The

incidence of mammalian scavengers is unlikely, due to the wildlife fencing previously described, while avian scavengers are likely to be discouraged from attempting to access the roadways due to existence of truck traffic.

Through the information provided to date along with the additional information provided in this response, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

5-MDC-D-22 (Fifth Round)

This item remains incomplete and information previously requested must be provided to enable the County to determine whether the proposed project meets the requirements of Miami-Dade County Code, zoning regulations, including Resolution Z-56-07, and the CDMP, in order to prepare the reports required by section 403.507 F.S. Miami-Dade County acknowledges FPL's statement relating to coordination with Miami-Dade County and USFWS to address management and preservation of listed species and their critical habitats, and that FPL will provide a revised listed threatened or endangered species management plan. However, this item will be considered incomplete until the required plan has been submitted and is considered sufficient.

Please also see MDC's response to items MDC-A-23, MDC-A-26-2, MDC-D-1(a), MDC-D-1(b), MDC-D-9, MDC-D-12, MDC-D-13, MDC-D-21, and MDC-D-23 Fifth Round.

RESPONSE:

With respect to Conditions 2 and 11 of the unusual use approval granted under Resolution No. Z-56-07 ("Unusual Use Approval"), FPL has previously provided the following information to MDC:

- SCA (June 2009) Sections 3.3.6, 5.4.1.4, 5.4.2, 6.1.2, 6.1.4, 6.8, R 9.3.7.3 and R 9.4.4. SCA Appendix 10.7.1.3.
- Responses to Completeness comments:
 - 1st Round Completeness Responses (October 2009): MDC-D-19, MDC-D-22, SFWMD-F-137;
 - 2nd Round Completeness Responses (April 2010): 2-MDC-D-20, 2-MDC-D-22, 2-MDC-D-27;
 - 3rd Round Completeness Responses (July 2010): 3-MDC-D-20, 3-MDC-D-22, 3-MDC-D-23;
and
 - 4th Round Completeness Responses (February 2011): 4-MDC-D-22, 4-MDC-D-23.

The requested wildlife protection features are contained in the refined Turkey Point Threatened and Endangered Species Evaluation and Management Plan (SCA Appendix 10.7.1.3, Rev. 2, July 2011) provided on the attached CD at *Attachments\5-MDC-A-23*. The Plan was refined in accordance with Conditions 2 and 11 of Resolution Z-56-07 to include additional information presented in Completeness Responses and to further describe pre-clearing surveys and conservation and monitoring plans for specific species based upon consultation with MDC, USFWS, and FWC. Please also see 5-MDC-D-21 above.

The information referenced above provides MDC adequate information to prepare its agency report regarding Conditions 2 and 11. Under the PPSA, “completeness” means that “the application has addressed all applicable sections of the prescribed application format, and that those sections are sufficient in comprehensiveness of data or in quality of information provided to allow the department to determine whether the application provides the reviewing agencies adequate information to prepare the reports required by s. 403.507 [agency reports].” § 403.503(10), Fla. Stat. (emphasis added). Thus, completeness questions must be limited to information needed by the agency to prepare its agency report.

The proper subject of MDC’s agency report is MDC’s view of the Project’s “consistency . . . with all applicable local ordinances, regulations, standards, or criteria that apply to the proposed electrical power plant, including any applicable local environmental regulations.” § 403.507(2)(a)(3), Fla. Stat. (emphasis added). These constitute the “nonprocedural requirements” of MDC relevant in this certification proceeding. See § 403.503(21), Fla. Stat. Although the requirement to submit a Threatened and Endangered Species Management Plan is essentially procedural in nature, FPL has provided MDC with the information necessary to assess the Project’s consistency with the requirements of Conditions 2 and 11 and thus the SCA should be determined complete.

As stated in previous completeness responses, FPL recognizes that the conditions of MDC’s Unusual Use Approval are independent of the Site Certification process. It is FPL’s intent to demonstrate compliance (or the ability to comply in the future) with Condition 2 and 11 through the certification process. MDC should be able to reach this conclusion when FPL has demonstrated that the Project meets all substantive requirements in the certification process.

5-MDC-D-23 (Fifth Round)

Please see MDC's Fifth Round response to item MDC-D-22.

RESPONSE:

Please see Response 5-MDC-D-22 above.

5-MDC-D-24 (Fifth Round)

Please see MDC's Fifth Round response to item MDC-D-1(a).

RESPONSE:

Please see Response 5-MDC-D-1(a) above.

5-MDC-D-25 (Fifth Round)

Please see MDC's Fifth Round response to item MDC-D-1(a).

RESPONSE:

Please see Response 5-MDC-D-1(a) above.

5-MDC-D-26 (Fifth Round) .

Please see MDC's Fifth Round response to item MDC-D-1 (a).

RESPONSE:

Please see Response 5-MDC-D-1(a) above.

5-MDC-D-27 (Fifth Round)

This item remains incomplete. Figures R9.3.2-1 through R9.3.2-9, referenced in FPL's 4th round completeness do not provide any details about the drainage for the proposed access roads. The only drainage information provided in Figures R9.3.2-3 through R9.3.2-15 is limited to a brief note in the "Typical Section Notes" of the figures. Miami-Dade County acknowledges that more detailed plans and calculations will be available post certification and the County looks forward to working in cooperation with FPL to develop conditions of certification that will ensure that the final access road design will meet all applicable Miami-Dade County standards, including but not limited drainage standards. However, at this time the following minimal information is required:

Figure R9.3.2-3 (SW 359 St. from SW 137 Ave. to SW 117 Ave.)

- [a] Please provide a revised drawing indicating the width of the proposed swale on both sides of the road.
- [b] Please provide a drawing showing a typical plan view and cross section details of the culverts proposed to be installed for the purpose of maintaining sheet-flow across the proposed access road.
- [c] Please clarify why Figure R9.3.2-3 shows a 12-foot striped median and Figure R9.3.2-15 does not show this striped median. Will the segment of the SW 359 Street depicted on this figure include a 12-foot striped median or not? Please provide appropriately revised plans.
- [d] Please provide revised drawings showing the location of any proposed guard rail or fencing.
- [e] In an effort to reduce the impacts of the proposed access road and considering that portions of the proposed access road are proposed to be removed and restored in the future, did FPL review alternative road and drainage designs that reduce the width of the proposed access road? Please provide appropriately revised plans.
- [f] Please provide revised drawings showing the portions of the proposed access road proposed to be removed and restored in the future. Please make sure that these drawings include details of the drainage for the maintenance road that will remain.
- [g] Please explain if the proposed open system treatment by roadside swales is intended to be constructed to an elevation below the ground water table as depicted on the figure. If so, please describe how water quality pre-treatment will be met, since this open water feature would not be considered pre-treatment. Also, please describe if the ditch is intended to provide conveyance of water, and what reason or design capacity that conveyance is intended to be designed for.
- [h] The new proposed roadway will be about 2.6 feet higher than the existing roadway

which will result in higher hydrologic barrier along SW 359 Street. Provide drainage calculations to justify the adequacy of the proposed culvert size, and number of culverts to maintain the natural sheet flow to the wetland area south of SW 359 St. Additionally, in abnormally high water conditions the existing road would overtop, please include in the calculations how the proposed culverts will function in abnormally high water conditions to demonstrate that the road will not impound water for a greater amount of time than the existing condition.

Figure R9.3.2-4 (SW 359 St. from SW 117 Ave to Turkey Point Plant facility)

- [i] Please provide a revised drawing indicating the width of the proposed swale on both sides of the road.
- [j] Please clarify how the swales proposed to run west to east along the north and south sides of the proposed SW 359 street access road will affect sheet-flow across this access road.
- [k] Please clarify if the proposed swales will discharge to the L31 E Canal. Please provide drawings (plan and cross section views) showing the drainage details of the intersection of SW 359 street and the L31 E.
- [l] Please provide a drawing showing a typical plan view and cross section details of the culverts proposed to be installed for the purpose of maintaining sheet-flow across the proposed access road. The cross section should show the proposed 24"- 30" portable water main.
- [m] Please clarify why Figure R9.3.2-4 shows a 10-foot striped median and Figure R9.3.2-15 does not show this striped median. Will the segment of the SW 359 Street depicted on this figure include a 10-foot striped median or not? Please provide appropriately revised plans.
- [n] Please provide revised drawings showing the location of any proposed guard rail or fencing.
- [o] In an effort to reduce the impacts of the proposed access road and considering that portions of the proposed access road are proposed to be removed and restored in the future, did FPL review alternative road and drainage designs that reduce the width of the proposed access road?
- [p] Please provide revised drawings showing the portions of the proposed access road proposed to be removed and restored in the future. Please make sure that these drawings include details of the drainage for the maintenance road that will remain.
- [q] Please explain if the proposed open system treatment by roadside swales is intended to be constructed to an elevation below the ground water table as depicted on the figure. If so, please describe how water quality pre-treatment will be met, since this open water feature would not be considered pre-treatment. Also, please describe if the ditch is intended to provide conveyance of water, and what reason or design capacity that

conveyance is intended to be designed for.

- [r] The new proposed roadway will be about 2.6 feet higher than the existing roadway which will result in higher hydrologic barrier along SW 359 Street. Provide drainage calculations to justify the adequacy of the proposed culvert size, and number of culverts to maintain the natural sheet flow to the wetland area south of SW 359 St. Additionally, in abnormally high water conditions the existing road would overtop, please include in the calculations how the proposed culverts will function in abnormally high water conditions to demonstrate that the road will not impound water for a greater amount of time than the existing condition.

Figure R9.3.2-5 (SW 137 Ave. from SW 359 St. to SW 344 St.)

- [s] The existing ditch located on the west side of SW 137 Avenue is a part of the county's Water Control Plan for future improvement (PB 126 Pg 39). This ditch will need to be relocated, excavated, and the canal right-of-way dedicated to the county prior to filling this canal. A Class III permit will be required by virtue of prescriptive right to this canal.

- [t] Please clarify what is meant by the note "existing ditch (to be relocated if necessary) (see note 5)". Please provide revised drawings showing the location where the existing ditch is proposed to be relocated.

- [u] Per note No.4. "*Closed system treatment and attenuation will be provided by proposed exfiltration trench.*" Please provide a revised figure that shows the proposed exfiltration trench.

- [v] Please clarify why Figure R9.3.2-5 shows a 12-foot striped median and Figure R9.3.2-13 does not show this striped median. Will the segment of the SW 137 Avenue depicted on this figure include a 12-foot striped median or not? Please provide appropriately revised plans.

- [w] The figure shows potential or likely impacts to the road side ditch which is part of the county's Water Control Plan for future improvement and continuance of existing water management function, per county PB 126 Pg 39. Please describe how that function and potential need for the ditch in will be accommodated. Describe if it will be maintained within the existing ROW or if additional ROW will be acquired as part of this feature. Figure R9.3.2-6 (SW 117 Ave. from SW 359 St to SW 328 St.)

- [x] Please clarify if the existing ditch located on the west side of SW 117 Avenue is proposed to be filled as part of the access road work?

- [y] If it becomes necessary to fill one or both of the ditches on either side of SW 117 Avenue, how will FPL replace the drainage capacity provided by these existing ditches? The county currently owns a drainage easement west of the road right-of-way line (ORB 5103 Pg 488) and by virtue of prescriptive right, a Class III Permit will be required for the relocation or reconstruction of this drainage ditch.

- [z] Please clarify if culverts are proposed to be installed to under the proposed access road

for the segment of the proposed access road between SW 359 Street and SW 344 Street.

- [aa] Please clarify what is meant by the note "existing ditch (to be relocated if necessary)". Please provide revised drawings showing where the existing ditch is proposed to be relocated to.
- [bb] Per note No.5. "*Closed system treatment and attenuation will be provided by proposed exfiltration trench and overflow into existing ditch (pre vs. post drainage)*". Please provide a revised figure that shows the proposed exfiltration trench.
- [cc] Please clarify why Figure R9.3.2-5 shows a 10-foot striped median. Will the segment of the SW 117 Avenue depicted on this figure include an 11-foot striped median or not? Please provide appropriately revised plans.
- [dd] The existing ditch is a necessary part of the county's Water Control Plan and will be conditioned to be relocated and sized according to historic and future CERP plan. Please provide drainage cross-culverts along the improved roadway, with the culvert number and size design based on the natural groundwater flows to wetland areas.

RESPONSE:

With respect to roads and sheetflow, FPL has previously provided the following information to MDC:

- 1st Round Completeness Responses (October 2009): FDEP-I-D-6, MDC-D-1,
- 2nd Round Completeness Responses (April 2010): 2-MDC-D-13, 2-MDC-D-24, 2-MDC-D-26, 2-MDC-D-27,
- 3rd Round Completeness Responses (July 2010): 3-MDC-D-1a.

In addition, FPL is providing the following information:

[a] Figure R9.3.2-3 (Rev. 1) has been revised to reflect the width of the swales on both sides of the road. Additional Figures R9.3.2-3(a) through (d) also include the width of the swales.

[b] Figure R9.3.2-3 has been revised to reflect the details of the culverts proposed to be installed for the purpose of maintaining sheet-flow across the proposed access road. Additional Figures R9.3.2-3(a) through (d) also include details of the culverts.

[c] Only the section of SW 359th Street from SW 117th Avenue to Turkey Point will include a median. Pursuant to the FDOT Green Book, medians are required for four lane roads but not for roads with only three travel lanes. The median has been revised as shown on Figure R9.3.2-4(Rev. 1) and Figure R9.3.2-4(a) and will be 15.5 ft. wide.

[d] Wildlife fencing and guardrails, where appropriate, are shown on the revised figures.

[e] The temporary roadway improvements will be consistent with FDOT Green Book roadway design standards. The widths of the proposed access roads are determined mostly by the number of travel lanes necessary during construction of the facility, as well as safety considerations and required stormwater drainage and treatment swales. FPL has made some changes to the conceptual road design by deleting the medians on SW 359th Street from SW 137th Avenue to SW 117th Avenue. As shown on

revised Figure R9.3.2-4, SW 359th Street from SW 117th Avenue to Turkey Point will include a 15.5' median and curbs instead of shoulders to reduce the width of the roadway footprint. In addition the fill slopes have also been revised.

[f] The typical cross section drawing of a transmission roadway (Figure W9.3.4-1 of the SCA) is representative of the transmission patrol road to remain after construction of Units 6 & 7. The new arch culverts will remain in place but will be cut off to the appropriate length for the patrol road. The six foot box culvert will be removed and a new 28" x 20" arch culvert will be installed in its place. The wildlife fence will also be removed.

[g] The drainage system has been revised and is reflected on the enclosed figures. The drainage swales will be elevated above existing grade. The roadside swales are not intended to convey water but to retain and treat stormwater runoff.

[h] As shown on the revised figures, the elevation of SW 359th Street will be approximately 6.03 ft., except the areas immediately adjacent to and containing the 6 ft. box culvert. The elevation of the existing patrol road along SW 359th Street is approximately 3.5 feet (NAVD88) which is approximately 2 ft above the seasonal high water level. It is proposed that the existing culvert crossings under the existing SW 359th Street patrol road will be replaced, as part of the construction of the temporary SW 359th Street roadway, with new larger culverts that will be installed at the same locations of the approximately 60 existing culverts. The new culverts will be 20 inches tall by 28 inches wide providing approximately 80 percent more flow area than the existing culverts. Given that the existing culverts provide sufficient capacity for sheet flow so that the existing patrol road is not normally overtopped, the construction of the temporary roadway at a higher elevation will not cause water elevation changes north of SW 359th Street from the current conditions and will not impound water for a greater amount of time than the existing conditions.

[i] Figure R9.3.2-4 (Rev. 1) has been revised to reflect the width of the swales on both sides of the road. Additional Figures R9.3.2-4(a) also include the width of the swales.

[j] Surface water flow will not be affected by the swales. The installation of the proposed arch culverts will provide for the existing surface water flow as well as the additional one foot of water expected as a result of CERP projects in the area.

[k] The roadside swales will not discharge into L-31E Canal. The swales will terminate prior to the bridge crossing of the L-31E Canal.

[l] Figures R9.3.2-4 (Rev. 1) has been revised to show the proposed 28" x 20" arch culverts. The potable water main is also shown on this figure.

[m] Only the section of SW 359th Street from SW 117th Avenue to Turkey Point will include a median. Pursuant to the FDOT Green Book, medians are required for four lane roads but not for roads with only three travel lanes. The median has been revised as shown on Figure R9.3.2-4 (Rev.1) and will be 15.5 ft. wide.

[n] Wildlife fencing and guardrails, where appropriate, are shown on the revised figures.

[o] The temporary roadway improvements will be consistent with FDOT Green Book roadway design standards. The widths of the proposed access roads are determined mostly by the number of travel lanes necessary during construction of the facility, as well as safety considerations and required stormwater drainage and treatment swales. FPL has made some changes to the conceptual road design by deleting the medians on SW 359th Street from SW 137th Avenue to SW 117th Avenue. As shown on revised Figure R9.3.2-4, SW 359th Street from SW 117th Avenue to Turkey Point will include a 15.5'

median and curbs instead of shoulders to reduce the width of the roadway footprint. In addition the fill slopes have been also be revised to further reduce the width of the roads.

[p] The typical cross section drawing of a transmission roadway (Figure W9.3.4-1 of the SCA) is representative of the transmission patrol road to remain after construction of Units 6 & 7. The new arch culverts will remain in place but will be cut off to the appropriate length for the patrol road. The six foot box culvert will be removed and a new 28" x 20" arch culvert will be installed in its place. The wildlife fence will also be removed.

[q] The drainage system has been revised and is reflected on the enclosed figures. The drainage swales will be elevated above existing grade. The roadside swales are not intended to convey water but to retain and treat stormwater runoff.

[r] As shown on the revised figures, the elevation of SW 359th Street will be approximately 6.03 ft., except the areas immediately adjacent to and containing the 6 ft. box culvert. The elevation of the existing patrol road along SW 359th Street is approximately 3.5 feet (NAVD88) which is approximately 2 ft above the seasonal high water level. It is proposed that the existing culvert crossings under the existing SW 359th Street patrol road will be replaced, as part of the construction of the temporary SW 359th Street roadway, with new larger culverts that will be installed at the same locations of the approximately 60 existing culverts. The new culverts will be 20 inches tall by 28 inches wide providing approximately 80 percent more flow area than the existing culverts. Given that the existing culverts provide sufficient capacity for sheet flow so that the existing patrol road is not normally overtopped, the construction of the temporary roadway at a higher elevation will not cause water elevation changes north of SW 359th Street from the current conditions and will not impound water for a greater amount of time than the existing conditions.

[s]-[dd] FPL is certifying a corridor for these roadways and therefore, final design information will not be available until post-certification. In an effort to provide more detail regarding SW 359th Street drainage and wildlife protection, FPL revised Figures R9.3.2-3 and R9.3.2-4 and provides new Figures R9.3.2-3(a) through (d) and Figure R9.3.2-4(a). Post-certification, FPL roadway engineers will meet with MDC Public Works staff to determine the appropriate design for the temporary roadway improvements along SW 137th Avenue and SW 117th Avenue that will provide safe access to the site during construction while meeting appropriate MDC and FDOT temporary roadway standards. Revised figures of temporary roadway improvements on public roads, including potential ditch filling or relocation, will be provided post-certification. FPL will work with the agencies to develop an appropriate condition of certification for submittal of the final roadway designs.

Through the information provided to date along with the additional information provided in this response, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

5-MDC-D-29 (Fifth Round)

This item remains incomplete and information previously requested must be provided to enable the County to determine whether the proposed project meets the requirements of Miami-Dade County Code, zoning regulations, including Resolution Z-56-07, and the CDMP, in order to prepare the reports required by section 403.507 F.S. Information regarding the specific location of the proposed roadways and locations where additional rights-of-way must be acquired is needed in order for Miami-Dade County to evaluate the proposed project's conformance with local requirements.

Miami-Dade County acknowledges FPL's general description of where additional right-of-way may need to be acquired; however, the County requires clarification on this information. FPL states in its response "it appears that significant right-of-way exists along SW 328th Street to accommodate the roadway improvements with no impact to private landowners". Please confirm whether all easements have been taken into account, including canal easements that may need to be relocated, when stating that sufficient right-of-way exists along SW 328 Street to accommodate the proposed road.

FPL states in its response "Depending upon the final design width of the roads along SW 137th Avenue and SW 117th Avenue, some impacts to adjacent property owners outside of the right-of-way may be necessary. If additional property is needed outside of public rights-of-way, FPL will obtain the necessary property interests." Please confirm whether all easements have been taken into account, including canal easements that may need to be relocated, when considering the potential impact to adjacent property owners along SW 137th Avenue and SW 117th Avenue.

Miami-Dade County reiterates its request for information including identification of all adjacent property owners, including any lands owned by Miami-Dade County Environmentally Endangered Lands Program, from whom additional ROW may need to be acquired, along with the process by which this additional ROW would be acquired. Until such information is provided, this item remains incomplete.

RESPONSE:

With respect to the proposed construction access roadways, FPL has previously provided the locations of the proposed construction access roadways to the greatest extent possible. The proposed corridors have been identified in the SCA Chapter R9.0 (June 2009); additional detail has been provided in the *HDR Roads and Bridges Conceptual Design Report* submitted with 1st Round Completeness Response MDC-D-29 (October 2009). FPL is certifying corridors for the proposed construction access roadways. Specific layouts of the roads will be determined by the final design which will not be available until after final rights-of-way have been determined post-certification. Until the final rights-of-way have been determined, it is unclear if additional adjacent property owners will be impacted. All existing easements will be taken into account during the final design of the roadways. Upon final design, FPL will determine if any adjacent property owners will be affected by the temporary roadway improvements and will address those impacts as necessary. The process by which right-of-way will be acquired will follow FPL standard practice for linear facilities including bilateral negotiations with property owners and/or condemnation as necessary. FPL will work with MDC to develop Conditions of Certification requiring coordination with MDC on roads design prior to construction.

Through the information provided to date, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

SECTION G - MISCELLANEOUS

5-MDC-G-6 (Fifth Round)

Please see MDC's response Fifth Round to items MDC-A-23, MDC-A-26-2, MDC-D-1(a), MDC-D-21, and MDC-D-22.

RESPONSE:

Please see Responses 5-MDC-A-23, 5-MDC-A-26-2 , 5-MDC-D-1(a), 5-MDC-D-21 and 5-MDC-D-22 above.

5-MDC-G-10 (Fifth Round)

Please see MDC's Fifth Round response to item MDC-D-12.

RESPONSE:

Please see Response 5-MDC-D-12 above.

5-MDC-G-11 (Fifth Round)

Please see MDC's Fifth Round response to items MDC-G-6, MDC-D-1, MDC-D-9, MDC-D-12, MDC-D-14, and MDC-D-16.

RESPONSE:

Please see Responses 5-MDC-G-6, 5-MDC-D-1,5-MDC-D-9, 5-MDC-D-12, 5-MDC-D-14 and 5-MDC-D-16 above.

5-MDC-G-12 (Fifth Round)

This item remains incomplete until all information requested has been provided. Miami-Dade County acknowledges the continuing efforts to modify and refine the proposed mitigation plan. FPL must provide the complete and detailed mitigation plan for review. The County also acknowledges FPL's statement regarding the removal of the option of adding reclaimed water to the Model Lands Basin as a component of the project's mitigation plan so no additional information is needed on that aspect of the project. However information requested to determine whether a variance would be required for other activities such as dewatering in contaminated areas is needed and has not been submitted. For example, please provide requested information to determine whether all dewatering discharges will meet applicable water quality standards.

As stated in previous rounds of completeness comments, the proposed reclaimed water treatment facility will require an Unusual Use Zoning approval. Resolution Z -56-07 is to approve a, "nuclear power plant (atomic reactors) and ancillary structures and equipment". The Miami Dade County Code (Unusual Uses, Section 33-13(e) establishes that a water treatment plant is a land use that shall not be permitted in any district unless approved upon public hearing. All information necessary for an Unusual Use review for FPL's proposed reclaimed water treatment plant should be supplied to the County at this time, and approval of a wastewater reuse plant as an Unusual Use is necessary prior to certification. Further details on required information submittals were previously provided in third round completeness comments under item B-3. For construction of the proposed reclaimed water treatment facility, FPL must also provide all necessary information for Miami-Dade County to determine whether the proposed construction and location meet CDMP requirements for work in designated mangrove protection areas as well as Chapter 33 and Chapter 24 standards and requirements including but not limited to Class I dredge and fill criteria or whether variances will be required.

Miami-Dade County has previously advised FPL of the standards that apply in mangrove wetlands designated as MPAs. In addition to an evaluation of appropriateness under the CDMP, Chapter 24 also requires avoidance and minimization of impacts to these areas. MDC acknowledges FPL's identification of another potential site for the reclaimed water treatment facility, and requests all details and information on this potential site from past surveys and assessments including information on usage by crocodiles and any other listed species and provide copies of any covenants, conservation easements, or other documents that may relate to protection of any portion of this land as a result of past regulatory decisions.

Please clarify whether FPL is proposing this alternative site in lieu of the original location. In addition, in response to FPL's latest information regarding avoidance and minimization, please provide information sufficient for Miami-Dade County to determine whether all other potential options to avoid impacts to the high quality wetlands in this MPA can be ruled out including but not limited to employing more efficient use of space at existing and proposed facilities. For example, please identify how much acreage could be achieved at the existing and proposed facility sites if surface parking was changed to parking garages and these garages were collocated with buildings such as the administration building. Please explain if the site plan for the Unit 6 & 7 Site can be refined to accommodate the reclaimed water treatment facility within the boundaries of the island or the already developed adjacent areas. Please also see response MDC-B-2.

RESPONSE:

The refined Mitigation Plan (SCA Appendix 10.4, Section 2, Attachment E, Rev. 2, July 2011) is provided on the attached CD at *Attachments\5-MDC-A-25*.

As part of the initial Project design and layout, the location of the FPL reclaimed water treatment facility was determined based on a number of considerations including plant operations, land availability, construction feasibility, and potential environmental impacts. FPL has identified a potential alternative location for construction of the reclaimed water treatment facility in response to MDC's request. Please see response 5-MDC-B-2 for information regarding utilization of the potential alternative location by threatened and endangered species and lack of covenants or conservation easements over that location. If MDC and the other reviewing agencies prefer this alternative location for the reclaimed water treatment facility and that alternative location is selected during the ongoing permitting proceedings, then FPL would be willing to accept a condition of certification specifying the alternative location.

As to the potential for co-location of the FPL reclaimed water treatment facility with other existing and proposed facility sites, no such areas with sufficient acreage to construct the reclaimed water treatment facility exist. An approximately 32-acre area will be used for parking during construction and as the location for the nuclear administration and training buildings following construction. Utilizing parking garages would not provide an area of sufficient acreage (44 acres) to construct the reclaimed water treatment facility. Similarly, the Units 6 & 7 Site layout cannot be modified to generate sufficient acreage of land for construction of the reclaimed water treatment facility without impacting construction feasibility and plant operations.

In accordance with Coastal Management Element of the CDMP, Policy CM-1A, mangrove protection areas are defined as tidally connected mangroves and mangrove wetlands within the "Environmental Protection" designation on the Adopted Land Use Plan (LUP) Map for MDC. The originally proposed location of the FPL reclaimed water treatment facility is an area of sawgrass marsh with scattered dwarf

mangroves, which is not tidally connected to Biscayne Bay. Both the original and potential alternative locations are within the Environmental Protection designation on the LUP Map. While no upland alternative exists that can meet the needs of the Project, the potential alternative location for the reclaimed water treatment facility reduces mangrove and sawgrass wetland impacts within the Environmental Protection designation by approximately 10 acres through utilization of a previously disturbed area west of the original location that contains upland spoil piles dominated by exotic species.

FPL will continue to evaluate the design for the FPL reclaimed water treatment facility alternative location as it relates to existing vegetative community types, the construction access roadway corridor, and existing features to determine whether further reduction of impacts to wetlands and quality habitat is feasible.

With regard to the necessity for an unusual use approval for the FPL reclaimed water treatment facility (in either the original or the alternative location), FPL has indicated its opinion that the water treatment facility is an ancillary feature addressed in the zoning approval through the approval of the Conceptual Site Plan and that no additional zoning approvals are needed for this ancillary facility. The 3rd Round Completeness questions and this 5th Round question suggest that the reclaimed water treatment facility requires zoning approval, specifically, an Unusual Use approval by the BOCC, because a water treatment facility was not “approved at public hearing.” As indicated in FPL’s 3rd Round response, this feature is an ancillary facility that was authorized at the public hearing approving the Unusual Use in December, 2007 by Resolution Z-56-07.

Resolution Z-56-07 approved an unusual use for “a nuclear power plant (atomic reactors) and ancillary structures and equipment”. Electrical power generation is the primary use and the power plants are the principal buildings approved by Resolution Z-56-07. According to Resolution Z-56-07, ancillary structures and equipment are also allowed. Water treatment facilities, if used to polish water for use in the power plants, are clearly ancillary facilities to the principal use of generating electricity. Ancillary facilities do not need to be specifically enumerated to have been considered approved; it is sufficient that the facilities are ancillary to the primary use. However, in this case the approved Conceptual Site Plan (FPL Turkey Point Public Hearing Application Detailed Operating Facility Plan, July 2007) specifically identified “Utility/ waste stream/ storm systems”, among other ancillary facilities, as required “Support Facilities”. As such no additional zoning approvals should be required for this ancillary facility as it has already been approved at public hearing by Resolution Z-56-07.

With regard to the water quality of dewatering effluent, FPL has provided the following information to MDC:

- The SCA (June 2009) Sections 5.1., 5.2.1.2, 5.3.1, 5.3.2
- Responses to Completeness comments:
 - 1st Round Completeness Responses (October 2009): MDC-A-5, FDEP II-A-3, FDEP II-A-9, FDEP II-A-23, FDEP II-A-27, FDEP II-B-56, FDEP-VI-B-2, FDEP-VI-B-5, SFWMD-B-28, SFWMD-B-29, SFWMD-B-30, SFWMD-B-34, SFWMD-B-39, SFWMD-B-40, SFWMD-B-41, SFWMD-B-42, SFWMD-B-92, SFWMD-K-172, SFWMD-K-177;
 - 2nd Round Completeness Responses (April 2010): 2-SFWMD-B-34(27), 2-COM-B
 - 3rd Round Completeness Responses (July 2010): 3-SFWMD-B-34(27); and
 - 4th Round Completeness Responses (February 2011): 4-MDC-A-5, 4-SFWMD-B-34(27).

With regard to dewatering in contaminated areas, the exact reclaimed water pipeline right-of-way will be determined post-certification. Therefore, this subject cannot be addressed in detail at this time. If contamination along the pipeline route is identified during final design or discovered during construction, FPL will modify the construction procedures to avoid pumping contaminated water, or will treat the water to ensure that applicable water quality standards are met at the point of release.

Through the information provided to date along with the additional information provided in this response, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

5-MDC-G-13 (Fifth Round)

This item remains incomplete. FPL has not provided the requested information regarding seasonal differences in groundwater flow cited in Section 3.3.3.2 of the SCA and a determination of the extent to which these are due to current operations at Turkey Point.

RESPONSE:

With respect to seasonal difference in groundwater flow, FPL has previously provided the following information to MDC in 1st Round Response SFWMD-C-96 (October 2009):

SFWMD-C-96. This section (page 3-28) states that, during the dry season, the groundwater gradient is reversed to a westward direction due to withdrawals made by existing permitted users.

RESPONSE: SCA Section 3.3.3.2 states, "During the wet season, a seaward gradient exists and groundwater flow is southeasterly towards Biscayne Bay. This gradient tends to disappear during the dry season, where the groundwater levels are depressed below sea level, resulting in a reverse flow direction." The SCA Section 3.3.2.1 page 3-22 did state, in a discussion of the surficial aquifer system, that "... in response to the lowering of inland groundwater levels due to pumping for water supply, saltwater has migrated inland along the base of the aquifer and affects the entire coastal zone. Saltwater moves inland and upward in response to low groundwater levels and moves seaward and downward in response to high groundwater levels (Klein and Hull, 1978)." These were general statements based on available literature.

Reference

Klein, Howard and Hull, J.E., 1978. *Biscayne aquifer, southeast Florida: U.S. Geological Survey Water-Resources Investigations 78-107*, USGS.

Through the information provided to date, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

5-MDC-G-20 and 5-MDC-G-21 (Fifth Round)

Miami-Dade County acknowledges submittal of a portion of the information requested under the 4th Round of Completeness Review. However, this item remains incomplete and information previously requested must be provided to enable the County to determine whether the project

meets the requirements of Miami-Dade County Code, zoning regulations, including Resolution Z-56-07, and the CDMP, in order to prepare the reports required by Section 403.507 F.S. Table 1 (Project Impact Summary) remains incomplete as approximately 30% of the project impacts (as determined by FPL) do not have specific mitigation options identified for consideration by the County. The County reiterates that a complete wetlands mitigation plan must be submitted for review that details the specific mitigation proposed for the specific project impacts.

RESPONSE:

The refined Mitigation Plan (SCA Appendix 10.4, Section 2, Attachment E, Rev. 2) is included on the attached CD at *Attachments\5-MDC-A-25*. Specific mitigation elements proposed for specific Project impacts are identified below. In the case of the temporary construction access roadway improvements, approximately 70 percent of the mitigation will be generated at the proposed SW 320th Street Restoration Site, while the remaining 30 percent will be generated at the proposed NW Restoration Site. Although FPL proposes compensatory mitigation for all wetland impacts associated with the temporary construction access roadway improvements as if they are permanent, FPL intends to remove lanes required for temporary construction access following construction and restore the temporarily-impacted wetlands. Permanent access road facilities on SW 359th Avenue will be limited to an 18-ft transmission patrol road.

PROJECT FEATURE	PROPOSED MITIGATION ELEMENT
Site Nuclear Administration/Training Buildings and Parking Area FPL Reclaimed Water Treatment Facility East Preferred Transmission Line	Everglades Mitigation Bank
West Preferred Transmission Line	Hole in the Donut Mitigation Bank
Temporary Construction Access Roadway Improvements (70%)	SW 320 th Street Restoration Site
Temporary Construction Access Roadway Improvements (30%) Temporary Pipeline Impacts (mitigation for time lag)	NW Restoration Site

Through the information provided to date along with the additional information provided in this response, FPL has provided information adequate to assess the Project’s consistency with all of MDC’s nonprocedural requirements and thus the SCA should be determined complete.

5-MDC-G-23 (Fifth Round)

Please see MDC's Fifth Round response to items MDC-G-6, MDC-D-1, MDC-D-9, MDC-D-12, MDC-D-14, and MDC-D-16.

RESPONSE:

Please see Responses 5-MDC-G-6, 5-MDC-D-1, 5-MDC-D-9, 5-MDC-D-12, 5-MDC-D-14 and 5-MDC-D-16 above.

5-MDC-G-26 (Fifth Round)

Please see MDC's Fifth Round response to items MDC-D-1, MDC-D-9, MDC-D-12, MDC-D-13, MDC-D-21, and MDC-D-23.

RESPONSE:

Please see Responses 5-MDC-D-1, 5-MDC-D-9, 5-MDC-D-12, 5-MDC-D-13, 5-MDC-D-21 and 5-MDC-D-23 above.

5-MDC-G-27 (Fifth Round)

Please see MDC's Fifth Round response to item MDC-A-24 Fifth Round.

RESPONSE:

Please see Response 5-MDC-A-24 above.

5-MDC-G-28 (Fifth Round)

Please see MDC's Fifth Round response to item MDC-G-20.

RESPONSE:

Please see Response 5-MDC-G-20 above.

5-MDC-G-30 (Fifth Round)

Please see MDC's Fifth Round response to item MDC-G-7.

RESPONSE:

Please see Response 5-MDC-G-7 above.

5-MDC-G-31 (Fifth Round)

This item remains incomplete. The County acknowledges FPL's response regarding Hole-In-The-Donut (HID) mitigation ratios applicable to Federal review of the project. However, a complete mitigation plan including mitigation ratios consistent with State and local requirements is required for review of this project. As stated previously, the County will require mitigation based upon the requirements of the Miami-Dade County Code and applicable ordinances, and the ratios determined in the Basis of Review (BOR). Therefore, any mitigation proposal that includes credits from HID will be required to meet BOR ratios of 1.5:1 to 4:1 in addition to any minimum federal ratios. The County reiterates that a complete wetlands mitigation plan must be submitted for review that includes the aforementioned ratios for mitigation at HID.

RESPONSE:

With regard to HID mitigation ratios, FPL has previously provided the following information to MDC: MDC-G-31 (October 2009), 2-MDC-G-31(April 2010), 3-MDC-G-31 (July 2010), and 4-MDC-G-31 (February 2011). In addition, the refined Mitigation Plan (SCA Appendix 10.4, Section 2, Attachment E, Rev. 2) is provided on the attached CD at *Attachments\5-MDC-A-25*. The current HID permit conditions state that “mitigation for wetland impacts within the Mitigation Service Area will consist of a set dollar amount per acre of impact.” Although the HID was permitted prior to the Basis of Review (BOR) and Uniform Mitigation Assessment Method (UMAM), it is understood that BOR ratios for restoration range from 1.5:1 to 4:1. Based on June 2011 consultation with HID managers, the assessment methodology of the bank may be revised in the future to comply with the Uniform Mitigation Assessment Method (UMAM). Following completion of detailed transmission line design and prior to construction, FPL will comply with the assessment methodology of the HID, as approved by the FDEP and USACE, to determine the appropriate number of credits required to compensate for the impacts associated with construction of the proposed transmission facilities.

Chapter 62-345.100(6), F.A.C., and Section 373.414(18)(b), F.S. illustrate the State of Florida’s guidance for use of mitigation banks that predate the UMAM.

Through the information provided to date along with the additional information provided in this response, FPL has provided information adequate to assess the Project’s consistency with all of MDC’s nonprocedural requirements and thus the SCA should be determined complete.

5-MDC-G-32 (Fifth Round)

Miami-Dade County acknowledges the information provided by FPL and considers this item complete, however staff wishes to offer the following comment to improve future collaboration on similar issues: Information portrayed in Figure 4-MDC-G-32-1 indicates that there is a lack of consistency between Miami-Dade County's parcel layer, which was developed in cooperation with FPL during the early 1990's, and FPL's own sources of GIS information. Staff suggests that FPL and Miami-Dade County collaborate to determine the most accurate representation for the parcels located between Card Sound Road and the existing Turkey Point power plant complex so that FPL and Miami-Dade County, along with other government agencies, are using the best available location information in order to avoid misunderstandings.

RESPONSE:

Comment acknowledged.

5-MDC-G-35 (Fifth Round)

Please see MDC's Fifth Round response to items MDC-G-20, MDC-G-21, and MDC-D-15.

RESPONSE:

Please see Responses 5-MDC-G-20, 5-MDC-G-21 and 5-MDC-D-15 (5-MDC-A-24) above.

5-MDC-G-40 (Fifth Round)

Please see MDC's Fifth Round response to items MDC-A-26-1 and MDC-A-26-2.

RESPONSE:

Please see Responses 5-MDC-A-26-1 and 5-MDC-A-26-2 above.

5-MDC-G-41 (Fifth Round)

This item remains incomplete. Please provide the water quality data in support of FPL's claim that water from the CCS is not migrating to adjoining surface or groundwater in the vicinity of the CCS. Please also see MDC's Fifth Round response to items MDC-A-5, MDC-A-18, and Section C.

RESPONSE:

Water quality data are not necessary to support the conclusion that the water from the cooling canal system will not migrate to adjoining surface water as a result of the Project based on the following facts: 1) the cooling canal system has no point source release to the adjoining surface waters; 2) water flowing from the cooling canal system through the aquifer is more dense than the groundwater surrounding the cooling canal system, even after accounting for temperature differences; and 3) the radial collector well laterals will be located approximately 25 to 40 ft below the bay bottom. Therefore, buoyant forces will cause groundwater beneath the cooling canals to move down toward the bottom of the aquifer. There is no hydraulic mechanism to cause upward movement to surface waters.

Groundwater quality in the vicinity of the cooling canal system has been addressed in FPL's prior responses to MDC-G-41. Groundwater quality data from several monitor wells and one surface monitoring station in Biscayne Bay, on the east side of the cooling canal system, were provided in the APT report (HDR, August 2009). Groundwater quality data from four monitoring wells and from the interceptor ditch on the west side of the cooling canal system were provided to Miami-Dade County DERM in the *Final Report on Florida Power & Light Company Turkey Point New Nuclear Project Cooling Canal Data and Analysis Report for the Turkey Point Site* (February 19, 2008) and *Florida Power & Light Turkey Point Nuclear Facility Temporary Sampling Program Summary Report* (September, 2009). Additional data are included in the *2009 Annual Report: Groundwater Monitoring Program* (September 18, 2009) provided on the attached CD at *Attachments/5-MDC-G-41*.

Through the information provided to date, FPL has provided information adequate to assess the Project's consistency with all of MDC's nonprocedural requirements and thus the SCA should be determined complete.

5-MDC-G-42 (Fifth Round)

Please refer to MDC's Fifth Round response to completeness items MDC-A-26-1.

RESPONSE:

Please see Response 5-MDC-A-26-1 above.

5-MDC-G-44 (Fifth Round)

Please see MDC's Fifth Round response to items MDC-A-26-1 and MDC-A-26-2.

RESPONSE:

Please see Responses 5-MDC-A-26-1 and 5-MDC-A-26-2 above.

5-MDC-G-45 (Fifth Round)

Please see MDC's Fifth Round response to item MDC-A-26-2.

RESPONSE:

Please see Response 5-MDC-A-26-2 above.

5-MDC-G-46 and MDC-G-47 (Fifth Round)

Please refer to MDC's Fifth Round response to completeness items MDC-A-26-1.

RESPONSE:

Please see Response 5-MDC-A-26-1 above.