

Florida Power & Light Company Turkey Point Units 6 & 7 COL Application

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Part 6 of the COL Application consists of the following documents:

- Site Redress Plan
- Applicant's Environmental Report Limited Work Authorization Stage

### Turkey Point Units 6 & 7 COL Application

### Part 6 — Limited Work Authorization and Site Redress Plan

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#### SITE REDRESS PLAN

### 1.0 INTRODUCTION

Limited Work Authorization (LWA) allows applicants to request approval to perform certain limited construction activities before the issuance of a combined license (COL). An applicant for an LWA must submit a plan for redress of activities (Site Redress Plan or SRP) performed under the LWA. The SRP would address activities performed under the LWA, should limited work activities be terminated by the holder, or the LWA be revoked by the NRC, or upon final denial of the COL Application.

As used in this section, "construction" means the activities of 10 CFR 50.10 (a)(1), and does not include the activities in 10 CFR 50.10 (a)(2). Therefore, the SRP does not apply to preconstruction activities allowed under 10 CFR 50.10 (a)(2).

### 1.1 SITE DESCRIPTION

Units 6 & 7 plant area is part of the Turkey Point plant property located in unincorporated Miami-Dade County, Florida. The approximately 11,000-acre Turkey Point plant property comprises two oil/gas-fired (Units 1 and 2), one gas-fired combined-cycle (Unit 5), and (with the addition of Units 6 & 7) four nuclear powered (Units 3, 4, 6 & 7) steam electric generating units. Figure 1.1-1 presents a general layout of Units 6 & 7 when constructed.

The Turkey Point plant property is approximately 25 miles south of Miami, 8 miles east of Florida City, and 9 miles southeast of the City of Homestead, Florida. The plant area is approximately 2 miles south of the Biscayne National Park Visitors Center. It is within 5 miles and 1.5 miles of the South Florida Water Management District conservation area (Model Lands Basin) and the L-31E canal, respectively. It is within 1 mile of Miami-Dade County's Biscayne Bay Aquatic Preserve and Homestead Bayfront Park. In addition, it is adjacent to the 13,000-acre Everglades Mitigation Bank, owned by FPL. Detailed descriptions of current land use, demography, and the physical characteristics at and around the site are presented in the Environmental Report (ER) Chapter 2.

### 1.2 SITE OWNERSHIP

As described in Part 10, a proposed license condition on exclusion area control will assure that FPL has necessary authority, control, and rights related to construction of Units 6 & 7 prior to initiation of construction activities at the site.

### 1.3 LIMITED WORK AUTHORIZATION ACTIVITIES

FPL intends to undertake the following activities:

- Install a permanent reinforced concrete diaphragm wall to facilitate excavation for the nuclear island
- Prepare nuclear island foundation surface preparation with dental concrete (as necessary)
- Place lean concrete under the nuclear island
- Install waterproofing on top of lean concrete under the nuclear island
- Install mud mat over waterproofing membrane for the nuclear island
- Install the foundation, including concrete placement forms, rebar, embeds, and concrete for the:
  - Nuclear island
  - Turbine building
  - Annex building
  - Radwaste building
- Subsurface preparation, placement of backfill, concrete, or permanent retaining walls within the excavation, and installation of the foundation concrete of the training building that includes the onsite emergency facility, technical support center (TSC)

### 2.0 SITE REDRESS PLAN

Activities described in this SRP would be implemented if LWA activities that have been performed as authorized by the LWA are terminated, the LWA is revoked by the NRC, or the final decision of the NRC is to deny the COL Application. Additionally, the SRP addresses the effects associated with existing redress and decommissioning plans, and FPL's financial responsibility regarding redress.

#### 2.1 SITE REDRESS PLAN OBJECTIVES

The overall objective of this SRP is to reconfigure and redress the site to provide an environmentally stable and aesthetically acceptable site that can be left unattended post-redress.

In planning for site redress, the following two general categories of conceptual options will be considered:

- Topographic approaches that accomplish the objective and preserve the potential of the site for future industrial use
- Completion or addition of site development features that enhance the value of the site for future industrial use

Redress activities will begin (in concert with the federal, state, or local land use authority and industrial development authorities) either at the time that the activities authorized by the LWA are carried out but are terminated by FPL, the LWA is revoked by the NRC, or the final decision of the NRC is to deny the COL Application. A detailed redress scope and schedule that is consistent with this SRP would be implemented in accordance with 10 CFR 52.91. The schedule would include a period of time for preparation to secure additional input from regulators and local municipalities. The redress activities would comply with applicable local, state, and federal environmental requirements. If, before redress activities begin, industrial or other acceptable uses for the site are identified and committed to and that are consistent with its development redress would be performed in a manner that accommodates and is consistent with such alternative use. The site would be redressed to the specifications of the future use in accordance with applicable regulations.

Before and during redress activities, environmental control of local water quality, air quality, storm water runoff, solid waste, and the protection of critical ecological elements, if any, would be maintained in compliance with approved permits and regulatory requirements.

Site redress activities described in this SRP are specific to the effect of planned LWA activities. Redress activities will reflect specific land use and zoning requirements of local municipal, county, and state jurisdictions, in addition to applicable federal requirements and industry standards.

Redress activities may account for both preexisting site conditions and a range of potential future use scenarios, including the following:

- Future site ownership and use
- Use of constructed facilities for alternative purposes, or their removal
- Potential liabilities associated with any facility or structure that is to remain following the completion of redress activities
- Potential environmental contamination that either predates, or is a result of, FPL's actions

### 2.2 SITE REDRESS PLAN CRITERIA

Regulatory requirements for redress are contained in 10 CFR Part 50. Once the Units 6 & 7 LWA is granted, FPL may perform none, some, or all of the construction activities listed in SRP Section 1.3. Redress carried out under this plan will achieve an environmentally stable and aesthetically acceptable site suitable for whatever nonnuclear use conforms to state and local zoning laws. If the activities permitted by 10 CFR 50.10(a)(1) are performed at the Turkey Point site, and the Turkey Point COL Application is not granted or not exercised, the site would be redressed in accordance with this SRP. If, before redress is complete, a use not envisioned in the SRP is found for the site or parts thereof, the SRP would be followed to the greatest extent practical consistent with the identified alternative use.

#### 2.3 DESCRIPTION OF SITE REDRESS PLAN

FPL's method of redress for LWA structures will comply with federal, state, and local requirements and regulations. Before initiating site redress activities, FPL would discuss with appropriate federal, state, and local agencies the specific redress activities and requirements, which may include a determination of the acceptability of burial of the LWA structures in place.

Any necessary remediation would be in compliance with applicable laws and regulations. Backfill placement for site redress would be in accordance with standard industry construction practices.

Final site redress would include regrading the area to mitigate erosion from storm water runoff. The disturbed area would be revegetated as necessary to ensure stabilization and an aesthetically pleasing landscape. FPL would provide all required notifications to the appropriate federal, state, and local agencies.

### 2.4 CONTROLS TO MITIGATE IMPACTS DURING REDRESS ACTIVITIES

The physical effects of redress activities will be controlled to mitigate impacts. Controls to mitigate these impacts are outlined in the following subsections.

#### 2.4.1 NOISE CONTROLS

Noise will occur during redress activities, such as with clearing and grading, or during the removal of installed structures. As a result, both onsite and offsite background noise levels will increase in the short term. Mitigation measures will be implemented to manage the increased ambient noise. Noise could temporarily disturb nearby residents, workers at nearby facilities, and some individuals participating in recreational activities near the site. Noise caused by site redress activities will not be sustained for prolonged periods of time. In addition, it will vary based on the specific activities and their locations.

During site redress, equipment used for clearing, excavating, trash disposal, and landfilling operations will generate noise. Trucks and other heavy equipment are furnished with noise-control devices that will reduce offsite noise effects, keeping such noises below acceptable levels.

As a result, there could be small adverse noise effects on the residences nearest the Turkey Point site by trucks driving to and from the site. However, these effects would be temporary because most of the site redress activities would occur during daytime workweek hours. Such activities should not affect nearby residents or recreational activities, even though the site redress schedule could, at times, span 24-hour days, up to 7 days per week.

Overall, site redress noise is expected to result in temporary, small noise effects on surrounding residential communities and sensitive receptors, such as schools and nearby recreation areas. Because noise-related effects are anticipated to be short term, they will only result in temporary adverse effects. No long-term direct or indirect cumulative effects from site redress noise are anticipated.

#### 2.4.2 TRAFFIC CONTROLS

The roads and highways near the Turkey Point site will experience an increase in use during redress activities, especially at the beginning and end of the workday. It is expected that the personnel involved in redress activities will be living in areas dispersed nearly uniformly in all directions from the site, and will travel relatively uniformly in all directions to access the site. Thus, no significant traffic congestion problems are expected as a result of redress activities.

During redress activities, onsite and offsite traffic control will adhere to applicable local, state, and federal requirements.

#### 2.4.3 EROSION AND SEDIMENT CONTROLS

Site grading and drainage during site redress activities would be designed to mitigate erosion and comply with a comprehensive erosion and sedimentation control plan and a storm water pollution prevention plan.

Several different structural controls may be used to maintain the quality of the storm water running off the site. The final location of these controls would be based on site conditions just before site redress activities begin.

### 2.4.4 AIR QUALITY CONTROLS

Air emissions may occur during site redress activities. Potential sources of air emissions during site redress may include the following:

- Fugitive dust from exposed ground or site redress activities
- Exhaust from personal vehicles and heavy equipment

During site redress activities at the Turkey Point site, the following controls will be implemented to mitigate potential air emissions from site redress sources.

- A dust control plan will be implemented
- Maintenance of construction vehicles will be performed to maximize efficiency and minimize emissions

Fugitive dust and air emissions from site redress activities and equipment are expected to be minimal and would be mitigated by implementing the controls described above.

### 2.4.5 VISUAL AESTHETIC CONTROLS

Visual aesthetic mitigation measures for site redress activities may include the following:

- Restricting laydown areas to minimize disturbance and visual intrusion
- Removing debris in a timely manner

Overall, some temporary visual aesthetic disturbance would occur as a result of site redress activities. These effects will be temporary, and no long-term indirect or cumulative effects on visual aesthetics are expected.

#### 2.4.6 POTENTIAL POLLUTANT SOURCE CONTROLS

Site redress activities may result in many potential pollutant sources, including fuels, effluents, wastes, spills, and materials handling and storage. Consistent with appropriate federal, state, and local agencies, specific measures would be implemented to control discharges of pollutant sources during redress activities.

### 2.4.6.1 Vehicle Fueling

Fueling areas and above ground storage tanks will be managed to prevent inadvertent spills.

### 2.4.6.2 Truck Washout Areas

Where truck washout areas are necessary, they will be located on site. Typically, these areas will be located within an impoundment where the water is contained. Wash water will be managed in accordance with appropriate federal, state, and local requirements.

### 2.4.6.3 Loading and Unloading Areas

Areas with the potential for spills that could become pollution sources may be designated for loading and unloading. Soils or other materials spilled during loading and unloading (outside of designated areas) will be cleaned up promptly, including soils on the outside of the trucks (e.g., the side rails) and on the ground or road surface.

### 2.4.6.4 Vehicle and Equipment Maintenance

Vehicle and equipment maintenance activities, such as lubrication or equipment repair that could result in oil or grease spills, will be performed in an enclosed building, if practical, in an area designated for this purpose. Spills will be cleaned up promptly. Precautions will be taken to prevent the release of pollutants to the environment from vehicle maintenance. Precautions include the use of drip pans, mats, and other similar methods. Oil-contaminated materials will be stored in metal containers and disposed of offsite in accordance with state and local regulations. Spill kits will be maintained for prompt cleanup of oil spills.

### 2.4.6.5 Material Handling/Storage

The Turkey Point site will have an approved storm water pollution prevention plan that has a section which addresses material handling/storage at the site during redress activities and will be followed.

### 2.4.6.6 Stockpile Management

In general, stockpiles for redress activities will be managed in accordance with applicable erosion and sediment control policies.

### 2.4.6.7 Spill Prevention

Fuel and waste tanks located on soil will be bermed with a perimeter dike of impervious material lining the berm and the bottom of the bermed area, or will be placed inside an open tank capable of containing 110 percent of the maximum capacity of the tank in case of rupture.

Fuel and waste tanks located on concrete or steel foundations will be bermed with appropriate materials suitable for each application. These materials will allow for the containment of 110 percent of the maximum capacity of the tank in case of rupture.

For redress activities requiring fuel or waste tanks, a sufficient number of spill kits will be made available to contain minor spills and leaks.

### 2.4.6.8 Spill Mitigation

Fueling operations and vehicle maintenance will be performed at designated facilities.

Spill sumps will be constructed adjacent to fuel and oil tanks. Drip pans will be placed underneath oil barrels to contain fluids that are used during redress activities. Toxic or hazardous materials spills will be reported promptly to an onsite authority or designee.

### 2.4.7 FUTURE SITE OWNERSHIP AND USE

In the event that FPL does not fully develop the Units 6 & 7 site to provide new nuclear power generation, future ownership and use of the site might include other electrical generation plants. If ownership of the site is transferred, FPL would have no further liability with regard to site redress.

### 2.5 IMPACTS ON EXISTING REDRESS AND DECOMMISSIONING PLANS

Redress of the Units 6 & 7 site would not impact any existing redress or decommissioning plans for the existing units. It is FPL's responsibility to redress the Units 6 & 7 site consistent with this SRP.

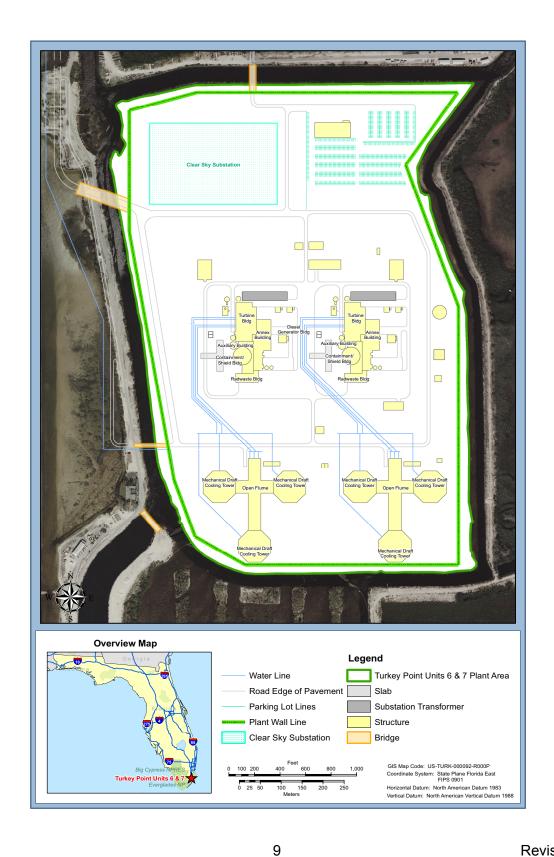
#### 2.6 FINANCIAL RESPONSIBILITY

FPL is responsible for providing the funding to redress the site in the event that activities authorized by the LWA are carried out but are terminated by FPL, the LWA is revoked by the NRC, or the final decision of the NRC is to deny the COL Application.

#### 2.7 NRC NOTIFICATION UPON COMPLETION

FPL will notify the NRC upon completion of activities addressed in this SRP. The site will be made available for inspection. Documentation that the NRC may require will be provided to confirm the satisfactory completion of the redress activities.

Figure 1.1-1 Conceptual Layout



### Turkey Point Units 6 & 7 COL Application

### Part 6 — Limited Work Authorization and Site Redress Plan

### APPLICANT'S ENVIRONMENTAL REPORT — LIMITED WORK AUTHORIZATION STAGE TABLE OF CONTENTS

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1.0-1 Summary of the Units 6 & 7 ER and its Relationship to Proposed LWA

Activities

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### APPLICANT'S ENVIRONMENTAL REPORT — LIMITED WORK AUTHORIZATION STAGE

### 1.0 INTRODUCTION TO THE ENVIRONMENTAL REPORT

FPL has prepared this environmental report (ER) for the proposed Units 6 & 7 to address the requirements of 10 CFR 51.49 that specifies the requirement for an ER that describes the activities and the environmental impacts associated with LWA activities.

The LWA ER complements the ER that has been prepared and submitted as Part 3 of the COL Application for Units 6 & 7 (referred to herein as the Units 6 & 7 ER). The Units 6 & 7 ER describes the reasonably foreseeable environmental impacts resulting from the proposed action as defined therein, including its cumulative impacts as well as possible mitigation of those impacts. The impacts attributable to LWA activities are a bounded subset of impacts described in the Units 6 & 7 ER. This LWA ER has been prepared to incorporate the contents of the Units 6 & 7 ER by reference. Table 1.0-1 summarizes the chapters of the Units 6 & 7 ER and indicates which of those chapters contain information that is relevant to the proposed LWA activities.

#### 2.0 DESCRIPTION OF PROPOSED LWA ACTIVITIES

The following LWA activities are being proposed:

- Install a permanent reinforced concrete diaphragm wall to facilitate excavation for the nuclear island
- Prepare nuclear island foundation surface preparation with dental concrete (as necessary)
- Place lean concrete under the nuclear island
- Install waterproofing on top of lean concrete under the nuclear island
- Install mud mat over waterproofing membrane for the nuclear island
- Install the foundation, including concrete placement forms, rebar, embeds, and concrete for the:
  - Nuclear island
  - Turbine building
  - Annex building
  - Radwaste building

 Subsurface preparation, placement of backfill, concrete, or permanent retaining walls within the excavation, and installation of the foundation concrete of the training building that includes the onsite emergency facility, technical support center (TSC)

#### 3.0 NEED FOR LWA ACTIVITIES

The need for the LWA activities is based on the need for power in Florida and the importance of beginning construction at Units 6 & 7 so that the facility can begin producing power to meet projected demands and realize other recognized benefits. Information on the need for power and the benefits from the development of the plant is provided in Chapter 8, *Need for Power*, of the Units 6 & 7 ER. FPL is requesting the LWA to facilitate the start of certain construction-related activities before the COL Application for the Turkey Point facility is issued. The ability to proceed with the LWA construction activities that are identified above in Section 2.0 is expected to result in an earlier completion of the project than would otherwise occur.

As described in Chapter 8.0 of the Units 6 & 7 ER, *Need for Power*, FPL submitted its Petition to Determine Need for Turkey Point Units 6 & 7 Electrical Power Plant and supporting documents, including the Need Study for Electrical Power, to the Florida Public Service Commission (FPSC) in October 2007. The FPSC granted FPL's petition by a final order in April 2008 (FPSC Order Number PSC-08-0237-FOF-EI).

Not receiving NRC approval for the LWA for the project (i.e., the *no action* alternative) would result in a delay in the completion of the plant and a subsequent and corresponding delay in the generation of needed baseload power. There are no other identified alternatives to the requested LWA.

The benefits associated with the issuance of the LWA for the proposed project include meeting the determined need for power in Florida with additional baseload generating capacity to maintain system reliability, increase fuel diversity, and allow progress toward meaningful  $\rm CO_2$  emissions reductions.

### 4.0 ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION

The environmental impacts associated with the construction of Units 6 & 7 are described in Chapter 4 of the Units 6 & 7 ER. Chapter 4 provides detailed and comprehensive information on the cumulative impacts of the construction of the entire proposed project. Section 4.6 of the Units 6 & 7 ER provides a detailed summary of the adverse impacts attributable to construction activities, and Table 4.6-1 of Units 6 & 7 ER summarizes the possible mitigation measures for those impacts. Table 4.6-2 of Units 6 & 7 ER provides estimates of the percentage of impacts attributable to construction and preconstruction, as well as a summary of the basis for the estimates.

It is noted that the impacts summarized in Table 4.6-1 are representative of the entire Units 6 & 7 construction. Impacts attributable to LWA activities are, therefore, necessarily bounded by these activities and are no greater than those indicated. The information in Table 4.6-2 provides an additional breakdown of the construction activities, which includes LWA activities and preconstruction activities.

The Site Redress Plan describes the mitigation measures that will be taken in the event that site activities allowed under LWA are not completed.

### Table 1.0-1 Summary of the Units 6 & 7 ER and its Relationship to Proposed LWA Activities

Units 6 & 7 ER Chapter	Units 6 & 7 ER Title	Relationship to LWA Activities
1.0	Introduction to the Environmental Report	Not directly applicable to LWA activities.
2.0	Environmental Description	This chapter describes the existing environment that will be affected by the construction (including LWA construction activities) and the operation of Units 6 & 7.
3.0	Plant Description	Not applicable to LWA-related activities. This chapter describes the proposed Units 6 & 7 in its as-built configuration and does not address LWA activities.
4.0	Environmental Impacts of Construction	Impacts attributable to LWA activities are included in the cumulative and other environmental impacts described in Sections 4.1, 4.2, 4.3, 4.4, and 4.6 of this chapter.  Section 4.6 and Table 4.6-2 include a description and estimate of the construction- and preconstruction-related impacts that will occur during construction of Turkey Point. All LWA activities will be associated with construction-related impacts.
5.0	Environmental Impacts of Station Operation	Not applicable to LWA activities.
6.0	Environmental Measurement and Monitoring Programs	Not specifically applicable to LWA activities.
7.0	Environmental Impacts of Postulated Accidents Involving Radioactive Materials	Not applicable to LWA activities.
8.0	Need For Power	Not applicable to LWA activities. However, the need for the LWA activities is based on the need for power in Florida and the importance of beginning construction on Units 6 & 7 so that the facility can begin producing power to meet projected demands.
9.0	Alternatives to the Proposed Action	Not applicable to LWA activities. Alternatives that are described in this chapter are related to site locations and power generation technologies that were considered in the alternatives analysis for the project.
10.0	Environmental Consequences of the Proposed Action	Not directly applicable to LWA activities. The environmental consequences described in this chapter are related to the cumulative consequences attributable to the as-built Units 6 & 7.