protection device. These labels will warn miners not to change or alter the sealed short-circuit settings.

(12) The haulage roads, locations of trailing cable anchoring points, and locations of the belt tailpiece or feeder will be arranged to:

(a) Prevent the shuttle cars from running over their trailing cables.

(b) Minimize the need for secondary (temporary) trailing cable anchoring points.

(c) Minimize back spooling.

(13) The alternative method will not be implemented until all miners designated to examine the integrity of the seals and verify the short-circuit settings have received task training in the proper procedures for examining trailing cables for defects and damage.

(14) Within 60 days after this proposed decision and order becomes final, the proposed revisions for the petitioner's approved 30 CFR part 48 training plan will be submitted to the District Manager. The revisions will specify task training for miners designated to verify that the short-circuit settings of the circuit interrupting device(s) that protect the affected trailing cables do not exceed the specified setting(s). The training plan will include the following:

(a) The hazards of setting the short-circuit interrupting device(s) too high to adequately protect the trailing cables.

(b) How to verify that the circuit interrupting device(s) protecting the trailing cable(s) are properly set and maintained.

(c) Mining methods and operating procedures that will protect the trailing cable(s) against mechanical damage.

(d) Proper procedures for examining the affected trailing cable(s) to ensure that the cables are in safe operating condition.

The petitioner further states that procedures specified in 30 CFR 48.3 for proposed revisions to already approved training plans will apply.

The petitioner asserts that the alternative method will provide at all times a measure of protection for the miners equal to or greater than that of the existing standard.

Dated: December 30, 2011.

Patricia W. Silvey,

Certifying Officer.

[FR Doc. 2011–33861 Filed 1–5–12; 8:45 am]

BILLING CODE 4510–43–P

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50–335 and 50–389; NRC–2011–0302]

Draft Environmental Assessment and Draft Finding of No Significant Impact Related to the Proposed License Amendment To Increase the Maximum Reactor Power Level: Florida Power & Light Company, St. Lucie Plant, Units 1 and 2

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft environmental assessment and finding of no significant impact; opportunity to comment.

DATES: Comments must be filed by February 6, 2012. Any potential party as defined in Title 10 of the Code of Federal Regulations (10 CFR) 2.4 who believes access to Sensitive Unclassified Non-Safeguards Information and/or Safeguards Information is necessary to respond to this notice must request document access by January 17, 2012.

ADDRESSES: Please include Docket ID NRC–2011–0302 in the subject line of your comments. For additional instructions on submitting comments and instructions on accessing documents related to this action, see ''Submitting Comments and Accessing Information'' in the **SUPPLEMENTARY INFORMATION** section of this document. You may submit comments by any one of the following methods:

- *Federal Rulemaking Web Site:* Go to *http://www.regulations.gov* and search for documents filed under Docket ID NRC–2011–0302. Address questions about NRC dockets to Carol Gallagher, telephone: (301) 492–3668; email: *Carol.Gallagher@nrc.gov.*
- *Mail comments to:* Cindy Bladey, Chief, Rules, Announcements, and Directives Branch (RADB), Office of Administration, Mail Stop: TWB–05–B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.
- Fax comments to: RADB at (301) 492–3446.

SUPPLEMENTARY INFORMATION:

Submitting Comments and Accessing Information

Comments submitted in writing or in electronic form will be posted on the NRC Web site and on the Federal rulemaking Web site, *http://www.regulations.gov.* Because your comments will not be edited to remove any identifying or contact information, the NRC cautions you against including any information in your submission that you do not want to be publicly disclosed.

The NRC requests that any party soliciting or aggregating comments received from other persons for submission to the NRC inform those persons that the NRC will not edit their comments to remove any identifying or contact information, and therefore, they should not include any information in their comments that they do not want publicly disclosed.

You can access publicly available documents related to this document using the following methods:

- *NRC's Public Document Room (PDR):* The public may examine and have copied, for a fee, publicly available documents at the NRC's PDR, O1–F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.
- *NRC's Agencywide Documents Access and Management System (ADAMS):* Publicly available documents created or received at the NRC are available online in the NRC Library at *http://www.nrc.gov/reading-rm/adams.html.* From this page, the public can gain entry into ADAMS, which provides text and image files of the NRC's public documents. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC's PDR reference staff at 1–(800) 397–4209, (301) 415–4737, or by email to *pdr.resource@nrc.gov.* The application for amendment, dated November 22, 2010, contains proprietary information and, accordingly, those portions are being withheld from public disclosure. A redacted version of the application for amendment, dated December 15, 2010, is available electronically under ADAMS Accession No. ML103560415.
- *Federal Rulemaking Web Site:* Public comments and supporting materials related to this notice can be found at *http://www.regulations.gov* by searching on Docket ID NRC–2011–0302.

FOR FURTHER INFORMATION CONTACT: Tracy Orf, Project Manager, Plant Licensing Branch II–2, Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. Telephone: (301) 415–2788; Fax number: (301) 415–1222; email: *Tracy.Orf@nrc.gov.*

I. Introduction

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an amendment for Renewed Facility Operating License Nos. DPR–67 and NPF–16, issued to Florida Power & Light Company (FPL, the licensee) for operation of St. Lucie Plant, Units 1 and

2 (St. Lucie 1 and 2), for a license amendment to increase the maximum thermal power from 2,700 megawatts thermal (MWt) to 3,020 MWt for each unit. In accordance with 10 CFR Section 51.21, the NRC has prepared this draft Environment Assessment (EA) and draft Finding of No Significant Impact (FONSI) for the proposed action. This represents a power increase of 11.85 percent over the current licensed thermal power. In 1981, FPL received approval from the NRC to increase its power by 5.47 percent to the current power level of 2,700 MWt.

The NRC staff did not identify any significant environmental impact associated with the proposed action based on its evaluation of the information provided in the licensee's application and other available information. The draft EA and draft FONSI are being published in the **Federal Register** with a 30-day public comment period ending February 6, 2012.

II. Environmental Assessment

Plant Site and Environs: St. Lucie Nuclear Plant consists of approximately 1,130 acres (457 hectares) in Sections 16 and 17, Township 36 South, Range 41 East on Hutchinson Island in unincorporated St. Lucie County, Florida. The St. Lucie Nuclear Plant is located between the Atlantic Ocean to the east and a tidally influenced estuary, the Indian River Lagoon, to the west. The plant is located on Hutchinson Island between Big Mud Creek to the north and Indian River to the south on an area previously degraded through flooding, drainage, and channelization for mosquito control projects. The nearest towns from the plant site on the Atlantic coast are Port St. Lucie, approximately 2.5 miles (mi) (4 kilometers (km)) southwest, and Fort Pierce, approximately 4 mi (6.4 km) northwest of the plant. The St. Lucie Nuclear Plant has two light-water reactors (Units 1 and 2), each designed by Combustion Engineering for a net electrical power output of 839 megawatts electric. FPL fully owns St. Lucie Unit 1 and has operated it since March 1, 1976. FPL also solely operates St. Lucie Unit 2, which began operations on April 6, 1983, and is co-owned by FPL, Orlando Utilities Commission, and Florida Municipal Power Agency.

The St. Lucie Nuclear Plant withdraws cooling water from the Atlantic Ocean through three offshore cooling water intakes with velocity caps. The ocean water is drawn through buried pipes into the plant's L-shaped intake canal to the eight intake pumps that circulate the non-contact cooling water through the plant. Two mesh barrier nets, one net of 5-inches (in) (12.7-centimeters (cm)) mesh size and the other of 8-in (20.3-cm) mesh size, and one rigid barrier located sequentially in the intake canal reduce the potential loss of large marine organisms, mostly sea turtles. Water passes through a trash rack made of 7.6 cm (3 in) spaced vertical bars and a 1-cm (3/8-in) mesh size traveling screen, against which marine organisms that have passed through the nets are impinged, and into eight separate intake wells (four per unit) where it is pumped to a circulating-water system and an auxiliary cooling water system at each unit. The majority of the water goes to a once-through circulating-water system to cool the main plant condensers. The system has a nominal total capacity of 968,000 gallons per minute (gpm) (61,070 liters per second (L/s)). The auxiliary cooling water systems for St. Lucie Units 1 and 2 are also once-through cooling systems, but use much less water [up to 58,000 gpm (3,660 L/s)] than the circulating-water systems. Marine life that passes through the screens becomes entrained in the water that passes through the plant and is subject to thermal and mechanical stresses. The plant is also equipped with an emergency cooling water intake canal on the west side that can withdraw Indian River Lagoon water through Big Mud Creek, but this pathway is closed during normal plant operation.

The heated water from the cooling water systems flows to a discharge canal and then through two offshore discharge pipes beneath the beach and dune system back to the Atlantic Ocean. One 12-foot (ft) (3.6-meter (m))-diameter discharge pipe extends approximately 1,500 ft (457 m) offshore and terminates in a two-port ''Y'' diffuser. A second 16-ft (4.9-m)-diameter discharge pipe extends about 3,400 ft (1,040 m) from the shoreline and terminates with a multiport diffuser. This second pipe has fifty-eight 16-in (41-cm)-diameter ports spaced 24 ft (7.3 m) apart along the last 1,400 ft (430 m) of pipe farthest offshore. The discharge of heated water through the diffusers on the discharge pipes ensures distribution over a wide area and rapid and efficient mixing with ocean water.

Background Information on the Proposed Action

By application dated November 22, 2010 (Unit 1), and February 25, 2011 (Unit 2), the licensee requested an amendment for an extended power uprate (EPU) for St. Lucie Nuclear Plant to increase the licensed thermal power level from 2,700 MWt to 3,020 MWt for each unit, which represents an increase of 11.85 percent above the current licensed thermal power. This proposed change in core thermal level requires an NRC federal action to consider amending the facility's operating license prior to the licensee implementing the EPU. The NRC considers the proposed action an EPU because it exceeds the typical 7-percent power increase that can be accommodated with only minor plant changes. EPUs typically involve extensive modifications to the nuclear steam supply system contained within the plant buildings.

Although not part of the NRC federal action, changes from the current operations at St. Lucie Nuclear Plant would occur if the NRC approves the EPU. FPL plans to make the physical changes to the non-nuclear plant components that are needed in order to implement the proposed EPU. The modifications are scheduled to be implemented for Unit 1 during the fall 2011 outage starting in November 2011 and are expected to be completed by the spring of 2012. Unit 2 modifications are scheduled to be implemented during the summer 2012 outage starting in June 2012 and are expected to be completed by the fall of 2012. The outage durations for both units are expected to be longer than for a routine 35-day outage. The actual power uprate, if approved by the NRC, constitutes a 12 percent power uprate and includes an additional 1.7 percent measurement uncertainty recapture for each unit. As part of the proposed EPU project, FPL would release heated water with a proposed temperature increase of 2 degrees Fahrenheit (°F) (1.1 degrees Celsius (°C)) above the current discharge temperature through the discharge structures into the Atlantic Ocean.

Approximately 800 people are currently employed at St. Lucie Units 1 and 2 on a full-time basis. FPL estimates this workforce will be augmented by an additional 1,000 construction workers on average per outage during the proposed EPU-related activities with a potential peak of 1,400 additional construction workers. The increase of workers would be larger than the number of workers required for a routine outage; however, the peak construction workforce would be smaller than the FPL reported peak workforce for previous outages involving replacement of major components.

The Need for the Proposed Action

FPL states in its environmental report that the proposed action is intended to provide an additional supply of electric

generation in the State of Florida without the need to site and construct new facilities, or to impose new sources of air or water discharges to the environment. FPL has determined that increasing the electrical output of St. Lucie 1 and 2 is the most cost-effective option to meet the demand for electrical energy while enhancing fuel diversity and minimizing environmental impacts, including the avoidance of greenhouse gas emissions.

Environmental Impacts of the Proposed Action

As part of the licensing process for St. Lucie Units 1 and 2, the U.S. Atomic Energy Commission published a Final Environmental Statement (FES) in 1973 for Unit 1, and the NRC published an FES in 1982 for Unit 2 (NUREG–0842). In the two FESs, the NRC staff considered the best data available to the NRC at the time to predict the environmental impacts that could result from the operation of St. Lucie Units 1 and 2 over their licensed lifetimes. In addition, the NRC published an Environmental Impact Statement (EIS) in May 2003 associated with the license renewal for St. Lucie Units 1 and 2. The 2003 EIS evaluated the environmental impacts of operating the St. Lucie Nuclear Plant for an additional 20 years beyond its then-current operating license, extending the operational life of Unit 1 until 2036 and Unit 2 until 2043. The NRC determined that the environmental impacts of license renewal would be small. The NRC staff's evaluation is contained in NUREG–1437, ''Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 11, Regarding St. Lucie Units 1 and 2'' (Supplemental EIS–11 (SEIS–11)) [Agencywide Documents Access and Management System (ADAMS) Accession No. ML031360705]. The NRC staff used information from FPL's license amendment request (LAR) (ADAMS Accession No. ML103560419) and SEIS–11 to perform this EA for the proposed EPU.

FPL's application states that it would implement the proposed EPU without extensive changes to buildings or to other plant areas outside of buildings. FPL proposes to perform all necessary physical plant modifications in existing buildings at St. Lucie Units 1 and 2 or along the existing electrical transmission line right of way (ROW). With the exception of the high-pressure turbine rotor replacement, the required plant modifications would be generally small in scope. Other plant modifications would include installing a new digital turbine control system; providing additional cooling for some plant systems; modifying feedwater and condensate systems; accommodating greater steam and condensate flow rates; adjusting the current onsite power system to compensate for increases in electrical loading; and upgrading instrumentation to include minor items such as replacing parts, changing setpoints, and modifying software.

FPL would use a vehicle and helicopter for transmission line modifications proposed along the existing overhead electrical transmission line ROW. The vehicle would transport personnel and a spool of overhead wire as a helicopter holds and moves the wire into place for the stringing activities. Although the modifications are part of the proposed EPU, this type and extent of activity along the ROW is included in existing maintenance permits and licenses.

Nonradiological Impacts

Land Use and Aesthetic Impacts

Potential land use and aesthetic impacts from the proposed EPU include proposed plant modifications at St. Lucie Nuclear Plant. While FPL proposes some plant modifications, most plant changes related to the proposed EPU would occur within existing structures, with the exception of modifications along the electrical transmission line ROW. As described in the licensee's application, the proposed electrical transmission modifications would include the addition of subconductor spacers, an overhead wire, and replacement of relay protection electronics. The overhead wire would function as a ground for relay protection of the transmission lines. FPL would install these transmission line modifications via helicopter. The only land use activity FPL expects to occur on the ground along the ROW would be the periodic need to park a truck or trailer containing a spool of wire that would be strung but would not extend outside of the existing ROW area. The NRC expects little or no observable change in the appearance of the transmission lines as a result of the electrical transmission line modifications. Maintenance of the electrical transmission line ROW (tree trimming, mowing, and herbicide application) would continue after EPU implementation. The NRC does not expect land use or aesthetic changes for the proposed EPU along the transmission line ROW.

No new construction would occur outside of existing plant areas, and no expansion of buildings, roads, parking lots, equipment lay-down areas, or storage areas are required to support the proposed EPU. FPL would use existing parking lots, road access, equipment lay-down areas, offices, workshops, warehouses, and restrooms during plant modifications. Therefore, land use conditions and visual aesthetics would not change significantly at St. Lucie Nuclear Plant, and the NRC expects no significant impact from EPU-related plant modifications on land use and aesthetic resources in the vicinity of St. Lucie Nuclear Plant.

Air Quality Impacts

Because of its coastal location, meteorological conditions conducive to high air pollution are infrequent at the St. Lucie Nuclear Plant. The plant is located within the South Florida Intrastate Air Quality Control Region. In addition, the Central Florida Intrastate Air Quality Control Region and the Southwest Florida Intrastate Air Quality Control Region are within 50 mi (80.5 km) of the St. Lucie Nuclear Plant. These regions are designated as being in attainment or unclassifiable for all criteria pollutants in the U.S. Environmental Protection Agency's (EPA) 40 CFR 81.310.

Diesel generators, boilers, and other activities and facilities associated with St. Lucie Units 1 and 2 emit pollutants. The Florida Department of Environmental Protection (FDEP) regulates emissions from these sources under Air Permit 1110071–006–AF. The FDEP reported no violations at the St. Lucie Nuclear Plant in the last 5 years. The NRC expects no changes to the emissions from these sources because of the EPU.

During EPU implementation, some minor and short duration air quality impacts would occur from other non-regulated sources. Vehicles of the additional outage workers needed for EPU implementation would generate the majority of air emissions during the proposed EPU-related modifications. FPL plans to complete the construction activities associated with the EPU, if approved by the NRC, by the spring of 2012 for Unit 1 and by the fall of 2012 for Unit 2. The outage durations for both units are expected to be longer than for a routine 35-day outage. The NRC expects air emissions from the EPU workforce, truck deliveries, and construction/modification activities would not be significantly greater than previous modification activities or refueling outages at the St. Lucie Nuclear Plant. In addition, FPL would perform the majority of the EPU work inside existing buildings and would not result in changes to outside air quality. The NRC expects no significant impacts

to regional air quality from the proposed EPU beyond those air impacts evaluated for SEIS–11 including potential minor and temporary impacts from worker activity.

Water Use Impacts

Groundwater

FPL has approval from the City of Fort Pierce and the Fort Pierce Utilities Authority to use freshwater for potable and sanitary purposes. Although this freshwater comes from groundwater sources pumped from the mainland, St. Lucie Nuclear Plant does not use groundwater in any of its cooling systems and has no plans for groundwater use as part of plant operations in the future. The plant currently uses approximately 131,500 gallons (498 m^3) of freshwater per day and uses seawater from the Atlantic Ocean for noncontact cooling water. No production wells are present on the plant site for either domestic-type water uses or industrial use. FPL does not discharge to groundwater at the plant site or on the mainland, and the plant's industrial wastewater facility permit (IWFP) does not apply to groundwater.

Under the EPU, FPL does not expect to significantly change the amount of freshwater use or supply source. With an average estimated increase of 1,000 workers supporting EPU construction activities, the NRC expects potable water use to increase during the outage and return back to the regular operating levels after EPU implementation. It is unlikely this potential increase in temporary groundwater use during the EPU construction activities would have any effect on other local and regional groundwater users. FPL has no use restrictions on the amount of water supplied by the City of Fort Pierce and the Fort Pierce Utilities Authority. The NRC expects no significant impact on groundwater resources during proposed EPU construction activities or following EPU implementation.

Surface Water

The NRC staff evaluated the potential effects of releasing heated water with a proposed temperature increase of 2 °F (1.1 °C) above the current discharge temperature through the discharge pipes into the Atlantic Ocean as part of the proposed EPU project. FDEP regulates the Florida Surface Water Quality Standards through an IWFP, which also establishes the maximum area subject to temperature increase (mixing zone), maximum discharge temperatures, and chemical monitoring requirements with limits specified.

The plant injects chlorine in the form of sodium hypochlorate into seawater upstream of the intake cooling water system in regulated quantities to control microorganisms. Because FDEP regulates discharges and requires chemical monitoring, the NRC expects that the authorized discharges will not exceed the IWFP limitations after EPU implementation.

In the IWFP, FDEP has issued the plant a temporary variance for a temperature increase of heated water discharge from 113 °F (45 °C) above ambient temperature to the proposed thermal discharge of 115 °F (46.1 °C) above ambient temperature after EPU completion for Units 1 and 2 on the condition that no adverse affects are found based on FPL study results. The proposed EPU will not result in an increase in the amount or rate of water withdrawn from or discharged to the Atlantic Ocean. FPL conducted a thermal discharge study for the proposed EPU-related increase in discharge water temperature (ADAMS Accession No. ML100830443) that predicts an increase in the extent of the thermal plume (mixing zone). The ambient water affected by the absolute temperature increase beyond the existing mixing zone would be less than 25 ft (7.6 m) vertically or horizontally for the two-port ''Y'' diffuser and less than 6 ft (1.8 m) in any direction for the multiport diffuser.

As part of its operating license renewal, FPL consulted with the Florida Department of Community Affairs (FDCA) for a review of coastal zone consistency. Based on the information FDCA reviewed, it determined that the licensing renewal action would be consistent with the Florida Coastal Management Program (FCMP). FDCA, in partnership with the FDEP, administers the FCMP and has the authority to review the proposed EPU action for coastal zone consistency.

Aquatic Resource Impacts

The potential impacts to aquatic biota from the proposed action could include impingement of aquatic life on barrier nets, trash racks, and traveling screens; entrainment of aquatic life through the cooling water intake structures and into the cooling water systems; and effects from the discharge of chemicals and heated water.

Because the proposed EPU will not result in an increase in the amount or velocity of water being withdrawn from or discharged to the Atlantic Ocean, the NRC expects no increase in aquatic impacts from impingement and entrainment beyond the current impact levels: all organisms impinged on the trash racks and traveling screens would be killed, as would most, if not all, entrained organisms. FPL would continue to rescue and release sea turtles and other endangered species trapped by the barrier nets in the intake canal. In addition, FPL's IWFP requires FPL to monitor aquatic organism entrapment in the intake canal, and, if unusually large numbers of organisms are entrapped, to submit to the FDEP a plan to mitigate such entrapment.

The predicted 2 °F (1.1 °C) temperature increase from the diffusers and increased size of the mixing zone because of the proposed EPU would increase thermal exposure to aquatic biota at the St. Lucie Nuclear Plant in the vicinity of the discharge locations. The thermal discharge study conducted for the proposed EPU predicts no increase in temperature higher than 96 °F (35.5 °C) within 6 ft (1.8 m) of the bottom of the ocean floor and within 24 ft (7.3 m) from the ocean surface because of heated water discharged from the multiport diffuser. The same study also predicts that heated water discharged from the ''Y'' diffuser would not increase the ocean water temperature higher than 96 °F (35.5 °C) within 2 ft (0.6 m) of the bottom of the ocean floor and within 25 ft (17 m) from the ocean surface. Based on this analysis, surface water temperature would remain below 94 °F (34.4 °C). Thermal studies conducted for the St. Lucie Nuclear Plant prior to its operation and summarized in SEIS–11 predicted there would be minimal impacts to aquatic biota from diffuser discharges that result in a surface temperature less than 97 °F (36.1 °C). Because the NRC expects the surface water temperature not to exceed 94 °F (34.4 °C) because of the proposed EPU, the NRC staff concludes that there are no significant impacts to aquatic biota from the proposed EPU.

Although the proposed increase in temperature after EPU implementation would exceed the Florida Surface Water Quality Standards regulated by FDEP, FDEP is continuing to assess this action by requiring FPL to conduct studies as part of an IWFP variance. If the study results are insufficient to adequately evaluate environmental changes, or if the data indicates a significant degradation to aquatic resources by exceeding Florida Surface Water Quality Standards or is inconsistent with the FCMP, FDEP could enforce additional abatement or mitigation measures to reduce the environmental impacts to acceptable levels. If the NRC approves the proposed EPU, the NRC does not expect aquatic resource impacts significantly greater than current

operations because state agencies will continue to assess study results and the effectiveness of current FPL environmental controls. FDEP could impose additional limits and controls on FPL if the impacts are larger than expected. If FDCA and FDEP review the study results and allow FPL to operate at the proposed EPU level, the NRC has reasonable confidence as discussed above that the increase in thermal discharge will not result in significant impacts on aquatic resources beyond the current impacts that occur during plant operations.

Terrestrial Resources Impacts

The St. Lucie Nuclear Plant is on a relatively flat, sheltered area of Hutchinson Island with red mangrove swamps on the western side of the island that gradually slope downward to a mangrove fringe bordering the intertidal shoreline of the Indian River Lagoon. East of the facility, land rises from the ocean shore to form dunes and ridges approximately 15 ft (4.5 m) above mean low water. Tropical hammock areas are present north of the discharge canal, and additional red mangrove swamps are present north of Big Mud Creek. Habitat in the electrical transmission line ROW is a mixture of human-altered areas, sand pine scrub, prairie/pine flatwoods, wet prairie, and isolated marshes.

Impacts that could potentially affect terrestrial resources include disturbance or loss of habitat, construction and EPU-related noise and lighting, and sediment transport or erosion. FPL plans to conduct electrical transmission line modifications that would require a periodic need to park a truck or trailer containing a spool of wire that would be strung. The NRC concluded in SEIS–11 that no bird mortalities were reported up to that time associated with the electrical transmission lines and predicted that FPL maintenance practices along the ROW would likely have little or no detrimental impact on the species potentially present in or near the electrical transmission ROW. Because FPL proposes a similar type and extent of land disturbance during typical maintenance of the electrical transmission line ROW for the EPU modifications, the NRC expects the proposed transmission line modifications would not result in any significant changes to land use or increase habitat loss or disturbance, sediment transport, or erosion beyond typical maintenance impacts. Noise and lighting would not adversely affect terrestrial species beyond effects experienced during previous outages because construction EPU modification activities would take place during outage periods, which are typically periods of heightened activity. Thus, the NRC expects no significant impacts on terrestrial biota associated with the proposed action.

Threatened and Endangered Species Impacts

A number of species in St. Lucie County are listed as threatened or endangered under the Federal Endangered Species Act, and other species are designated as meriting special protection or consideration. These include birds, fish, aquatic and terrestrial mammals, flowering plants, insects, and reptiles that could occur on or near St. Lucie Units 1 and 2 facility areas and possibly along the electrical transmission line ROW. The most common occurrences of threatened or endangered species near St. Lucie Units 1 and 2 are five species of sea turtles that nest on Hutchinson Island beaches: loggerhead turtles (*Caretta caretta*), Atlantic green turtles (*Chelonia mydas*), Kemp's ridley turtles (*Lepidochelys kempii*), leatherback turtles (*Dermochelys coriacea*), and hawksbill turtles (*Eretmochelys imbricata*). FPL has a mitigation and monitoring program in place for the capture-release and protection of sea turtles that enter the intake canal. The West Indian manatee (*Trichechus manatus*) also has been documented at the St. Lucie Nuclear Plant. Designated critical habitat for the West Indian manatee is located along the Indian River west of Hutchinson Island. The NRC staff assessed potential impacts on the West Indian manatee from St. Lucie Nuclear Plant in SEIS–11. No other critical habitat areas for endangered, threatened, or candidate species are located at the St. Lucie Nuclear Plant site or along the transmission line ROW.

The following table identifies the species that the NRC considered in this EA that were not previously assessed for SEIS–11 because the species were not listed at that time.

TABLE OF FEDERALLY LISTED SPECIES OCCURRING IN ST. LUCIE COUNTY NOT PREVIOUSLY ASSESSED IN SEIS–11

Scientific name	Common name	ESA status [a]
Birds:		
Calidris canutus ssp. Rufa	red knot	Candidate.
Charadrius melodus	piping plover	T.
Dendroica kirtlandii	Kirtland's warbler	E.
Grus americana	whooping Crane [b]	EXPN, XN.
Fish:		
Pristis pectinata	smalltooth sawfish	E.
Mammals:		
Puma concolor	Puma	T/SA.
Reptiles:		
Crocodylus acutus	American crocodile	T.
Gopherus polyphemus	gopher tortoise [c]	Candidate.

[a] E = endangered; T = threatened; T/SA = threatened due to similarity of appearance; EXPN, XN = experimental, nonessential.
[b] Experimental, nonessential populations of endangered species (e.g., red wolf) are treated as threatened species on public land, for consultation purposes, and as species proposed for listing on private land.
[c] The gopher tortoise is not listed by the FWS as occurring in St. Lucie County. The core of the species' current distribution in the eastern portion of its range occurs in central and north Florida (76 FR 45130), and FPL has reported the species' occurrence on the site and in the electrical transmission line right-of-way.
Source: U.S. Fish and Wildlife Service.

The NRC has consulted with the National Marine Fisheries Service (NMFS) since 1982 regarding sea turtle kills, captures, or incidental takes. A 2001 NMFS biological opinion analyzed the effects of the circulating cooling water system on certain sea turtles at the St. Lucie Nuclear Plant. The 2001 NMFS biological opinion provides for limited incidental takes of threatened or endangered sea turtles. Correspondence between the licensee, U.S. Fish and

Wildlife Service, and NMFS in connection with the 2003 license renewal environmental review indicated that effects to federal endangered, threatened, or candidate species, including a variety of sea turtles and manatees, would not significantly change as a result of issuing a license renewal for the St. Lucie Nuclear Plant. The NRC reinitiated formal consultation with NMFS in 2005 after the incidental take of a smalltooth sawfish (*Pristis pectinata*). The NRC added sea turtles to the reinitiation of formal consultation with NMFS in 2006 after the St. Lucie Nuclear Plant exceeded the annual incidental take limit for sea turtles. The NRC provided NMFS with a biological assessment in 2007 (ADAMS Accession No. ML071700161) as an update regarding effects on certain sea turtle species up to that time. The NRC expects a biological opinion from NMFS in response to ongoing consultation, but does not expect the biological opinion to affect the conclusions in this draft EA.

As described in the Aquatic Resources Impacts section, the expected temperature increase of plant water discharged to the Atlantic Ocean could increase thermal exposure to aquatic biota, including the threatened and endangered sea turtles found at the site. The NRC expects the FPL capture-release and monitoring program for sea turtles and NRC interactions with NMFS regarding incidental takes to continue under the terms and conditions of the new biological opinion. Therefore, the NRC expects the proposed EPU would not change the effects of plant operation on threatened and endangered species.

Planned construction-related activities associated with the proposed EPU primarily involve changes to existing structures, systems, and components internal to existing buildings and would not involve earth disturbance, with the exception of planned electrical transmission line modifications. Traffic and worker activity in the developed parts of the plant site during the combined refueling outages and EPU modifications would be somewhat greater than a normal refueling outage. As described in the Terrestrial Resources Impacts section, electrical transmission line modifications may require truck use within the transmission line ROW. The NRC concluded in SEIS–11 that transmission line maintenance practices for the FPL license renewal would not lower terrestrial habitat quality or cause significant changes in wildlife populations. Because the proposed EPU operations would not result in any significant changes to the expected transmission maintenance activities evaluated for the operating license renewal, the proposed EPU transmission modifications also should have little effect on threatened and endangered terrestrial species. The effects of changes to the terrestrial wildlife habitat on the St. Lucie Nuclear Plant site from the proposed EPU should not exceed those potential effects on terrestrial wildlife evaluated in SEIS–11, including potential minor and temporary impacts from worker activity.

Historic and Archaeological Resources Impacts

Records at the Florida Master File in the Florida Division of Historical Resources identify five known archaeological sites located on or immediately adjacent to the property boundaries for the St. Lucie Nuclear Plant, although no archaeological and historic architectural finds have been recorded on the site. None of these sites are listed on the National Register for Historic Places (NRHP). The NRHP lists sixteen properties in St. Lucie County including one historic district. The Captain Hammond House in White City, approximately 6 mi (10 km) from St. Lucie Nuclear Plant, is the nearest property listed on the NRHP.

A moderate to high likelihood for the presence of significant prehistoric archaeological remains occurs along Blind Creek and the northern end of the St. Lucie Nuclear Plant boundary. As previously discussed, all EPU-related modifications would take place within existing buildings and facilities and the electrical transmission line ROW, which are not located near Blind Creek or the northern FPL property boundary. Because no change in ground disturbance or construction-related activities would occur outside of previously disturbed areas and existing electrical transmission line ROW, the NRC expects no significant impact from the proposed EPU-related modifications on historic and archaeological resources.

Socioeconomic Impacts

Potential socioeconomic impacts from the proposed EPU include temporary increases in the size of the workforce at St. Lucie Units 1 and 2, and associated increased demand for goods, public services, and housing in the region. The proposed EPU also could generate increased tax revenues for the state and surrounding counties.

Currently, approximately 800 full-time employees work at the St. Lucie Nuclear Plant. FPL estimates a temporary increase in the size of the workforce during the fall 2011 and summer 2012 refueling outages. During the refueling outages, FPL expects the average number of workers to peak by as many as 1,400 construction workers per day to implement the EPU for each unit. The outage durations for both units are expected to be longer than for a routine 35-day outage. Once EPU-related plant modifications have been completed, the size of the refueling outage workforce at St. Lucie Nuclear Plant would return to normal levels and would remain similar to pre-EPU levels, with no significant increases during future refueling outages. The size of the regular plant operations workforce would be unaffected by the proposed EPU.

The NRC expects most of the EPU plant modification workers to relocate temporarily to communities in St. Lucie, Martin, Indian River, and Palm Beach Counties, resulting in short-term increases in the local population along with increased demands for public services and housing. Because plant modification work would be temporary, most workers would stay in available rental homes, apartments, mobile homes, and camper-trailers. The 2010 American Community Survey 1-year estimate for vacant housing units reported 32,056 vacant housing units in St. Lucie County; 18,042 in Martin County; 23,236 in Indian River County; and 147,910 in Palm Beach County that could potentially ease the demand for local rental housing. Therefore, the NRC expects a temporary increase in plant employment for a short duration that would have little or no noticeable effect on the availability of housing in the region.

The additional number of refueling outage workers and truck material and equipment deliveries needed to support EPU-related plant modifications would cause short-term level of service impacts (restricted traffic flow and higher incident rates) on secondary roads in the immediate vicinity of St. Lucie Nuclear Plant. FPL expects increased traffic volumes necessary to support implementation of the EPU-related modifications during the refueling outage. The NRC predicted transportation service impacts for refueling outages at St. Lucie Nuclear Plant during its license renewal term would be small and would not require mitigation. However, the number of temporary construction workers the NRC evaluated for SEIS–11 was less than the number of temporary construction workers required for the proposed EPU. Based on this information and that EPU-related plant modifications would occur during a normal refueling outage, there could be

noticeable short-term (during certain hours of the day) level-of-service traffic impacts beyond what is experienced during normal outages. During periods of high traffic volume (i.e., morning and afternoon shift changes), work schedules could be staggered and employees and/or local police officials could be used to direct traffic entering and leaving St. Lucie Nuclear Plant to minimize level-of-service impacts.

The St. Lucie Nuclear Plant currently pays annual real estate property taxes to the St. Lucie County school district, the County Board of Commissioners, the County fire district, and the South Florida Water Management District. The annual amount of future property taxes the St. Lucie Nuclear Plant would pay could take into account the increased value of St. Lucie Units 1 and 2 as a result of the EPU and increased power generation.

Due to the short duration of EPU-related plant modification activities, there would be little or no noticeable effect on tax revenues generated by temporary workers residing in St. Lucie County. Therefore, the NRC expects no significant socioeconomic impacts from EPU-related plant modifications and operations under EPU conditions in the vicinity of St. Lucie Nuclear Plant.

Environmental Justice Impact Analysis

The environmental justice impact analysis evaluates the potential for disproportionately high and adverse human health and environmental effects on minority and low-income populations that could result from activities associated with the proposed EPU at St. Lucie Nuclear Plant. Such effects may include biological, cultural, economic, or social impacts. Minority and low-income populations are subsets of the general public residing in the vicinity of St. Lucie Nuclear Plant, and all are exposed to the same health and environmental effects generated from activities at St. Lucie Units 1 and 2.

The NRC considered the demographic composition of the area within a 50-mi (80.5-km) radius of St. Lucie Units 1 and 2 to determine the location of minority and low-income populations and whether the proposed action may affect them. The NRC examined the geographic distribution of minority and low-income populations within 50 mi (80.5 km) of the St. Lucie Units 1 and 2 using the U.S. Census Bureau (USCB) data for 2000. Although the 2010 census occurred, the data is not yet available in a format that provides the population information within a specified radius of the site.

According to the U.S. Census Bureau (USCB) data for 2000 on minority populations in the vicinity of St. Lucie Units 1 and 2, an estimated 1.2 million people live within a 50-mi (80.5-km) radius of the plant located within parts of nine counties. Minority populations within 50 mi (80.5 km) comprise 27 percent (274,500 persons). The largest minority group was African-American (approximately 135,250 persons or 13.3 percent), followed by Hispanic or Latino (approximately 111,000 persons or 11 percent). The 2000 census block groups containing minority populations were concentrated in Gifford (Indian River County), Fort Pierce (St. Lucie County), Pahokee (Palm Beach County near Lake Okeechobee), the agricultural areas around Lake Okeechobee, and Hobe Sound (Martin County).

The NRC examined low-income populations using the USCB data for 2000 and the 2010 American Community Survey 1–Year Estimate. According to the 2000 census data, approximately 11 percent of the population (111,000 persons) residing within 50 mi (80.5 km) of the St. Lucie Nuclear Plant were considered low-income, living below the 2000 federal poverty threshold of $8,350 per individual. According to the 2010 census estimate, approximately 14.1 percent of families and 18 percent of individuals were determined to be living below the Federal poverty threshold in St. Lucie County. The 2010 federal poverty threshold was $22,050 for a family of four and $10,830 for an individual. The median household income for St. Lucie County was approximately $38,671 and 13 percent lower than the median household income (approximately $44,409) for Florida.

Environmental Justice Impact

Potential impacts to minority and low-income populations would mostly consist of environmental and socioeconomic effects (e.g., noise, dust, traffic, employment, and housing impacts). Radiation doses from plant operations after the EPU are expected to continue to remain well below regulatory limits.

Noise and dust impacts would be temporary and limited to onsite activities. Minority and low-income populations residing along site access roads could experience increased commuter vehicle traffic during shift changes. Increased demand for inexpensive rental housing during the EPU-related plant modifications could disproportionately affect low-income populations; however, due to the short duration of the EPU-related work and the availability of housing properties, impacts to minority and low-income populations would be of short duration and limited. According to the 2010 census information, there were approximately 221,244 vacant housing units in St. Lucie County and the surrounding three counties combined.

Based on this information and the analysis of human health and environmental impacts presented in this EA, the proposed EPU would not have disproportionately high and adverse human health and environmental effects on minority and low-income populations residing in the St. Lucie Nuclear Plant vicinity.

Nonradiological Cumulative Impacts

The NRC considered potential cumulative impacts on the environment resulting from the incremental impact of the proposed EPU when added to other past, present, and reasonably foreseeable future actions in the vicinity of St. Lucie Nuclear Plant. For the purposes of this analysis, past actions are related to the construction and licensing of St. Lucie Units 1 and 2, present actions are related to current operations, and future actions are those that are reasonably foreseeable through the end of station operations including operations under the EPU.

The NRC concluded that there would be no significant cumulative impacts to the resource areas air quality, groundwater, threatened and endangered species, historical and archaeological resources in the vicinity of St. Lucie Units 1 and 2 because the contributory effect of ongoing actions within a region are regulated and monitored through a permitting process (*e.g.,* National Pollutant Discharge Elimination System and 401/404 permits under the Clean Water Act) under State or Federal authority. In these cases, impacts are managed as long as these actions are in compliance with their respective permits and conditions of certification.

Surface water and aquatic resources were examined for potential cumulative impacts. The geographic boundary for potential cumulative impacts is the area of the post-EPU thermal mixing zone. If the proposed EPU is approved and is implemented, St. Lucie Units 1 and 2 are predicted to have a slightly larger and hotter mixing zone than pre-uprate conditions during full flow and capacity. The NRC anticipates that St. Lucie Units 1 and 2 will continue to operate post EPU in full compliance with the requirements of the FDEP IWFP. FDEP would evaluate FPL compliance with the IWFP.

Proposed EPU-related modifications for the electrical transmission line ROW at the St. Lucie Nuclear Plant could

affect land use, aesthetics, and terrestrial species. Improvements and maintenance would be conducted according to Federal and State regulations, permit conditions, existing procedures, and established best management practices to minimize impacts to these resources. Nevertheless, terrestrial wildlife and habitat may be lost, displaced, or disturbed by noise and human presence during EPU-related work in the electrical transmission line ROW. Less mobile animals, such as reptiles, amphibians, and small mammals, would incur greater impacts than more mobile animals, such as birds. The proposed electrical transmission line modifications would neither change land use activities expected during current operations nor change the current aesthetic resources within view of the electrical transmission lines.

The greatest socioeconomic impacts from the proposed EPU and continued operation of St. Lucie Units 1 and 2 would occur during the fall 2011 and summer 2012 fuel outages. The increase in EPU-related construction workforces would have a temporary effect on socioeconomic conditions in local communities from the increased demand for temporary housing, public services (e.g., public schools), and increased traffic.

Nonradiological Impacts Summary

As discussed previously, the proposed EPU would not result in any significant nonradiological impacts. Table 1 summarizes the nonradiological environmental impacts of the proposed EPU at St. Lucie Units 1 and 2.

TABLE 1—SUMMARY OF NONRADIOLOGICAL ENVIRONMENTAL IMPACTS

Land Use	Proposed EPU-related activities are not expected to cause significant impacts on land use conditions and aesthetic resources in the vicinity of St. Lucie Units 1 and 2.
Air Quality	Temporary air quality impacts from vehicle emissions related to EPU construction workforce is not expected to cause significant impacts to air quality.
Water Use	Water use changes resulting from the proposed EPU are not expected to cause impacts greater than current operations. No significant impact on groundwater or surface water resources.
Aquatic Resources	The NRC expects no significant changes to impacts caused by current operation due to impingement, entrainment, and thermal discharges.
Terrestrial Resources	The NRC expects no significant impacts to terrestrial resources.
Threatened and Endangered Species.	The proposed EPU would change impacts from those caused by current operations. The NRC expects a NMFS to issue a biological opinion on sea turtles and the smalltooth sawfish in the near future.
Historic and Archaeological Resources.	No significant impact to historic and archaeological resources on site or in the vicinity of St. Lucie Units 1 and 2.
Socioeconomics	No significant socioeconomic impacts from EPU-related temporary increase in workforce.
Environmental Justice	No disproportionately high or adverse human health and environmental effects on minority and low-income populations in the vicinity of St. Lucie Units 1 and 2.
Cumulative Impacts	The proposed EPU would not cause impacts significantly greater than current operations. To address potential cumulative impacts for surface water and aquatic resources, a NMFS biological opinion is expected with the authority to impose limits on nonradiological discharges to abate any significant water quality and ecology impacts.

Radiological Impacts

Radioactive Gaseous and Liquid Effluents, Direct Radiation Shine, and Solid Waste

St. Lucie Units 1 and 2 use waste treatment systems to collect, process, recycle, and dispose of gaseous, liquid, and solid wastes that contain radioactive material in a safe and controlled manner within NRC and EPA radiation safety standards. The licensee's evaluation of plant operation under proposed EPU conditions predict that no physical changes would be needed to the radioactive gaseous, liquid, or solid waste systems.

Radioactive Gaseous Effluents

Radioactive gaseous wastes are principally activation gases and fission product radioactive noble gases resulting from process operations, including continuous cleanup of the reactor coolant system, gases used for tank cover gas, and gases collected during venting. The licensee's evaluation determined that implementation of the proposed EPU would not significantly increase the inventory of nonradioactive carrier gases normally processed in the gaseous waste management system, because plant system functions are not changing and the volume inputs remain the same. The licensee's analysis also showed that the proposed EPU would result in an increase (a bounding maximum, as expected, of 13.2 percent for all noble gases, particulates, radioiodines, and tritium) in the equilibrium radioactivity in the reactor coolant, which in turn increases the radioactivity in the waste disposal systems and radioactive gases released from the plant.

The licensee's evaluation concluded that the proposed EPU would not change the radioactive gaseous waste system design function and reliability to safely control and process the waste. The existing equipment and plant procedures that control radioactive releases to the environment will continue to be used to maintain radioactive gaseous releases within the dose limits of 10 CFR 20.1302 and the as low as is reasonably achievable (ALARA) dose objectives in 10 CFR part 50, Appendix I.

Radioactive Liquid Effluents

Radioactive liquid wastes include liquids from reactor process systems and liquids that have become contaminated. The licensee's evaluation shows that the proposed EPU implementation would not significantly increase the inventory of liquid normally processed by the liquid waste management system. This is because the system functions are not changing and the volume inputs remain the same. The proposed EPU would result in an increase in the equilibrium radioactivity in the reactor coolant (12.2 percent), which in turn would impact the concentrations of radioactive nuclides in the waste disposal systems.

Because the NRC does not expect the composition of the radioactive material in the waste and the volume of radioactive material processed through the system to significantly change, the current design and operation of the radioactive liquid waste system will accommodate the effects of the proposed EPU. The existing equipment and plant procedures that control radioactive releases to the environment will continue to be used to maintain

radioactive liquid releases within the dose limits of 10 CFR 20.1302 and ALARA dose standards in 10 CFR part 50, Appendix I.

Occupational Radiation Dose Under EPU Conditions

The licensee stated that the in-plant radiation sources are expected to increase approximately linearly with the proposed increase in core power level of 12.2 percent. For the radiological impact analyses, the licensee conservatively assumed an increase to the licensed thermal power level from 2,700 MWt to 3,030 MWt or 12.2 percent, although the EPU request is for an increase to the licensed thermal power level to 3,020 MWt, or 11.85 percent. To protect the workers, the plant radiation protection program monitors radiation levels throughout the plant to establish appropriate work controls, training, temporary shielding, and protective equipment requirements so that worker doses will remain within the dose limits of 10 CFR part 20 and ALARA.

In addition to the work controls implemented by the radiation protection program, shielding is used throughout St. Lucie Units 1 and 2 to protect plant personnel against radiation from the reactor and auxiliary systems. The licensee determined that the current shielding design, which uses conservative analytical techniques to establish the shielding requirements, is adequate to offset the increased radiation levels that are expected to occur from the proposed EPU. The proposed EPU is not expected to significantly affect radiation levels within the plant, and therefore there would not be a significant radiological impact to the workers.

Offsite Doses at EPU Conditions

The primary sources of offsite dose to members of the public from St. Lucie Units 1 and 2 are radioactive gaseous and liquid effluents. The licensee predicts that maximum annual total and organ doses from liquid effluent releases would increase by 12.2 percent. As discussed previously, operation under the proposed EPU conditions will not change the ability of the radioactive gaseous and liquid waste management systems to perform their intended functions. Also, there would be no change to the radiation monitoring system and procedures used to control the release of radioactive effluents in accordance with NRC radiation protection standards in 10 CFR part 20 and 10 CFR part 50, Appendix I.

Based on the previous information, the offsite radiation dose to members of the public would continue to be within regulatory limits and therefore would not be significant.

Radioactive Solid Wastes

Solid radioactive waste streams include solids recovered from the reactor coolant systems, solids that come into contact with the radioactive liquids or gases, and solids used in the reactor coolant system operation. The licensee evaluated the potential effects of the proposed EPU on the solid waste management system. The largest volume of radioactive solid waste is low-level radioactive waste, which includes bead resin, spent filters, and dry active waste (DAW) that result from routine plant operation, outages, and routine maintenance. DAW includes paper, plastic, wood, rubber, glass, floor sweepings, cloth, metal, and other types of waste generated during routine maintenance and outages.

The licensee states that the proposed EPU would not have a significant effect on the generation of radioactive solid waste volume from the primary reactor coolant and secondary side systems because system functions are not changing and the volume inputs remain consistent with historical generation rates. The waste can be handled by the solid waste management system without modification. The equipment is designed and operated to process the waste into a form that minimizes potential harm to the workers and the environment. Waste processing areas are monitored for radiation, and safety features are in place to ensure worker doses are maintained within regulatory limits. The proposed EPU would not generate a new type of waste or create a new waste stream. Therefore, the impact from the proposed EPU on radioactive solid waste would not be significant.

Spent Nuclear Fuel

Spent fuel from St. Lucie Units 1 and 2 is stored in a plant spent fuel pool. St. Lucie Units 1 and 2 are currently licensed to use uranium-dioxide fuel that has a maximum enrichment of 4.5 percent by weight uranium-235. The average fuel assembly discharge burnup for the proposed EPU is expected to be limited to 49,000 megawatt days per metric ton uranium (MWd/MTU) with no fuel pins exceeding the maximum fuel rod burnup limit of 62,000 MWd/MTU for Unit 1 and 60,000 MWd/MTU for Unit 2. The licensee's fuel reload design goals will maintain the St. Lucie Units 1 and 2 fuel cycles within the limits bounded by the impacts analyzed in 10 CFR part 51, Table S–3, ''Uranium Fuel Cycle Environmental Data'' and Table S–4, ''Environmental Impact of Transportation of Fuel and Waste to and From One Light-Water-Cooled Nuclear Power Reactor,'' as supplemented by NUREG–1437, Volume 1, Addendum 1, ''Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Main Report, Section 6.3—Transportation Table 9.1, Summary of findings on NEPA issues for license renewal of nuclear power plants.'' Therefore, there would be no significant impacts resulting from spent nuclear fuel.

Postulated Design-Basis Accident Doses

Postulated design-basis accidents are evaluated by both the licensee and the NRC to ensure that St. Lucie Units 1 and 2 can withstand normal and abnormal transients and a broad spectrum of postulated accidents without undue hazard to the health and safety of the public.

On November 22, 2010, the licensee submitted the St. Lucie Unit 1 EPU LAR to the NRC to increase the licensed core power level from 2,700 MWt to 3,020 MWt. On February 25, 2011, the licensee submitted the St. Lucie Unit 2 EPU LAR to the NRC requesting the same increase in licensed core power level. Analyses were performed by the licensee according to the Alternative Radiological Source Term methodology updated with input and assumptions consistent with the proposed EPU. For each design-basis accident radiological consequence analyses were performed using the guidance in NRC Regulatory Guide 1.183, ''Alternative Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors.'' Accident-specific total effective dose equivalent was determined at the exclusion area boundary, at the low-population zone, and in the control room. The analyses also include the evaluation of the waste gas decay tank rupture event. The licensee concluded that the calculated doses meet the acceptance criteria specified in 10 CFR 50.67 and 10 CFR part 50, Appendix A, General Design Criterion 19.

The NRC is evaluating the licensee's LARs to independently determine whether they are acceptable to approve. The results of the NRC evaluation and conclusion will be documented in a Safety Evaluation Report that will be publicly available on the NRC ADAMS. If the NRC approves the LARs, then the proposed EPU will not have a significant impact with respect to the radiological consequences of design basis accidents.

Radiological Cumulative Impacts

The cumulative impacts associated with the proposed EPU for St. Lucie

Unit 1 are considered in conjunction with the operation of St. Lucie Unit 2, which is located next to Unit 1 on the site property. The radiological dose limits for protection of the public and workers have been developed by the NRC and EPA to address the cumulative impact of acute and long-term exposure to radiation and radioactive material. These dose limits are codified in 10 CFR part 20 and 40 CFR part 190.

The cumulative radiation doses to the public and workers are required to be within the limits of the regulations. The public dose limit of 0.25 millisievert (25 millirem) in 40 CFR part 190 applies to all reactors that may be on a site and also includes any other nearby nuclear power reactor facilities. No other nuclear power reactor or uranium fuel cycle facility is located near St. Lucie Units 1 and 2. The staff reviewed several years of radiation dose data contained in the licensee's annual radioactive effluent release reports for St. Lucie Units 1 and 2. The data demonstrate that the dose to members of the public from radioactive effluents is well within the limits of 10 CFR part 20 and 40 CFR part 190. To evaluate the projected dose at EPU conditions for St. Lucie Units 1 and 2, the NRC increased the actual dose data contained in the reports by 12 percent. The projected doses at EPU conditions remained well within regulatory limits. Therefore, the staff concludes that there would not be a significant cumulative radiological impact to members of the public from increased radioactive effluents from St. Lucie Units 1 and 2 at the proposed EPU operation.

As previously evaluated, the licensee has a radiation protection program that maintains worker doses within the dose limits in 10 CFR part 20 during all phases of St. Lucie Units 1 and 2 operations. The NRC expects continued compliance with regulatory dose limits during operation at the proposed EPU power level. Therefore, the NRC concludes that there would not be a significant cumulative radiological impact to plant workers from operation of St. Lucie Units 1 and 2 at the proposed EPU levels.

Radiological Impacts Summary

As discussed previously, the proposed EPU would not result in any significant radiological impacts. Table 2 summarizes the radiological environmental impacts of the proposed EPU at St. Lucie Units 1 and 2.

TABLE 2—SUMMARY OF RADIOLOGICAL ENVIRONMENTAL IMPACTS

Radioactive Gaseous Effluents	Amount of additional radioactive gaseous effluents generated would be handled by the existing system.
Radioactive Liquid Effluents	Amount of additional radioactive liquid effluents generated would be handled by the existing system.
Occupational Radiation Doses	Occupational doses would continue to be maintained within NRC limits.
Offsite Radiation Doses	Radiation doses to members of the public would remain below NRC and EPA radiation protection standards.
Radioactive Solid Waste	Amount of additional radioactive solid waste generated would be handled by the existing system.
Spent Nuclear Fuel	The spent fuel characteristics will remain within the bounding criteria used in the impact analysis in 10 CFR part 51, Table S–3 and Table S–4.
Postulated Design-Basis Accident Doses.	Calculated doses for postulated design-basis accidents would remain within NRC limits.
Cumulative Radiological	Radiation doses to the public and plant workers would remain below NRC and EPA radiation protection standards.

Alternatives to the Proposed Action

As an alternative to the proposed action, the NRC considered denial of the proposed EPU (i.e., the ''no-action'' alternative). Denial of the application would result in no change in the current environmental impacts. However, if the EPU was not approved for St. Lucie Unit 1, other agencies and electric power organizations may be required to pursue other means, such as fossil fuel or alternative fuel power generation, in order to provide electric generation capacity to offset future demand. Construction and operation of such a fossil-fueled or alternative-fueled facility may create impacts in air quality, land use, and waste management significantly greater than those identified for the proposed EPU at St. Lucie Units 1 and 2. Furthermore, the proposed EPU does not involve environmental impacts that are significantly different from those originally indentified in the St. Lucie Units 1 and 2 FESs, NUREG–1437, and SEIS–11.

Alternative Use of Resources

This action does not involve the use of any different resources than those previously considered in the FESs or SEIS–11.

Agencies and Persons Consulted

In accordance with its stated policy, on December 8, 2011, the NRC consulted with the State of Florida official regarding the environmental impact of the proposed action. The State official had no comments.

III. Draft Finding of No Significant Impact

On the basis of the EA, the NRC concludes that granting the proposed EPU license amendment is not expected to cause impacts significantly greater than current operations. Therefore, the proposed action of implementing the EPU for St. Lucie Units 1 and 2 will not have a significant effect on the quality of the human environment because no significant permanent changes are involved and the temporary impacts are within previously disturbed areas at the site and the capacity of the plant systems. Accordingly, the NRC has determined it is not necessary to prepare an environmental impact statement for the proposed action. A final determination to prepare an environmental impact statement or a final finding of no significant impact will not be made until the public comment period closes.

For further details on the proposed action, see the licensee's application dated November 22, 2010, for Unit 1 and February 25, 2011, for Unit 2.

For the Nuclear Regulatory Commission.

Dated at Rockville, Maryland, this 28th day of December 2011.

Siva P. Lingam,

Chief (Acting), Plant Licensing Branch II–2, Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation.

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