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10 CFR 52.3
10 CFR 52.110

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Levy Nuclear Plant (LNP) Units 1 and 2
Combined License Nos. NPF-99 and NPF-100
Docket Nos. 52-029 & 52-030

Subject: Duke Energy Florida (DEF), LNP Units 1 & 2 Termination of Levy Nuclear Plant Units 1 and 2 Combined Licenses

Reference: Letter from Joseph W. Donahue to NRC, Duke Energy Florida (DEF), LNP Units 1 and 2 Notification of Termination of Project, dated November 1, 2017, Serial: NPD-NRC-2017-014

This letter requests NRC approval to terminate the Combined Licenses (COLs) for Levy Nuclear Plant Units 1 and 2. In Reference 1, DEF notified the NRC that as of August 29, 2017, DEF announced it will no longer move forward with building the Levy Nuclear Plant (LNP) and placed the project in an abandoned status. Reference 1 also stated that, within 90 days from the date of the letter, DEF planned to submit a request for termination of the Levy licenses, along with a License Termination Plan for disposition of the combined licenses (COLs) (NPF-99 and NPF-100) in accordance with 10 CFR 52.110(i).

There is no nuclear fuel or special nuclear material on the site nor is there any Safeguards Information on the site. There are no construction or quality-related activities that were initiated at the site following the issuance of the Levy COLs on October 26, 2016. DEF will continue to comply with NRC requirements pending the termination of the licenses.

The enclosure to this letter provides the License Termination Plan. A specific approval date for termination of the COLs is not being requested, however, DEF desires to complete this action no later than June 30, 2018 for business planning purposes.

This letter contains no regulatory commitments.

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NRO

If you have any questions concerning this letter, or require additional information, please contact me or Erik Wagner at (704) 382-3949.

Sincerely,

Joseph W. Donahue
Vice President - Nuclear Engineering

Enclosure: Levy Nuclear Plant License Termination Plan

cc: Mr. Brian Hughes, U.S. NRC Project Manager
Ms. Vonna Ordaz, U.S. NRC Director, Office of New Reactors
Ms. Jennifer Dixon-Herrity, U.S. NRC Chief, Licensing Branch 4
Mr. Frank Akstulewicz, U.S. NRC Division of New Reactor Licensing
Ms. Mallecia Sutton, U.S. NRC Project Manager
U.S. NRC Region II, Regional Administrator
Mr. Braulio L. Baez, Executive Director - FPSC

Enclosure to NPD-NRC-2018-004

LEVY NUCLEAR PLANT
LICENSE TERMINATION PLAN

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Chapter 1, General Information

1.1 Purpose

The purpose of the Levy Nuclear Plant (LNP) License Termination Plan (LTP) is to satisfy the requirements of 10 CFR 52.110(i), Termination of License, using the guidance provided by Nuclear Regulatory Commission (NRC) Regulatory Guide 1.179, *Standard Format and Content of License Termination Plans for Nuclear Power Reactors,* and NUREG-1700, *Standard Review Plan for Evaluating Nuclear Power Reactor License Termination Plans.* Other NRC guidance, such as NUREG-1575, *Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)*, NUREG-1727, *NMSS Decommissioning Standard Review Plan*, and NUREG-1757, *Consolidated NMSS Decommissioning Guidance*, will be demonstrated to not be applicable to the LNP site.

1.2 Scope

The LNP LTP addresses subjects such as decommissioning activities and final status surveys, and will demonstrate that the site currently meets the criteria for unrestricted use in 10 CFR 20.1402. The LTP contains information on:

- Site Characterization
- Decommissioning Activities
- Site Remediation
- Final Status Survey
- Compliance with Radiological Criteria for License Termination
- Site-Specific Decommissioning Cost Update
- Environmental Report Supplemental Information

1.3 Site Description and Historical Background

The Levy Nuclear Plant Units 1 and 2 (LNP) site is located in Levy County, Florida. This is a large, primarily rural area located southwest of Gainesville and west of Ocala and approximately 15.5 kilometers (km) (9.6 miles [mi.]) northeast of the Crystal River Energy Complex, an energy facility also owned by Duke Energy Florida, LLC (DEF). While there are small communities and clusters of homes in the region, the area is sparsely populated. The nearest towns from the LNP site are Inglis and Yankeetown, which are located 6.6 km (4.1 mi.) southwest and 12.9 km (8.0 mi.) southwest from the site, respectively; the Gulf of Mexico is located approximately 12.8 km (7.9 mi.) west of the LNP site, and Lake Rousseau lies about 4.8 km (3.0 mi.) to the south. Figure 2.1.1-201 (attached) shows the location of the LNP site and the surrounding area.

The LNP site is approximately 1257 hectares (ha) (3105 acres [ac.]). Much of the LNP site, in particular the reactor locations, has been in intensive silviculture production for over a century.

Additional information on the LNP site and environs can be found in Chapter 2 of the LNP Combined License Application (COLA) Final Safety Analysis Report, ML16111A203, in the NRC ADAMS public document collection.

LNP Units 1 and 2, Docket Numbers 52-029 and 52-030, received combined licenses (COLs) NPF-099 and NPF-100 on October 26, 2016. The NRC Final Environmental Impact Statement (FEIS), NUREG-1941, was issued on April 26, 2012. On November 1, 2017, Duke Energy Florida (DEF) notified the NRC that DEF will no longer move forward with the Levy Plant and placed the project in an abandoned status.

After receipt of the COLs in October 2016, no construction activities were initiated at the LNP site. DEF deferred the decision to build until a later date based on many factors; therefore, the site has remained in the same state as it was left following the conclusion of the core boring programs for foundation characterization in late 2009. Piezometer and monitoring wells were installed in early 2007 to provide for surficial and Floridan aquifer sampling, and are still in existence. Ten sealand containers are on the site and contain the core borings from the original investigation program in 2007, the core borings from the offset boring program in 2009 and other miscellaneous items. An office trailer is located on-site next to the containers. A meteorological tower was erected in early 2007 and was used to gather meteorological data to support licensing. This tower was removed in late 2016, leaving only the fenced-in concrete pad and fencing associated with the guy wire anchors. Aerial views of the sealand containers and office trailer as well as the fenced-in concrete pad area are attached (see Figures 1 and 2).

1.4 Plan Summary

Termination of the NRC licenses and environmental closure of the LNP site are closely related activities, completion of which will allow the site to be released for future unrestricted use. The LTP describes the processes to be used in meeting the requirements for terminating the NRC licenses for LNP Units 1 and 2.

Restoring the site to a condition acceptable for unrestricted use requires no remediation, due to the lack of permanent structures on the site or other improvements to the site, and the fact that no radioactive materials have been received or generated at the site:

- No road paving has been performed, thus no remediation is required,
- No excavations have been performed and no subsurface structures or piping have been installed,
- Monitoring wells are capped and sealed.
- As of January 25, 2018, the only facilities left onsite are the temporary sealand storage containers and the temporary office trailer (Figure 1, attached), and the fenced-in meteorological tower concrete pad and fencing associated with the guy wire anchors. (Figure 2, attached).

Removal of the containers, office trailer and meteorological tower and permanent abandonment of the monitoring wells are not required prior to terminating the license. However, as of this date, DEF is working to permanently seal the monitoring wells in accordance with Florida state environmental requirements.

As discussed in the following chapters, there are no decommissioning activities required, and license termination activities will be accomplished with no significant adverse environmental impacts.

This LTP has been prepared for LNP in accordance with 10 CFR 52.110(i). The LTP is a stand-alone document to support the DEF request for termination of the license. The information required by 10 CFR 52.110(i)(2) is provided in the following chapters.

1.5 License Termination Plan Information Contact

For information or comments regarding the LNP LTP, please contact:

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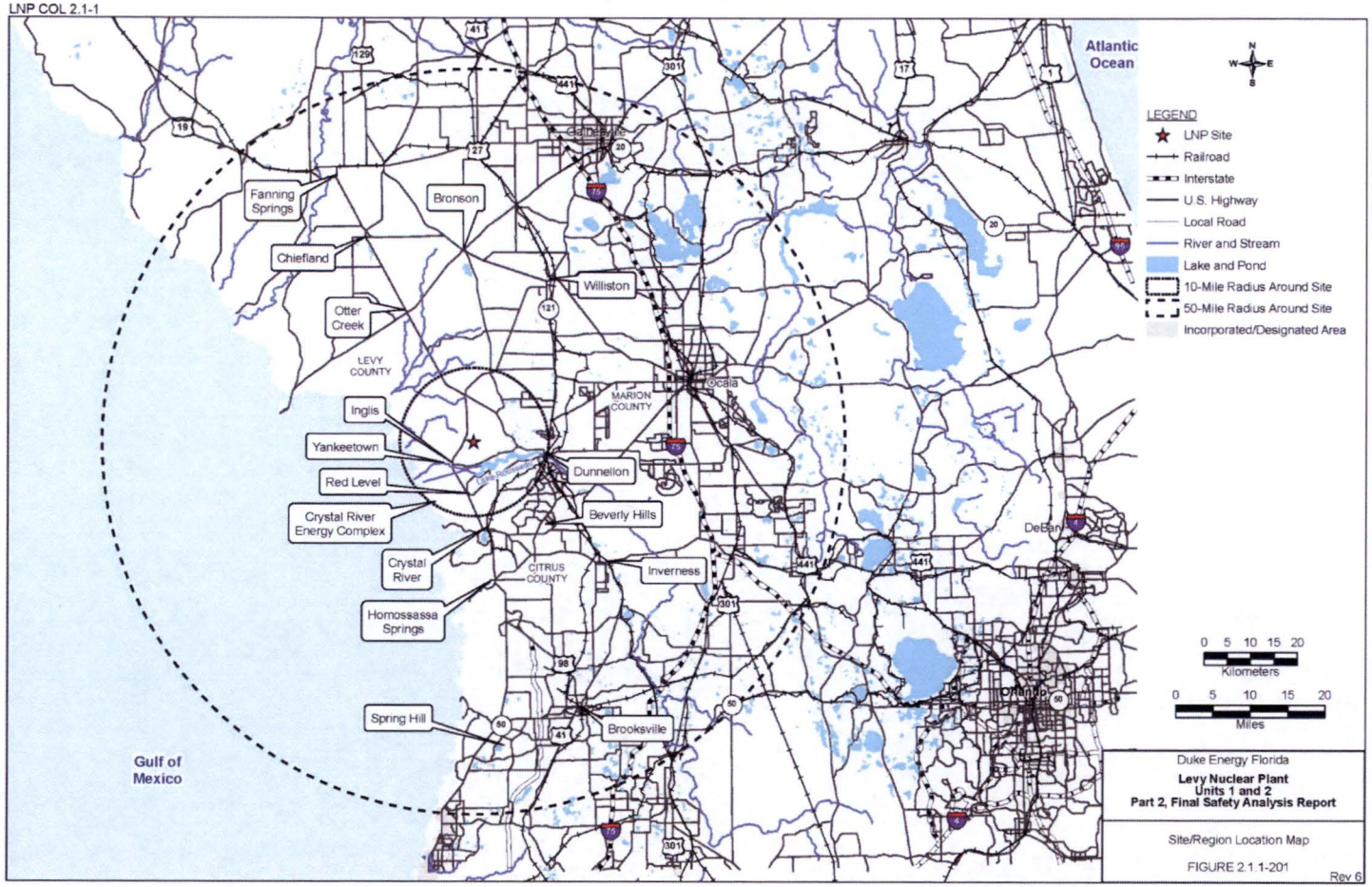
LNP COL 2.1-1


Atlantic Ocean
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Fanning Springs
Bronson
Chiefland
Otter Creek
Williston
LEVY COUNTY
MARION COUNTY
Ocala
Inglis
Yankeetown
Red Level
Crystal River Energy Complex
Crystal River
Homosassa Springs
Dunnellon
Beverly Hills
CITRUS COUNTY
Inverness
Spring Hill
Brooksville
DeBary
Orlando
LEGEND
LNP Site
Railroad
Interstate
U.S. Highway
Local Road
River and Stream
Lake and Pond
10-Mile Radius Around Site
50-Mile Radius Around Site
Incorporated/Designated Area
0 5 10 15 20
Kilometers
0 5 10 15 20
Miles
Duke Energy Florida
Levy Nuclear Plant
Units 1 and 2
Part 2, Final Safety Analysis Report
Site/Region Location Map
FIGURE 2.1.1-201
Rev 6

Figure 1 - Sealand Containers and Office Trailer

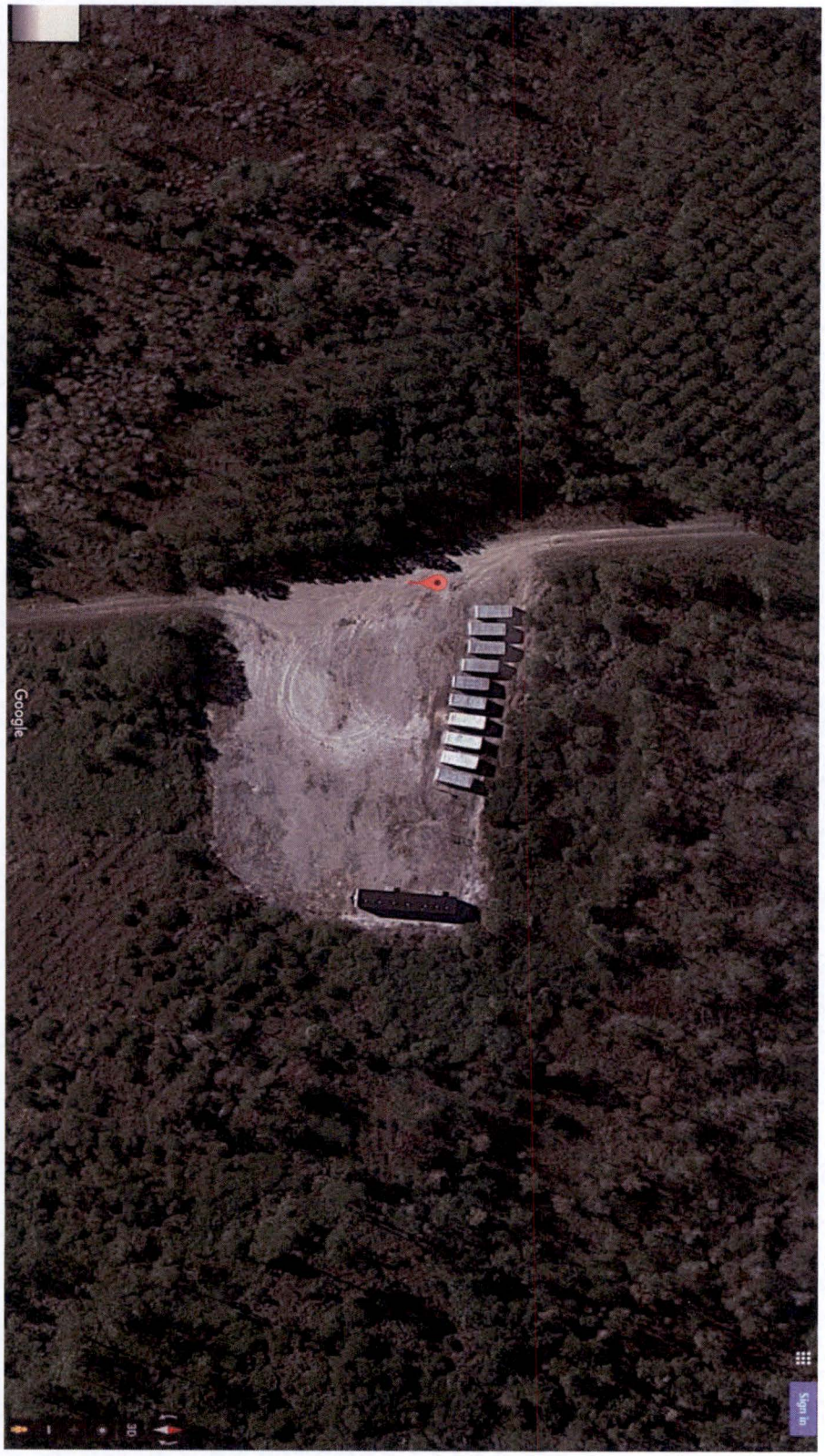

Figure 2 - Meteorological Tower pad

Chapter 2, Site Characterization

2.1 Introduction

The purpose of site characterization is to identify and document any residual radioactive contaminants of plant origin present on the site to ensure that final radiation surveys are conducted in all areas where contamination exists, or has the potential to exist or remain.

2.2 Historical Site Assessment

The LNP site and environs are described in the LNP FSAR, Chapter 2, which is available in the NRC ADAMS Public Document Room, Reference 1. This information encompasses the geographic, surface and groundwater hydrology, and intended plant area descriptions. No changes to this information have been made since NRC issuance of the COLs.

During the application stage for LNP, studies were performed to delineate the level of radionuclide concentrations in the Withlacoochee River and the Floridan Aquifer. These levels were presented in Tables 2.4.13-204 and 2.4.13-205 of the LNP FSAR (Reference 1).

As discussed in Sections 1.3 and 1.4 of this plan, no construction activity has occurred on the site since the COLs were issued by the NRC in October 2016. Further, no nuclear materials have been received at LNP.

2.3 Analytical Methods

No analytical methods are employed for the purpose of site characterization, since none of the areas onsite were impacted with radioactive contamination post-COL and the site remains in that state.

2.4 Environmental

The environmental status of the LNP site is best characterized by the NRC Final Environmental Impact Statement (FEIS), NUREG-1941 (Reference 2). The FEIS is based on the environmental report identified in Reference 3. See Chapter 8 of this LTP for additional details.

2.5 References

1. Duke Energy Levy Units 1 and 2 COLA (Final Safety Analysis Report), Rev. 9, Accession No. ML16111A957
2. NUREG-1941, Final Environmental Impact Statement for Combined Licenses (COLs) for Levy Nuclear Plant Units 1 and 2, Volumes 1-3, April 2012
3. Progress Energy Florida, Levy Nuclear Plant Units 1 and 2 COL Application, Part 3, Environmental Report. Revision 1, Accession No. ML092860995.

Chapter 3, Identification of Remaining Dismantlement Activities

3.1 Introduction

In accordance with 10 CFR 52.110(i)(2)(ii), the LTP must identify remaining dismantlement activities.

Since no plant systems, structures or components were erected, installed or operated prior to or following the granting of the LNP licenses by NRC in October 2016, and there has been no introduction of radioactive contamination to the Levy site, no decontamination or dismantlement activities are required or remain at LNP.

3.2 Current Radiological Status and Exposure Estimates

Since no nuclear materials have been received at the Levy site, there is no radiation or radioactive nuclide concentrations beyond background radiation in the site soils or groundwater as identified during the licensing phase of the project, thus there is no exposure to workers or the general population from the LNP site.

3.3 Coordination with Outside Entities

The termination of the LNP 10 CFR part 52 licenses involves the US NRC. For LNP, Duke Energy Florida (DEF) has obtained a Site Certification from the Florida Department of Environmental Protection (FDEP) and a Clean Water Act (CWA) Section 404 permit from the USACE. Both of these authorizations have conditions which are essentially only invoked for construction and/or operation of the facility; as such there is no rigid requirement for removal of these authorizations. Consequently, the future status of these authorizations should have no effect on the termination of the LNP COL. DEF has initiated discussions with these agencies to determine their preference for ultimate closure of these authorizations.

No decommissioning activities need to take place since there have been no construction activities on the site or in the vicinity of the site. The forested areas of the site continue to be managed in accordance with accepted forestry management practices. DEF is planning for the proper abandonment of the monitoring wells that are onsite in accordance with the requirements of the State of Florida.

Chapter 4, Site Remediation Plan

Since no plant activities were conducted that introduced radioactivity to the site, no remediation is required. Since no nuclear materials were received by LNP, the existing site does not have residual radioactivity that is distinguishable from background radiation and therefore meets the NRC radiological release criteria in 10 CFR 20.1402, Radiological Criteria for Unrestricted Use. Duke Energy intends to release the LNP site for unrestricted use upon license termination.

Chapter 5, Final Status Survey Plan

Duke Energy has concluded that a Final Status Survey is not required. There was no introduction of radioactive contamination to the Levy site, as was discussed in Chapter 3, and therefore, the existing site does not have residual radioactivity that is distinguishable from background radiation. Thus, the site currently meets the NRC radiological release criteria in 10 CFR 20.1402, Radiological Criteria for Unrestricted Use.

Chapter 6, Compliance with the Radiological Criteria for License Termination

Chapter 6, together with Chapters 4 and 5, discusses compliance with the radiological criteria of 10 CFR 20.1402 for unrestricted future use of the LNP site. The NRC dose limit applies to residual radioactivity that is distinguishable from background; however, since there was no introduction of radioactive contamination to the Levy site, the existing site does not have residual radioactivity that is distinguishable from background radiation. Therefore, the site currently meets the NRC radiological release criteria in 10 CFR 20.1402, Radiological Criteria for Unrestricted Use.

Chapter 7, Update of Site-Specific Decommissioning Costs

In accordance with 10 CFR 52.110(i)(2)(vi), Chapter 7 addresses an update to the site-specific estimate of the decommissioning costs. In accordance with 10 CFR 50.33(k) and 10 CFR 50.75(b), a decommissioning report was provided as Appendix A in Reference 1. This report certified that decommissioning would be provided as required by 10 CFR 50.75. However, Duke does not foresee any decommissioning costs associated with termination of the license, and a decommissioning fund is required before the scheduled date for initial loading of fuel, based on the requirements in 10 CFR 50.75(e)(3). Since the Levy project will never reach that point, funds are not necessary.

Reference

1. Levy Nuclear Plant Units 1 and 2, COL Application, Part 1, General and Financial Information, Revision 8 - ADAMS Accession Number ML16111A178

Chapter 8, Supplement to the Environmental Report

8.1 Introduction and Purpose

8.1.1 Purpose

The purpose of this chapter of the License Termination Plan (LTP) is to update the Environmental Report for the Levy Nuclear Plant Units 1 and 2 (COLs NPF-99 and NPF-100) with any new information or significant environmental change associated with the site's proposed license termination. This chapter of the LTP is pursuant to 10 CFR 52.110(i)(2)(vii).

The information contained in this chapter generally follows the Nuclear Regulatory Commission (NRC) guidance of Regulatory Guide 1.179, Standard Format and Content of License Termination Plans for Nuclear Power Reactors, Rev. 1 dated June 2011 and NUREG-1700, Standard Review Plan for Evaluating Nuclear Power Reactor License Termination Plans, Rev. 1 dated March 2003.

8.1.2 Background

Levy Nuclear Plant Units 1 and 2, Docket Numbers 52-029 and 52-030, received combined licenses (COLs) NPF-099 and NPF-100 on October 26, 2016. The NRC's Final Environmental Impact Statement (FEIS), NUREG-1941, was issued on April 26, 2012 and was the result of the environmental review process which began with the submittal to the NRC of the Environmental Report (ER) along with the Combined License Application submitted on July 28, 2008.

8.2 Levy Site Environmental Description

The Levy Nuclear Plant Units 1 and 2 (LNP) site is located in Levy County, Florida. This is a large, primarily rural area located southwest of Gainesville and west of Ocala and approximately 15.5 kilometers (km) (9.6 miles [mi.]) northeast of the Crystal River Energy Complex, an energy facility also owned by Duke Energy Florida, LLC (DEF). While there are small communities and clusters of homes in the region, the area is sparsely populated. The nearest towns from the LNP site are Inglis and Yankeetown, which are located 6.6 km (4.1 mi.) southwest and 12.9 km (8.0 mi.) southwest from the site, respectively; the Gulf of Mexico is located approximately 12.8 km (7.9 mi.) west of the LNP site, and Lake Rousseau lies about 4.8 km (3.0 mi.) to the south. Figure 2.1.1-201 shows the location of the LNP site and the surrounding area.

The LNP site is approximately 1257 hectares (ha) (3105 acres [ac.]). Much of the LNP site, in particular the reactor locations, has been in intensive silviculture production for over a century.

Detailed information on the LNP site and its environment can be found in the Environmental Report of the LNP Combined License Application (COLA), and in the FEIS [NUREG-1941].

8.3 Site Description Until and After License Termination

This section will address a description of the Levy site as it currently is and until after the proposed license termination for each of the environmental description sections in the previously submitted Environmental Report. After receipt of the COLs in October 2016, no construction activities were initiated at the LNP site. In general, there have been no changes to the site since it was reviewed by the NRC during the Environmental Review for the COL. No plans have been made for use of the site after the proposed license termination. Duke Energy will comply with State and Federal requirements for any future use as long as Duke Energy owns the property.

8.3.1 Land

The project lands continue to be as described in ER Section 2.2. No construction activities have taken place on the site or in the vicinity of the site either in preparation for or in accordance with the COL. The Levy County Comprehensive Plan continues to designate the site as "Public Use" which provides for public buildings and grounds including public utilities. The site is in the same condition that it was during the Environmental Review for the COL. The forested areas of the site continue to be managed in accordance with accepted forestry management practices.

No Levy Project-related construction has taken place in the transmission corridors previously described for the project. Since many of these corridors encompassed existing right-of-ways, they may be used in the future for possible transmission expansions; however, if this were to occur, these corridors would have to undergo new siting reviews in accordance with State of Florida requirements.

8.3.2 Water

The hydrology, existing water use and water quality for the Levy site continues to be as described in ER Section 2.3. No changes have occurred to the site since the Environmental Review for the COL and no changes are anticipated before the licenses are terminated.

8.3.3 Ecology

The ecological descriptions of the terrestrial and aquatic communities on and within the vicinity of the Levy site remain as described in ER Section 2.4. Periodic reviews of listings for threatened or endangered species have not identified any changes. Pre-construction ecological surveys have not been

conducted and there are no construction activities anticipated before the licenses are terminated.

8.3.4 Socioeconomics

The socioeconomics associated with demographics, community characteristics, historic properties and environmental justice have not changed significantly from the description in ER Section 2.5. New and Significant reviews of changes for the site prior to issuance of the COL identified that population growth was less than originally projected in the ER. Lower than expected local population will put less stress on socioeconomic services than was originally projected. The cancellation of the Levy construction will not produce the economic benefits that were anticipated, but will not change the current socioeconomic environment present in the vicinity of the Levy site.

8.3.5 Geology

The geologic conditions at and in the vicinity of the Levy site remain the same as described in ER Section 2.6.

8.3.6 Meteorology and Air Quality

The general climate, meteorology and air quality at and in the vicinity of the Levy site remain the same as described in ER Section 2.7.

8.3.7 Related Federal Project Activities

There are no federal project activities associated with the Levy Project; the description in ER Section 2.8 remains the same.

8.4 Environmental Effects of License Termination

Since there has been no construction and no fuel ever received at the Levy site, there are no decommissioning activities that need to be evaluated for environmental effects. There are no radiological environmental impacts to be considered. As noted in Section 8.3 above, no changes have occurred and no changes are anticipated to the non-radiological environment associated with the Levy Project. Consequently, the environmental impacts associated with the proposed license termination are SMALL and clearly bounded by the conclusions reached in the Environmental Impact Statement.

8.5 Overview of Regulations Governing Environmental Aspects of License Termination

10 CFR 52.110 governs the termination of a license for a plant licensed under 10 CFR Part 52. Specifically 10 CFR 52.110(i)(2)(vii) requires that "A supplement to the environmental report, under § 51.53 of this chapter, describing any new information or significant environmental change associated with the licensee's proposed termination activities" be included in the LTP. 10 CFR 51.53 governs postconstruction environmental reports. No construction occurred.

8.6 Summary and Conclusions

Duke Energy has made no changes to the site since it was reviewed by the NRC during the Environmental Review for the COL. No pre-construction or construction activities have taken place or are anticipated to take place prior to the proposed license termination. No nuclear fuel has ever been received on the Levy site, consequently there are no radiological impacts that require evaluation. As described above, there are no decommissioning activities that require evaluation. The environment of the Levy site and its vicinity has not changed since the Environmental Report was originally reviewed and there has been no new and significant information identified which would alter the conclusions in the Final Environmental Impact Statement.

The termination of the Levy COL will not produce any environmental impacts that are not currently bounded by the Final Environmental Impact Statement for the Levy Project, NUREG-1941.

8.7 References

1. 10 CFR 52.110(i)(2)(vii)

2. Nuclear Regulatory Commission COLs NPF-99 and NPF-100

3. Regulatory Guide 1.179, Standard Format and Content of License Termination Plans for Nuclear Power Reactors, Rev. 1 dated June 2011

4. NUREG-1700, Standard Review Plan for Evaluating Nuclear Power Reactor License Termination Plans, Rev. 1 dated March 2003

5. NUREG-1941, Environmental Impact Statement for Combined Licenses (COLs) for Levy Nuclear Plant Units 1 and 2, April 2012