



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BLVD.
KING OF PRUSSIA, PA 19406-2713**

May 1, 2019

Terry Hobbs
Decommissioning General Manager
Duke Energy Florida, LLC
Crystal River Unit 3
15760 W. Power Line Road
Crystal River, FL 34428-6708

**SUBJECT: NRC INSPECTION REPORT NO. 05000302/2019001, DUKE ENERGY
FLORIDA, LLC, CRYSTAL RIVER UNIT 3, CRYSTAL RIVER, FLORIDA**

Dear Mr. Hobbs:

On April 8 – 12, 2019, the U.S. Nuclear Regulatory Commission (NRC) completed an on-site inspection under Inspection Manual Chapter 2561, "Decommissioning Power Reactor Inspection Program," at the permanently shut down Crystal River Nuclear Plant Unit 3 (CR-3). The inspector examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and the conditions of your license. The inspection consisted of observations by the inspector, interviews with personnel, and a review of procedures and records. The results of the inspection were discussed with you and other members of the CR-3 staff on April 11, 2019, and are described in the enclosed report. No findings of safety significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC document system (ADAMS), accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select Radioactive Waste; Decommissioning of Nuclear Facilities; then Regulations, Guidance and Communications. The current Enforcement Policy is included on the NRC's website at www.nrc.gov; select About NRC, Organizations & Functions; Office of Enforcement; Enforcement documents; then Enforcement Policy (Under 'Related Information'). You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

T. Hobbs

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No reply to this letter is required. Please contact Katherine Warner, at 610-337-5389, if you have any questions regarding this matter.

Sincerely,

/RA/

Raymond J. Powell, Chief
Decommissioning, ISFSI, and Reactor HP
Branch
Division of Nuclear Materials Safety

Docket No. 05000302
License No. DPR-72

Enclosure: Inspection Report 05000302/2019001
w/Attachment

cc w/encl: Distribution via ListServ

T. Hobbs

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 05000302/2019001
Docket No. 05000302
License No. DPR-72
Licensee: Duke Energy Florida, LLC (Duke Energy)
Facility: Crystal River Unit 3 (CR-3)
Location: 15760 W. Power Line Road
Crystal River, FL 34428-6708
Inspection Dates: April 8 – 12, 2019
Inspector: Katherine Warner, Health Physicist
Decommissioning, ISFSI, and Reactor HP Branch
Division of Nuclear Materials Safety, Region 1
Approved By: Raymond Powell, Chief
Decommissioning, ISFSI, and Reactor HP Branch
Division of Nuclear Materials Safety, Region I

EXECUTIVE SUMMARY

Duke Energy
Crystal River Nuclear Plant
NRC Inspection Report No. 05000302/2019001

An announced CR-3 decommissioning on-site inspection was performed April 8 – 12, 2019. The inspection included performance of confirmatory surveys and a review of occupational radiation exposure. The inspection consisted of observations by the inspector, interviews with Duke Energy personnel, a review of procedures and records, and plant walk-downs. The NRC's program for overseeing the safe operation of a shut-down nuclear power reactor is described in Inspection Manual Chapter (IMC) 2561, "Decommissioning Power Reactor Inspection Program."

Based on the results of this inspection, no findings of safety significance were identified.

REPORT DETAILS

1.0 Background

On February 20, 2013, Duke Energy sent a letter [Agency Documentation and Management System Accession Number ML13056A005] to the NRC certifying the permanent cessation of activities and certifying that the fuel had been permanently removed from the reactor. This met the requirements of 10 Code of Federal Regulations (CFR) 50.82(a)(1)(i) and 50.82(a)(1)(ii). CR-3 is currently in the SAFSTOR phase of decommissioning as described in IMC 2561. On January 22, 2019 Duke Energy submitted a license amendment request [ML19022A076] to the NRC requesting a partial site release of selected non-impacted areas from its Part 50 license.

2.0 SAFSTOR Performance and Status Review

a. Inspection Scope [Inspection Procedures (IPs) 83750 and 83801]

The inspector observed activities and reviewed documentation associated with occupational exposure and radioactive waste management to determine the effectiveness of site radiological programs. The inspector accompanied a CR-3 radiation protection (RP) technician during a plant walk-down that included: general area surveys, checking and verifying radiological postings, checking locked doors and gates, and general housekeeping. The inspector also toured the reactor building which included receiving a locked high radiation area briefing and entering the 'A/B' letdown cooler room to check material conditions. The inspector reviewed 2018 dose totals, radiation work permits, and As Low As Reasonably Achievable (ALARA) work plans to verify work activities were pre-planned effectively to limit worker exposure.

The NRC contracted Oak Ridge Associated Universities (ORAU) to perform confirmatory surveys of the areas being considered for partial site release. The inspector reviewed the survey plan, attended pre-job briefs, and observed ORAU performing the surveys.

b. Observations and Findings

The inspector determined that pre-job briefings were thorough and identified the significant potential hazards for the activities to be performed. The inspector determined that survey records were clear and complete, and RP technicians used appropriate instruments for the surveys. The inspector verified technician training and qualifications were up to date. The inspector verified that ALARA plans were developed as needed and were effective in limiting worker exposure and that occupational dose for 2018 was acceptable for the scope of the radiological activities performed. The inspector noted the main decommissioning activities are the plant modifications preparing the site for dormancy.

The inspector observed ORAU perform surveys in accordance with the survey plan. The NRC's final determination regarding the partial site release will be made by NRC staff in the Office of Nuclear Material Safety and Safeguards after the issuance of the final confirmatory survey data and analysis.

3.0 Exit Meeting Summary

On, April 11, 2019, the inspector presented the inspection results to Phyllis Dixon, Manager – Technical Support, and other members of Duke Energy’s staff. The inspector confirmed that proprietary information was not removed from the site.

PARTIAL LIST OF PERSONS CONTACTED

B. Akins, Manager - Radiation Protection and Chemistry
D. Bartlett, Radiation Protection Technician
C. Burtoff, Lead RP/Chemistry Scientist
P. Dixon, Manager - Technical Support
T. Hobbs, Decommissioning General Manager
A. Maldonado, Radiation Protection Technician
D. Summers, Radiation Protection Technician
R. Tomczak, Chief Chemistry Technician
M. Van Sicklen, Licensing

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

Audits and Reports

02161837, RP Focus Areas: 1) RAM Storage and Control, 2) Postings & Signs
02234977, RP Program: Industrial Health, Rad Shipping and Respiratory Protection, September 27, 2018
02254178, 2018 Radiation Protection Program Annual Review, January 28, 2019
19-01, Mini ALARA Work Plan- Install power and cameras at RB sump, install lighting in RB for SAFSTOR 2, January 14, 2019
2018 Annual Exposure Report, March 23, 2019

Condition Reports

02254890,

Miscellaneous

List of High Rad and Locked High Rad Areas
RWP 1048

Procedures

CR3M-PM-002, CR3 Radiation Protection Manual, Revision 2
HPS-1000, Radiation Protection – Conduct of Operations, Revision 2

Radiological Surveys

CR3-M-2018004-1
CR3-M-2018030-3
CR3-M-2019115-3
CR3-M-2019305-2
CR3-M-2019306-3
CR3-M-2019307-2
CR3-M-2019307-3
CR3-M-2019311-1
CR3-M-2019311-3
CR3-M-2019312-1

LIST OF ACRONYMS USED

ALARA	As Low As Reasonably Achievable
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CR-3	Crystal River Unit 3
Duke Energy	Duke Energy Florida, Inc.
IMC	Inspection Manual Chapter
IP	Inspection Procedure
NRC	U.S. Nuclear Regulatory Commission
PSDAR	Post Shutdown Activities Report
RWP	Radiation Work Permit