



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BOULEVARD
ARLINGTON, TEXAS 76011-4511

January 05, 2023

Troy Via, Chief Operations Officer
and Vice President Utility Operations
Omaha Public Power District
Fort Calhoun Station
Mail Stop FC-2-4
9610 Power Lane
Blair, NE 68008

SUBJECT: FORT CALHOUN STATION – NRC INSPECTION REPORT 05000285/2022-006

Dear Mr. Via:

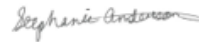
This letter refers to the U.S. Nuclear Regulatory Commission (NRC) decommissioning inspection conducted December 5-8, 2022, at the Fort Calhoun Station near Blair, Nebraska. The NRC inspectors discussed the results of the decommissioning inspection with members of your staff at the conclusion of the onsite inspection. The inspection results are documented in the enclosure to this letter.

The NRC inspection examined activities conducted under your license as they relate to public health and safety, the common defense and security, and compliance with the Commission's rules and regulations, and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observation of activities, and interviews with personnel. Specifically, the inspectors reviewed your decommissioning performance and the solid radioactive waste management and transportation programs. No violations were noted, and no response to this letter is required.

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

If you have any questions regarding this inspection report, please contact Linda Gersey at 817-200-1299, or the undersigned at 817-200-1249.

Sincerely,



Anderson, Stephanie signing on behalf
of Warnick, Gregory
on 01/05/23

Gregory G. Warnick, Chief
Decommissioning, ISFSI, and Operating
Reactor Branch
Division of Radiological Safety and Security

Docket No. 050-00285
License No. DPR-40

Enclosure:
Inspection Report 050-00285/2022-006

Electronic Distribution via Listserv

FORT CALHOUN STATION – NRC INSPECTION REPORT 05000285/2022-006 DATED -
JANUARY 05, 2023

DISTRIBUTION:

SMorris, ORA
JMonninger, ORA
MMuessle, DRSS
GMiller, DRSS
GWarnick, DRSS
VDricks, ORA
LWilkins, OCA
AMoreno, RIV/CAO
ROrlikowski, OEDO/ETA
RAlexander, ORA
SAnderson, NMSS/DUWP
JParrott, NMSS/DUWP
R4-DRSS-DIOR-DECOM

ADAMS ACCESSION NUMBER: **ML23004A207**

<input checked="" type="checkbox"/> SUNSI Review By: LMG	ADAMS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Sensitive <input checked="" type="checkbox"/> Non-Sensitive	<input type="checkbox"/> Non-Publicly Available <input checked="" type="checkbox"/> Publicly Available	Keyword NRC-002
OFFICE	DRSS/DIOR	C:DIOR		
NAME	LMGersey	GGWarnick		
SIGNATURE	LMG	SMG for GGW		
DATE	1/04/2023	1/05/2023		

OFFICIAL RECORD COPY

**U.S. NUCLEAR REGULATORY COMMISSION
REGION IV**

Docket No.: 050-00285

License No.: DPR-40

Report No.: 050-00285/2022-006

Licensee: Omaha Public Power District

Facility: Fort Calhoun Station

Location: 9610 Power Lane
Blair, Nebraska

Dates: December 5-8, 2022

Inspectors: Linda M. Gersey, Health Physicist
Decommissioning, ISFSI, and Operating Reactor Branch
Division of Radiological Safety and Security

Lee E. Brookhart, Senior ISFSI Inspectors
Decommissioning, ISFSI, and Operating Reactor Branch
Division of Radiological Safety and Security

Approved By: Gregory G. Warnick, Chief
Decommissioning, ISFSI, and Operating Reactor Branch
Division of Radiological Safety and Security

Enclosure

EXECUTIVE SUMMARY

Fort Calhoun Station NRC Inspection Report 050-00285/2022-006

This U.S. Nuclear Regulatory Commission (NRC) inspection was a routine, announced inspection of decommissioning activities being conducted at the Fort Calhoun Station. In summary, the inspectors concluded that the licensee was conducting activities in accordance with site procedures, license requirements, and applicable NRC regulations.

Decommissioning Performance and Status Review at Permanently Shutdown Reactors

- The licensee was conducting decommissioning activities in accordance with license and regulatory requirements. The inspectors determined that the licensee was adequately controlling decommissioning activities and radiological work areas at the facility. Staffing levels were commensurate with the current facility activities. (Section 1.2)

Solid Radioactive Waste Management and Transportation of Radioactive Materials

- The licensee was handling and securing radioactive material and radioactive waste to prevent unauthorized removal. The licensee had appropriate procedures in place related to radioactive waste and transportation. The licensee had an effective corrective actions program for radioactive waste and transportation activities. The licensee was packaging and shipping radioactive wastes in accordance with regulatory requirements and with the appropriate documentation and shipping papers. (Section 2.2)

Report Details

Summary of Plant Status

On June 24, 2016, Omaha Public Power District, the licensee, formally notified the NRC of its intent to permanently cease operations at Fort Calhoun Station (FCS) (Agencywide Documents Access and Management System [ADAMS] Accession No. ML16176A213). The licensee permanently ceased power operations on October 14, 2016, and certified pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.82(a)(1)(ii) that as of November 13, 2016, all fuel had been permanently removed from the FCS reactor vessel and placed into the spent fuel pool (ML16319A254).

The licensee submitted its Post-Shutdown Decommissioning Activities Report (PSDAR) to the NRC on March 20, 2017 (ML17089A759). The PSDAR described the licensee's proposed decommissioning activities and schedule. At that time, the licensee selected the SAFSTOR decommissioning option. SAFSTOR is a method of decommissioning in which a nuclear facility is placed and maintained in a condition that allows the facility to be safely stored and subsequently decontaminated (deferred decontamination) to levels that permit release for unrestricted use.

In April 2019, the licensee changed its decommissioning approach from SAFSTOR to DECON. DECON is a method of decommissioning in which structures, systems, and components that contain radioactive contamination are removed from the site and safely disposed at a commercially operated low-level waste disposal facility or decontaminated to a level that permits the site to be released for unrestricted use shortly after it ceases operation. By letter dated December 16, 2019, FCS submitted an updated PSDAR to reflect the change from SAFSTOR to DECON (ML19351E355).

On May 13, 2020, FCS removed the last canister of fuel and all special nuclear material from the spent fuel pool (ML20139A138). Accordingly, FCS entered the Independent Spent Fuel Storage Installation (ISFSI)-only Technical Specifications and Emergency Plan on May 18, 2020, and ISFSI-only Security Plan on June 24, 2020.

Title 10 CFR 50.82(a)(9) specifies that an application for license termination must be accompanied or preceded by a license termination plan (LTP). On August 3, 2021, FCS submitted its LTP to the NRC (ML21271A178). The NRC accepted the LTP for a detailed technical review on February 10, 2022 (ML22038A675). On July 13, 2022, the NRC held a public meeting at Blair Public Library & Technology Center and discussed the NRC's process and timeline for reviewing the LTP.

Since the previous inspection in September 2022, the licensee and contractors have continued with active decommissioning, including conducting final status surveys. Demolition was continuing with the auxiliary building and parts of the intake structure. Demolition work had been suspended at the turbine building due to a change order request by the contractor. At the time of the inspection, the reactor vessel internal (RVI) segmentation was essentially complete. The licensee continued to ship radioactive waste to licensed disposal sites. Preparations were being made to load Greater-Than-Class C (GTCC) waste into casks.

1 Decommissioning Performance and Status Review at Permanently Shutdown Reactors (IP 71801)

1.1 Inspection Scope

The inspectors conducted interviews, attended licensee meetings, reviewed procedures, and conducted site tours to:

- Evaluate the status of decommissioning and verify whether the licensee is conducting decommissioning and maintenance activities in accordance with regulatory and license requirements;
- Maintain awareness of work activities to assess licensee control and conduct of decommissioning; and
- Evaluate the licensee's decommissioning staffing, including that of the contracted workforce, to ensure that license requirements are met, as applicable to the current decommissioning status.

1.2 Observations and Findings

The PSDAR, Section 2.0, provides a general description of the planned decommissioning activities. The PSDAR states that decommissioning activities will be performed in accordance with written, reviewed, and approved site procedures. The inspectors reviewed selected decommissioning activities in progress, interviewed staff responsible for the work, and reviewed selected procedures and other related documents to ensure that decommissioning activities were being conducted as described in the PSDAR.

The inspectors attended several routine meetings during the inspection, including management's weekly performance challenge meeting and project review committee meeting. The licensee's conversations were detailed, and management facilitated knowledgeable, wide-ranging discussions to evaluate the risk of ongoing and upcoming planned activities, reviewed the project schedule and milestones, and evaluated resource needs with a focus on safety. In addition, the inspectors attended the morning meetings for the FERMA contractor, the Energy Solutions radioactive waste group, the radiation protection staff, and the RVI support group. Staff attending the meetings were encouraged to voice any concerns and ask for clarification regarding the day's work or other upcoming planned activities. The inspectors noted that safety was the first topic of discussion for every meeting attended.

The inspectors toured the facility, including containment, the containment waste structure (CWS), deconstruction areas, and the waste processing structure (WPS). While touring containment, the inspectors observed Westinghouse staff loading cut segments from the reactor vessel into a 3-60 liner. The radiation protection staff was in the area at all times, performing routine surveys of the area and performing decontamination of items and areas, as appropriate. The inspectors also observed a high radiation transfer of an 8-120 liner containing tri-nuke filters into an 8-120A cask. The inspectors attended the high radiation transfer pre-brief and discussions of the associated radiation work permit. Due to careful pre-planning by the licensee, the high radiation transfer went as expected.

The radiation safety staff was appropriately assessing the potential in changes to the radiation areas due to the constant fluctuation of work activities in containment, the CWS, and the WPS. The inspectors did not identify any radiation area that was not already identified and posted by the licensee. General observations by the inspectors identified good housekeeping practices in all areas.

The inspectors evaluated staff levels for the licensee and onsite contractors. Staffing levels continue to fluctuate, depending on the decommissioning work in progress. One example where the licensee was maximizing efficiency with staff included training all radiation safety personnel to perform multiple duties, regardless of which company they worked for, which ensured the availability of radiation staff when needed for different jobs. The contractors discussed the staffing and training for the upcoming loading of the GTCC waste from the reactor vessel. The inspectors determined that staffing levels were commensurate with the current facility activities and staffing needs for upcoming work was adequate.

1.3 Conclusion

The licensee was conducting decommissioning activities in accordance with license and regulatory requirements. The inspectors determined that the licensee was adequately controlling decommissioning activities and radiological work areas at the facility. Staffing levels were commensurate with the current facility activities.

2 Solid Radioactive Waste Management and Transportation of Radioactive Materials (IP 86750)

2.1 Inspection Scope

The inspectors conducted interviews, attended licensee meetings, reviewed procedures, and conducted site tours to:

- Verify that radioactive materials are being controlled, labelled, posted, and secured against unauthorized removal;
- Verify that detailed instructions and operating procedures for transfer, packaging, and transport of low-level and GTCC radioactive waste are being used;
- Evaluate the effectiveness of the licensee's problem identification and resolution program, related to radioactive waste storage, processing, and transportation activities; and
- Verify radioactive waste shipments made by the licensee were in compliance with NRC and U.S. Department of Transportation (DOT) regulations and the disposal site criteria.

2.2 Observations and Findings

The inspectors observed contractors moving contaminated rubble from the aux building, inside the radiologically controlled area (RCA), to the WPS. The rubble is placed into

trucks and covered by the mechanical tarps. Prior to exiting the RCA, the trucks are surveyed for radiological contamination, and then driven to the WPS. The roadway used by the trucks is surveyed several times a day to ensure there is no spread of contamination. The inspectors determined that the contractors were handling and controlling contaminated waste and performing surveys appropriately.

The inspectors had detailed discussions with the licensee contractor responsible for handling, securing, and transporting of the GTCC waste from the containment building to the ISFSI pad. Although the inspectors were not able to observe the movement of GTCC casks, it appeared that the licensee and contractor had procedures and training in place to conduct this work safely and securely.

The inspectors reviewed the licensee's condition reports associated with the radioactive waste management and transportation program, since July 2021. Specifically, the inspectors evaluated the reports for clarity of the documented condition, implementation, and appropriateness of the condition resolution, and verified licensee management had performed a final review of the condition. The inspectors discussed several of the condition reports with staff and management concerning observations and the management review process. The inspectors concluded that the licensee was appropriately implementing the corrective action program, as it concerns radioactive waste management and transportation of radioactive materials and had sufficient management oversight.

The inspectors reviewed the licensee's radioactive waste shipment log which documented 39 shipments from June 30, 2021, through December 7, 2021. Of the 39 shipments, 17 were made by truck and 22 shipments were made by rail. From January 1, 2022, through December 7, 2022, the licensee had made 41 truck and 396 railcar shipments, totaling 80.36 million pounds of waste. Radioactive waste shipped by truck was packaged in casks and contained Class A or Class B/C waste. Railcar shipments contained a mixture of demolition rubble and trash and was classified as dry active waste. All of the shipments were sent to a licensed waste burial site. The inspectors selected three shipments from the log to review for compliance with the regulations under 10 CFR 71.2, "Transportation of Licensed Material," and the licensee's procedures. These shipment numbers were RW-22-453, RW-22-417, and RW-22-430. All shipments were accurately characterized, packaged, and met applicable regulatory requirements. The inspectors discussed the process for preparing shipments with licensee personnel. Through these discussions and a review of pertinent records, the inspectors concluded that the shipments were made in accordance with NRC and U.S. DOT requirements and licensee procedures.

2.3 Conclusion

The licensee was handling and securing radioactive material and radioactive waste to prevent unauthorized removal. The licensee had appropriate procedures in place related to radioactive waste and transportation. The licensee had an effective corrective actions program for radioactive waste and transportation activities. The licensee was packaging and shipping radioactive wastes in accordance with regulatory requirements and with the appropriate documentation and shipping papers.

3 Exit Meeting Summary

On December 8, 2022, the inspectors presented the final inspection results to the licensee's staff. All proprietary information was returned to licensee representatives.

SUPPLEMENTAL INSPECTION INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

A. Barker, Regulatory Assurance & Emergency Planning Manager
A. Hanson, Principle Regulatory Specialist
T. Maine, Plant Manager, Decommissioning
J. Nowak, Project Manager, Decommissioning
T. Uehling, Senior Director, FCS Decommissioning
D. Whisler, Manager Radiation Protection & Chemistry

INSPECTION PROCEDURES (IPs) USED

IP 71801	Decommissioning Performance and Status Review at Permanently Shutdown Reactors
IP 86750	Solid Radioactive Waste Management and Transportation of Radioactive Materials

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened/Closed

None

Discussed

None

LIST OF ACRONYMS

10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
ADAMS	Agencywide Documents Access and Management System
CWS	Containment Waste Structure
FCS	Fort Calhoun Station
IP	Inspection Procedure
ISFSI	Independent Spent Fuel Storage Installation
LTP	License Termination Plan
NRC	U.S. Nuclear Regulatory Commission
PSDAR	Post-Shutdown Decommissioning Activities Report
RCA	Radiologically Controlled Area
WPS	Waste Processing Structure