



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

February 25, 2022

Mr. Troy Via, Chief Operation 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 050-00285/2022-001

Dear Mr. Via:

This letter refers to the U.S. Nuclear Regulatory Commission (NRC) decommissioning inspection conducted on January 25 - 27, 2022, at the Fort Calhoun Station, located near Blair, Nebraska. The NRC inspectors discussed the results of the decommissioning inspection with you and other members of your staff during a final exit meeting conducted on January 27, 2022. 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 confirmed 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 design changes. No violations were noted and no response to this letter is required.

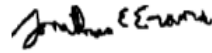
In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site 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.

T. Via

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If you have any questions regarding this inspection report, please contact Ms. Linda Gersey at 817-200-1299, or the undersigned at 301-415-4024.

Sincerely,



Signed by Evans, Jonathan
on 02/25/22

Jonathan E. Evans, Acting Chief
Reactor Inspection Branch
Division of Nuclear Materials Safety

Docket No.: 050-00285

License No.: DPR-40

Enclosure:

Inspection Report 050-00285/2022-001

FORT CALHOUN STATION – NRC INSPECTION REPORT 050-00285/2022-001
DATED – FEBRUARY 25, 2022

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket No.: 050-00285

License No.: DPR-40

Report No.: 050-00285/2022-001

Licensee: Omaha Public Power District

Facility: Fort Calhoun Station

Location: 9610 Power Lane
Blair, Nebraska

Dates: January 25-27, 2022

Inspectors: Linda M. Gersey
Health Physicist
Materials Licensing and Decommissioning Branch
Division of Nuclear Materials Safety

John P. Reynoso
Health Physicist
Reactor Inspection Branch
Division of Nuclear Materials Safety

Accompanied By: Jonathan E. Evans, Acting Chief
Reactor Inspection Branch
Division of Nuclear Materials Safety

Approved By: Jonathan E. Evans, Acting Chief
Reactor Inspection Branch
Division of Nuclear Materials Safety

Enclosure

EXECUTIVE SUMMARY

Fort Calhoun Station NRC Inspection Report 050-00285/2022-001

The U.S. Nuclear Regulatory Commission (NRC) inspection was a routine, announced inspection of decommissioning activities being conducted at the Fort Calhoun Station under inspection report 050-00285/2022-001. In summary, the licensee was conducting these activities in accordance with site procedures, license requirements, and applicable NRC regulations.

Decommissioning Performance and Status Reviews at Permanently Shutdown Reactors

- The licensee was implementing the decommissioning activities in accordance with the regulations and license requirements. (Section 1.2)
- The inspectors determined that the licensee was adequately controlling decommissioning activities and radiological work areas at the facility. (Section 1.2)
- The licensee had responded to, and took appropriate corrective actions, after a small fire occurred in the Intake Structure during January 2022. (Section 1.2)
- The licensee continued to track decommissioning costs appropriately. (Section 1.2)

Safety Reviews, Design Changes, and Modifications at Permanently Shutdown Reactors

- The licensee was adequately maintaining a safety evaluation program associated to decommissioning changes and work activities. (Section 2.2)
- The processes for evaluating the safety impacts of facility changes and modifications were adequate for complying with the provisions of 10 CFR 50.59. (Section 2.2)
- The licensee's 10 CFR 50.59 safety evaluation program provided effective periodic training for personnel preparing, reviewing, and approving safety evaluations. (Section 2.2)

Report Details

Summary of Plant Status

On June 24, 2016, Omaha Public Power District (OPPD), the licensee, formally notified the Nuclear Regulatory Commission (NRC) by letter of its intent to permanently cease operations of Fort Calhoun Station (FCS) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16176A213). By letter dated November 13, 2016, OPPD notified the NRC that it had permanently ceased power operations at FCS on October 14, 2016, and certified pursuant to Title 10 *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 in the FCS Spent Fuel Pool (ADAMS Accession No. ML16319A254). On December 28, 2016, the NRC informed the licensee that it was no longer under NRC Inspection Manual Chapter (IMC) 0305, "Operating Reactor Assessment Program," IMC 0608, "Performance Indicator Program," and IMC 2515, "Light-Water Reactor Inspection Program," when conducting oversight activities and assessing site performance (ADAMS Accession No. ML1636A449). The licensee was informed that the NRC's oversight of licensed activities under decommissioning would be conducted under the provisions of IMC 2561, "Decommissioning Power Reactor Inspection Program."

The licensee submitted its Post-Shutdown Decommissioning Activities Report (PSDAR) on March 20, 2017 (ADAMS Accession No. ML17089A759). The PSDAR is not a licensing action and therefore is not approved by the NRC; however, the NRC reviewed the report. The licensee's PSDAR described the decommissioning activities and schedule to support SAFSTOR strategy for the facility which is one of the options allowed by the NRC for decommissioning. The NRC subsequently held a public meeting in Omaha, Nebraska on May 31, 2017, to discuss comments regarding the FCS PSDAR. The transcript of the public meeting is available on the NRC's website at <http://www.nrc.gov/reading-rm/adams.html>, under (ADAMS Accession No. ML17160A394).

The licensee selected the SAFSTOR decommissioning options as described in the PSDAR. The licensee had planned to continue in SAFSTOR until the spent fuel was transferred to the U.S. Department of Energy in 2058. On April 29, 2019, however, OPPD voted to change its decommissioning approach from SAFSTOR to DECON by contracting with Energy Solutions. DECON will consist of decontamination and destruction of the site in a process that will begin much sooner on a date to be determined by OPPD. FCS submitted a new PSDAR to reflect the change from SAFSTOR to DECON (ADAMS Accession No. ML19351E355).

On May 13, 2020, FCS removed the last canister of fuel and all Special Nuclear Material from the spent fuel pool. The licensee documented this event with a letter to the NRC dated May 18, 2020 (ADAMS Accession No. ML20139A138). Accordingly, FCS has entered 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.

On August 3, 2021, FCS submitted their License Termination Plan to the NRC. This document will be reviewed in order to ensure that the final status of the site meets all regulatory requirements and upon approval will be documented in future inspection reports.

Since the previous inspection in October 2021, the licensee had completed or commenced the following major activities:

- Installation of the Containment Waste Structure, which allows containment access/regress through an intermediary structure to facilitate deconstruction activities within the containment structure and facilitate loading into transportation containers.
- Placed new containment ventilation system into operation.
- Placed Containment Waste Structure rail and crane system into production to facilitate waste removal from containment.
- Installed an elevator to access the operations deck from the outside.
- The Reactor Vessel Head was segmented and shipped to Clive, Utah, for disposal.
- Began reactor vessel internals removal and segmentation of internals assemblies.
- Completed interior demolition of the Auxiliary Building.
- Commencement of exterior demolition of the Auxiliary Building.
- Continued interior demolition of the Rad Waste Building, Turbine Building and Intake Structures.
- Upgraded and relocated the liquid radiological waste processing equipment.
- Constructed the heavy haul path from the deconstruction area to the Waste Processing Structure.

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

1.1 Inspection Scope

The inspectors reviewed documents and interviewed plant personnel to assess the licensee's performance in the following areas:

- Status of decommissioning and verify whether the licensee is conducting decommissioning and maintenance activities in accordance with regulatory and license requirements.
- Licensee awareness of work activities to assess their control and conduct of decommissioning.
- Status of the licensee's decommissioning staffing, personnel qualifications, and training requirements, including that of the contracted workforce, to ensure that license requirements are met, as applicable to the current decommissioning status.
- Progress and changes that potentially impact decommissioning financial assurance, to supplement information for the Financial Assurance Branch to support and ensure a thorough financial analysis review of the annual decommissioning trust fund reported by the licensee.
- Whether the licensee is identifying problems related to decommissioning and maintenance activities at an appropriate threshold and entering them into the corrective action program.
- Performed plant tours to assess field conditions and decommissioning activities.
- Observed and assessed the status of facility housekeeping.

1.2 Observations and Findings

The inspectors listened to the weekly senior leadership Performance Challenge Meeting, which focused on the overall status of the plant and the upcoming major work activities.

The licensee's conversations were detailed, and management facilitated knowledgeable, wide ranging discussions to discern risk, schedule, resource needs, and how to improve the process controls and oversight. The licensee management discussions demonstrated a focus on safety in addition to efficiency and budget. The inspectors also met with the Senior Director for Decommissioning to discuss plans for decommissioning activities, current and projected staffing levels as site activities progress, and the decommissioning milestones.

The inspectors toured the facility, including containment, the new Containment Waste Structure, deconstruction areas, Waste Processing Structure, and Intake Structure. While touring containment, the inspectors observed a dry-run of the loading evolution for the T-Bell and the Basket to Cask Liner alignment. The inspectors noted that the licensee identified several lessons-learned from the dry-run, which included staging a camera on a long pole for remote viewing for assistance with the alignment of the T-Bell over the Cask Liner and adding a safety advocate on the Operating Deck who is responsible for observing safety of the workers during the T-Bell operations.

Through observations and plant tours, discussions with staff, and records reviews, the inspectors determined that the licensee was appropriately controlling and conducting facility operations in a safe manner. General observations by the inspectors identified good housekeeping practices, and appropriate radiological postings and labeling. The inspectors did not identify any radiation area that was not already identified and posted by the licensee.

On January 5, 2022, the licensee notified the NRC, in accordance with 10 CFR 50.72(b)(2)(xi), of a small fire that occurred in the Intake Structure during internal demolition work. The fire was started when a contractor used a torch to punch a hole in a traveling river water screen to allow for removal. The Fire Watch immediately responded, although due to the inaccessibility of the flames, an offsite fire department was required to extinguish the fire. The fire occurred in the Non-Radiological area of the plant and there was no release of radioactivity or hazardous materials. There were no injuries reported. To evaluate the licensee's response to the event, the inspectors conducted interviews with contractors and site personnel, observed the Intake Structure, and evaluated the licensee's Condition Report and follow-up actions. The fire occurred because the contractors mistakenly believed the screens were constructed of stainless steel, which would not have reacted to the use of a torch. Upon further investigation, the licensee identified that the screens had been purchased in a poly-type material to prevent rusting from contact with river water. To prevent a recurrence of this event, the licensee committed to closer scrutiny of the composition of materials being demolished. The inspectors concluded that the licensee had responded to the fire in accordance with their Station Fire Plan and took appropriate corrective actions.

The inspectors conducted a review of maintenance procedures, condition reports, and the prioritization schedule for preventive maintenance. The licensee's work prioritization schedule is consistent with the current status of the plant. The equipment selected for prioritization are of risk significance and are being maintained in accordance with the licensee's maintenance program with the appropriate amount of managerial oversight.

The inspectors also evaluated staff levels and training for both maintenance and the onsite contractors. Staffing levels are expected to change as the licensee progresses through the deconstruction and decommissioning process. The inspectors determined

that staffing levels for these groups were commensurate with the current plant condition. Staff in both groups were qualified in their applicable positions with annual refresher training up-to-date as required by licensee procedures.

Licensee decommissioning cost planning and assessment, being an important part of the decommissioning process, were evaluated by the inspection team in a meeting with senior licensee management. Attending this meeting was also a project manager from the NRC Financial Assurance Branch. The inspectors determined that the licensee's cost planning and assessment were inclusive of current and planned major decommissioning activities as identified in the PSDAR. The inspectors also determined that licensee funding and expenditures were tracking as planned by the licensee with no significant deviations to expenditures up to current date nor major deviations from the decommissioning schedule.

1.3 Conclusion

The licensee was implementing the decommissioning activities in accordance with the regulations and license requirements. The inspectors determined that the licensee was adequately controlling decommissioning activities and radiological work areas at the facility. The licensee had responded to and took appropriate corrective actions after a small fire occurred in the Intake Structure during January 2022. The licensee continued to track decommissioning costs appropriately.

2 **Safety Reviews, Design Changes, and Modifications at Permanently Shutdown Reactors (37801)**

2.1 Inspection Scope

The inspectors reviewed documents, interviewed plant personnel, and observed work activities to assess the licensee's performance in the following areas:

- Determination that licensee procedures and processes ensure they are adequately identifying changes to technical specifications (TS) resulting from proposed changes, tests, experiments, and modifications.
- Evaluate whether the licensee's safety review process committee is appropriately staffed and trained in accordance with its charter, as defined in the licensee's TSs, quality assurance plan, or other licensing documentation, as applicable.
- Verify supporting design-basis documentation, such as calculations, design specifications, vendor manuals, PSDAR, and TSs are updated consistent with design changes.
- Verify that the licensee's training program provides effective periodic training for personnel preparing, reviewing, and approving safety evaluations. Verify that the training and qualification of the personnel conducting the 10 CFR 50.59 training is consistent with license requirements.

2.2 Observations and Findings

The inspectors evaluated the licensee's 10 CFR 50.59 safety evaluation program, as implemented by FCSI-RA-203-1, "50.59 Resource Manual" Review Process," Revision 4. The inspectors also reviewed processes governed by regulations under 10 CFR 50.59 that allow a licensee to make changes in the facility as described in the

Final Safety Analysis Report, as updated (FSAR), make changes in the procedures as described in the FSAR, and conduct tests or experiments not described in the FSAR without obtaining a license amendment, provided the criteria established in the regulations are met. The inspectors determined that the procedures and work processes provided adequate quality instructions to assure proper implementation, review, and approval related to design changes, and activities of regulatory concerns involving decommissioning.

The inspectors assessed various decommissioning and deconstruction activities including a review of three 10 CFR 50.59 screenings, four maintenance and/or work activities, and three design changes to ascertain whether the licensee appropriately utilize the 10 CFR 50.59 process. The inspectors concluded that the licensee reviewed the activities under the 10 CFR 50.59 screening process in accordance with procedural and regulatory requirements. For the screenings which did not result in an evaluation, the screeners had documented an adequate explanation as to why an evaluation was not necessary. In addition, the inspectors performed walk downs of facility changes impacting the monitoring of radioactive effluents to ensure changes do not negatively impact other systems or the environment. No concerns were identified by the inspectors.

The inspectors reviewed the licensee's 10 CFR 50.59 safety evaluation program and confirmed that it provided effective periodic training for personnel responsible for preparing, reviewing, and approving safety evaluations. The inspectors reviewed the qualifications for the screeners, evaluators, reviewers, and the process owner to verify they were qualified and trained at the time of performing their job functions and found them to be adequate.

2.3 Conclusion

The licensee was adequately maintaining a safety evaluation program associated to decommissioning changes and work activities. The processes for evaluating the safety impacts of facility changes and modifications were adequate for complying with the provisions of 10 CFR 50.59. The licensee's 10 CFR 50.59 safety evaluation program provided effective periodic training for personnel preparing, reviewing, and approving safety evaluations.

3 **Exit Meeting Summary**

On January 27, 2022, the inspectors presented the final inspection results to Mr. Troy Via, Chief Operation Officer and Vice President Utility Operations, and other senior members of the licensee's staff. All proprietary information was returned by the NRC inspection team.

SUPPLEMENTAL INSPECTION INFORMATION
KEY POINTS OF CONTACT

Licensee Personnel

T. Via, Chief Operation Officer and Vice President Utility Operations
A. Barker, Regulatory Assurance & Emergency Planning Manager
C. Cameron, Principal Regulatory Specialist
T. Uehling, Senior Director, Decommissioning

INSPECTION PROCEDURES (IPs) USED

IP 71801	Decommissioning Performance and Status Reviews at Permanently Shutdown Reactors
IP 37801	Safety Reviews, Design Changes, and Modifications at Permanently Shutdown Reactors

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Open

None

Closed

None

Discussed

None

Enclosure

LIST OF ACRONYMS

ADAMS	Agencywide Documents Access and Management System
CFR	<i>Code of Federal Regulations</i>
FCS	Fort Calhoun Station
IMC	Inspection Manual Chapter
IP	Inspection Procedure
ISFSI	Independent Spent Fuel Storage Installation
NRC	U.S. Nuclear Regulatory Commission
OPPD	Omaha Public Power District
PSDAR	Post-Shutdown Decommissioning Activities Report
TS	Technical Specifications
FSAR	Final Safety Analysis Report (as updated)