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

July 01, 2025

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
050-00285/2025-003

Dear Troy Via:

This letter refers to the U.S. Nuclear Regulatory Commission (NRC) decommissioning inspection conducted on June 10-11, 2025, 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 inspection on June 11, 2025. 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, solid radioactive waste and transportation, and occupational radiation exposure programs. No violations were noted, and no response to this letter is required.

No findings or violations of more than minor significance were identified during this inspection.

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,

Signed by Josey, Jeffrey
on 07/01/25

Jeffrey E. Josey, Chief
Decomm., ISFSI, and Operating Reactor Branch
Division of Radiological Safety and Security

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

Enclosure:
Inspection Report 050-00285/2025-003

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FORT CALHOUN STATION – NRC INSPECTION REPORT 05000285/2025-003 – DATED JULY 01, 2025

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U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.	050-00285
License No.	DPR-40
Report No.	050-00285/2025-003
Licensee:	Omaha Public Power District
Facility:	Fort Calhoun Station
Location:	9610 Power Lane Blair, Nebraska
Inspection Dates:	June 10-11, 2025
Exit Meeting Date:	June 11, 2025
Inspectors:	Linda M, Gersey, Health Physicist Decommissioning, ISFSI, and Operating Reactor Branch Division of Radiological Safety and Security Christian R. Dennes, Health Physicist Decommissioning, ISFSI, and Operating Reactor Branch Division of Radiological Safety and Security
Approved By:	Jeffrey E. Josey, Chief Decommissioning, ISFSI, and Operating Reactor Branch Division of Radiological Safety and Security
Attachment:	Supplemental Inspection Information

Enclosure

EXECUTIVE SUMMARY

Fort Calhoun Station
NRC Inspection Report 050-00285/2025-003

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 Reviews at Permanently Shutdown Reactors

- The licensee effectively implemented its decommissioning activities in accordance with the approved procedures and commitments provided in the License Termination Plan. (Section 1.2a)
- The licensee maintained adequate radiological control over these work activities. (Section 1.2b)
- The licensee had sufficient staff to perform the work in progress. (Section 1.2c)

Occupational Radiation Exposure at Permanently Shutdown Reactors

- The licensee had programs in place to ensure adequate protection of worker health and safety from exposure to radiation or radioactive material. (Section 2.2a – Section 2.2d)
- The licensee had adequately identified problems and implemented appropriate and timely corrective actions related to occupational radiation safety. (Section 2.2e)

Solid Radioactive Waste Management and Transportation of Radioactive Materials

- The licensee was adequately implementing its program for processing, handling, storage, and transportation of radioactive material, in accordance with internal procedures, LTP commitments, and regulatory requirements. (Section 3.2a – Section 3.2d)

Report Details

Summary of Site Status

Fort Calhoun Station permanently ceased power operations in 2016. In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 50.82(a)(9), an application for license termination must be accompanied or preceded by the license termination plan (LTP). Revision 1 of the LTP was dated December 6, 2023, Agencywide Documents Access and Management System (ADAMS) Accession No. ML23346A152). The NRC approved Revision 1 by license amendment dated January 31, 2024 (ML24019A167).

Since the previous inspection, the licensee had completed the backfill of the auxiliary building basement to 1001 feet elevation and inside containment to 994 feet elevation. During the onsite inspection, the licensee continued to backfill the auxiliary building basement with soil, with the goal of reaching 1002 feet elevation.

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

The inspectors observed site activities, reviewed documents, and interviewed site personnel to:

- Evaluate the status of decommissioning and verify whether the licensee was conducting decommissioning activities in accordance with regulatory and license requirements.
- Maintain awareness of work activities to assess licensee control and conduct of decommissioning.
- Evaluate select licensee decommissioning staffing, personnel qualifications, and training requirements, including that of the contracted workforce, to ensure that license requirements were met, as applicable to the current decommissioning status.

1.2 Observations and Findings

a. Status of Decommissioning

The inspectors observed the licensee's weekly performance challenge meeting to determine the status of decommissioning activities. During the meeting, the licensee discussed the following topics: any immediate safety concerns including industrial safety; critical path overview; significant milestones; deconstruction program performance; focus areas; radiation protection technician resources; and regulatory assurance activities. The immediate safety concerns at the time of the inspection pertained to the hazards of the large number of haul trucks on site. Over 10 haul trucks were on site moving clean soil to the auxiliary building for backfilling.

During the inspection, the licensee and their contractors continued to backfill the auxiliary building basement with clean soil. Once the backfill reaches 1002 feet elevation, the auxiliary building remnant walls will be demolished and treated as radioactive waste. The internal containment walls had been decontaminated, a final status survey (FSS) performed in the basement, and the basement backfilled with soil to 994 feet elevation. The NRC had not verified the final status survey (FSS) for the

containment basement and thus the license had backfilled at-risk. The licensee had provided the NRC with four split samples from the containment basement, although the results of those samples were not available at the time of the inspection. The licensee indicated that they would be conducting FSSs of the upper walls of containment in the coming weeks. The licensee's anticipated schedule for demolition of the containment's first 10 feet of concrete is in August 2025.

Several underground decommissioning projects were being conducted at the time of the inspection. The underground sanitary sewer and associated piping was undergoing FSSs. Septic piping that will impact critical utilities will remain in place and FSSs will be completed in-situ. Underground utility removal will commence soon.

The licensee indicated that the FSSs for the interior of the containment building and removal of the underground utilities were slightly behind schedule, and backfilling of the auxiliary building basement was ahead of schedule. Overall, the licensee was conducting decommissioning activities within the projected schedule.

b. Decommissioning Operations

The inspectors attended a daily site status meeting and pre-job contractor meetings to ensure that the licensee and its decommissioning contractor continued to plan and implement decommissioning in a controlled manner. The inspectors noted that the pre-job meetings provided adequate information about the field conditions, decommissioning activities, and overall safety for the staff.

The inspectors performed a site tour to assess field conditions and decommissioning activities by assessing material condition of structures, housekeeping, and worker level of knowledge of procedure use. The inspectors walked over the licensee's controlled area near the river and ensured the access points were secured against unauthorized entry. The inspectors also toured the containment building and the Waste Processing Structure (WPS), although no work was being performed in these areas at the time of the inspection. During the tour of the WPS, the inspectors verified that the High Radiation Area containing the higher activity waste was appropriately secured and posted. The inspectors also noted that the radiologically controlled entry points to the radioactive waste processing area in the WPS were being adequately maintained by having survey meters, radioactive waste containers, and appropriate personal protective clothing available.

The major work being performed at the time of the inspection was backfilling the auxiliary building basement with clean soil. The inspectors observed radiation protection technicians (RPTs) performing radiological surveys of the haul truck's tires prior to entry in the auxiliary building area and prior to entry into the clean soil area. After the haul trucks had emptied the soil in the auxiliary building area, and prior to leaving the controlled area, the inspectors observed RPTs perform more through radiological surveys of the trucks. The inspectors interviewed several RPTs performing these surveys and noted that all individuals were knowledgeable about the procedural requirements. The inspectors noted that the licensee and its contractor were maintaining control of the haul truck movements to ensure personnel safety.

The inspectors conducted independent radiological surveys during site tours using a Thermo Scientific Radeye G survey meter (serial number 0372, calibration due date of May 16, 2026). Overall, the measured exposure rates were consistent with existing signs, boundaries, and postings.

c. Decommissioning Staffing and Training

During the performance challenge meeting, the licensee discussed the increase in RPT resources needed in August to support processing of the containment concrete waste. The licensee stated that they had filled those positions and those individuals would be onsite soon. Since the previous NRC inspection in April 2025, new staff had been hired in the FSS group and by the licensee's radioactive waste contractor. The inspectors reviewed the training for the individuals and found it met the requirements for their positions. The inspectors reviewed the organizational chart and confirmed that all critical positions had been filled.

1.3 Conclusions

The licensee effectively implemented its decommissioning activities in accordance with the approved procedures and commitments provided in the LTP. The licensee maintained adequate radiological control over these work activities. The licensee had sufficient staff to perform the work in progress.

2 Occupational Radiation Exposure at Permanently Shutdown Reactors (IP 83750)

2.1 Inspection Scope

The inspectors gathered sufficient information to determine whether licensee performance met the following objectives:

- To ensure adequate protection of worker health and safety from exposure to radiation or radioactive material.
- To evaluate whether the licensee adequately identifies problems and implements appropriate and timely corrective actions related to occupational radiation safety.

a. Organization, Changes, and Training

The inspectors noted that since the last NRC inspection of Inspection Procedure (IP) 83750, in February 2025, no significant organizational, procedural, or instrumentation changes had been made that affect the occupational radiation exposure program. The inspectors reviewed the training and qualifications of several RPTs and verified that they had the required qualifications and training to implement their duties.

b. Radiological Work Planning and Observation

The inspectors attended pre-job meetings with the licensee's contractors prior to the backfilling of the auxiliary building basement. The discussions during the meeting included ensuring that the RPTs understood their role in surveying the haul trucks and the caution needed while the trucks were moving around the site. The inspectors determined that the planning and preparations were sufficient for the day's radiological

work. The inspectors observed the RPTs surveying the haul trucks at several survey stations and interviewed a select number of RPTs to verify they understood the requirements of the survey. The inspectors noted that the RPTs were knowledgeable and employed appropriate radiological controls and the procedures were sufficient to control the spread of contamination and prevent the unintended release of radioactive materials from the site

c. Dosimetry

The inspectors reviewed the licensee's 2024 annual occupational exposure records. During 2024, a total of 428 individuals were monitored for occupational radiation exposure, the majority of which received less than 0.1 rem for the year. A total of 35 individuals were notified of their 2024 annual dose in accordance with 10 CFR 19.13(b). The highest total effective dose equivalent for an employee in 2024 was recorded as 0.587 rem, which is significantly lower than the regulatory dose limit of 5 rem. The inspectors also verified that the licensee had reported the 2024 annual report of individual monitoring to the NRC in accordance with 10 CFR 20.2206(b) and licensee procedure FCSD-RP-280, "Occupational Exposure Reporting," Rev 2.

d. Airborne and Contamination Controls

The inspectors toured areas where radiological air monitors were located, including the WPS, containment, and area air samplers. In the WPS, the licensee had 1 continuous particulate air monitor, 6 radiation area monitors which transmit data to the radiation protection team, and 4 portable goose-neck samplers for use when work is occurring. The inspectors observed several operating portable goose-neck samplers in the containment building area and in locations where the RPTs were conducting surveys on the haul trucks. The inspectors determined that the licensee had appropriately considered the use, operation, and placement of samplers to ensure appropriate occupational air monitoring.

The inspectors observed the ventilation systems in containment and the WPS. The inspectors verified that the ventilation systems were operable and sufficient to prevent the spread of radiological contamination. The inspectors reviewed the annual 2024 data for individual committed effective dose equivalents and noted that only one individual had a recordable minor intake. The 2024 data results indicate that there were no widespread problems with ambient air concentrations that negatively impacted workers.

e. Problem Identification and Resolution

The inspectors reviewed the list of condition reports (CRs) related to occupational exposure that were issued since the last inspection of IP83750. Two CR's were generated for individuals who lost their dosimeters. The corrective actions included completing form FCSD-RP-203-F-01, " Personnel Exposure Investigation," estimating the exposure for the time period the dosimeter was worn, and adding the dose estimate to the formal dose record. The inspectors determined that the licensee was adequately following their procedures and regulatory requirements.

3.3 Conclusions

The licensee had programs in place to ensure adequate protection of worker health and safety from exposure to radiation or radioactive material. The licensee had adequately identified problems and implemented appropriate and timely corrective actions related to occupational radiation safety.

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

3.1 Inspection Scope

The inspectors observed site activities, reviewed associated procedures, radioactive waste manifests, shipping documentation, and interviewed site personnel to assess the licensee's implementation of regulatory requirements and procedural controls for the safe processing, handling, storage, and transportation of radioactive waste.

3.2 Observations and Findings

a. Radioactive Material Storage and Control

The inspectors conducted walkdowns of areas designated for the storage and control of radioactive materials. The reviewed areas included the radiologically controlled areas and the WPS. During the inspection, inspectors observed that the licensee had performed segregation of contaminated rubble within the WPS and adequately identified concrete debris exhibiting elevated radiation levels. Inspectors observed the control and storage of the high radiation level material in a locked high radiation area (LHRA) vault located within the WPS. The vault was properly posted in accordance with the requirements of 10 CFR 20.1902 and access controls were implemented as required by 10 CFR 20.1601. The areas observed by the inspectors containing radioactive material were controlled, posted, and maintained in accordance with regulations and licensee procedures.

The inspectors conducted observations of containers used for the storage of radioactive materials located within the WPS to assess the physical condition of the containers and verify compliance with applicable regulatory requirements. The inspectors determined that the observed containers were adequately maintained and exhibited no signs of structural degradation, including swelling, corrosion, leakage, or deformation. The inspectors concluded that the licensee's management of radioactive material containers was adequate and met regulatory requirements.

The inspectors reviewed the licensee's implementation of physical protection requirements for Category 2 quantities of radioactive material, as required by 10 CFR 37. The inspectors observed that the licensee had maintained control of Category 2 quantities of radioactive sealed sources used for calibration of radiation protection survey instruments. The licensee procedures, physical barriers, and security personnel were sufficient to ensure control of the sources.

The licensee had not transferred or replaced the sources since the last inspection. An RPT demonstrated how the sources are accounted for and leak tested and provided records of source inspections and leak checks. The physical protection measures, procedural controls, and source accountability processes in place were adequate to ensure the security and integrity of the Category 2 radioactive material.

b. Radioactive Waste Processing

The inspectors reviewed the licensee's procedures and field activities associated with the processing and handling of radioactive demolition waste within the WPS. The inspectors observed that demolition rubble from the containment interior was processed and separated based on material composition. Materials exhibiting elevated radiation dose rates had been identified through surveys and segregated or inserted into the LHRA vault. The inspectors noted the implementation of adequate health physics controls, including the proper use of personal protective equipment and the use of continuous air monitoring equipment to assess airborne radioactivity and maintain occupational exposure As Low As Reasonably Achievable. In addition, inspectors noted good use of industrial safety practices.

c. Transportation of Radioactive Materials

The inspectors reviewed the licensee's transportation program for compliance with NRC requirements related to the shipment of radioactive materials. This included the broker training records, radioactive waste manifests, shipping documentation, and implementing procedures. The inspectors examined training records and lesson plans associated with the licensee's broker training program. The inspectors reviewed training records for one certified broker, which included verification that training was current and that records were properly signed at the time of radioactive material shipment authorization. The training program was being conducted in accordance with regulatory requirements and licensee procedures.

The inspectors determined that there were no significant changes since the last inspection in terms of organizational structure, facilities, equipment, or the programs and procedures associated with the packaging and transportation of radioactive waste. The inspectors reviewed two shipment packages for rail and road to verify the adequacy of the shipment documentation, including characterization data, waste classification, and confirmation that the shipments were prepared in accordance with NRC and U.S. Department of Transportation regulations. The shipping papers had the proper emergency contact details, transport index values, and United Nations Identification number. The licensee's transportation activities was found to be in compliance with requirements. No shipments involving Type B quantities of radioactive material have occurred since the removal of the reactor vessel segmentation components from the site in the previous year.

d. Problem Identification and Resolution

The inspectors noted that there were no CRs related to radioactive waste or transportation of radioactive materials since the last time IP 86750 was used for inspection in December 2024.

3.3 Conclusions

The licensee was adequately implementing its program for processing, handling, storage, and transportation of radioactive material, in accordance with internal procedures, LTP commitments, and regulatory requirements.

4 Exit Meeting Summary

The inspectors presented the preliminary inspection results to the licensee's management and other members of the licensee's staff at the conclusion of the inspection on June 11, 2025. The inspectors asked if any materials examined were proprietary. No proprietary information was removed from the site.

SUPPLEMENTAL INSPECTION INFORMATION
KEY POINTS OF CONTACT

Licensee and Contractor Personnel

B. Pearson, Regulatory Assurance & Emergency Planning Manager
M. Cuarenta, Waste Manager, Energy*Solutions*
K. Daughenbaugh, ISFSI Shift Supervisor
J. Emich, Waste Manager, Energy*Solutions*
R. Hugenroth, Nuclear Oversight Manager
A. Hansen, Principal Regulatory Assurance
C. Heimes, Manager ISFSI Site Security
A. Kudra, Project Manager FSS, Energy*Solutions*
T. Maine, Plant Manager
D. Whisler, Radiation Protection Manager

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened
None

Closed
None

Discussed
None

PARTIAL LIST OF DOCUMENTS REVIEWED

Procedures
FCSD-RP-503, “Unconditional Release Survey Method,” Rev 7
FCSD-RP-210, “Dosimetry Issue, Usage, and Control,” Rev 1
FCSD-RP-310, “Radiological Air Sampling,” Rev 4
FCSD-RP-280, “Occupational Exposure Reporting,” Rev 2
FCSD-RP-224, “Personnel Air Monitoring and DAC-Hr Tracking,” Rev 6
FCSD-RP-376, “Radiological Posting, Labelling, and Marking,” Rev 4
FCSD-RP-460, “Controls for Hogh and Locked High Radiation Areas,” Rev 3
FCSD-RW-PG-100, “Waste Management Program,” Rev 0
FCSD-RW-PG-101, “Radwaste Process Control Program,” Rev 2
FCSD-RW-PN-201, “Waste Management Interfaces and Organizational Responsibilities,” Rev 0
FCSD-RW-PR-302, “Waste Material Control and Tracking,” Rev 0
FCSD-RW-PR-303, “Waste Characterization and Classification,” Rev 0
FCSD-RW-PR-315, “Training and Qualification of Waste Management Personnel,” Rev 3
FCSD-RW-PR-320, “Radioactive Material Shipments,” Rev 0
FCSD-RP-737, “Calibration of The RadEye G Portable Survey Meter,” Rev 0
FCSD-RP-751, “Calibration of Eberline RadEye SX Portable Survey Meter,” Rev 0
FCSD-RP-756, “Calibration of The RadEye NL Survey Meter,” Rev 0
FCSD-RP-800, “Control, Inventory, and Leak Testing of Radioactive Sources,” Rev 1

Licensing Bases Documents
Fort Calhoun 1 Technical Specification, Amendment 299
License Termination Plan, January 31, 2024

Miscellaneous
FCS 2024 Electronic NRC Form 5 Data
FCS Radioactive Source Inventory Card, Source Name: 1307
FCS Radioactive Source Inventory Card, Source Name: 1468
FCSD-RP-203-F-01 Personnel Exposure Investigation

INSPECTION PROCEDURES USED

IP 71801	Decommissioning Performance and Status Reviews at Permanently Shutdown Reactors
IP 83750	Occupational Radiation Exposure at Permanently Shutdown Reactors
IP 86750	Solid Radioactive Waste Management and Transportation of Radioactive Materials

LIST OF ACRONYMS

CFR	*Code of Federal Regulations*
CR	Condition Report
FSS	Final Status Survey
IP	Inspection Procedure
LHRA	Locked High Radiation Area
LTP	License Termination Plan
NRC	Nuclear Regulatory Commission
RPT	Radiation Protection Technician
WPS	Waste Processing Structure