UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

October 6, 2002

R. T. Ridenoure
Division Manager - Nuclear Operations
Omaha Public Power District
Fort Calhoun Station FC-2-4 Adm.
P.O. Box 550
Fort Calhoun, Nebraska 68023-0550

SUBJECT: FORT CALHOUN STATION - NRC RADIATION SAFETY TEAM INSPECTION REPORT 50-285/02-09

Dear Mr. Ridenoure:

On September 20, 2002, the NRC completed a radiation safety team inspection at the Fort Calhoun Station. The enclosed report documents the inspection findings that were discussed with Mr. D. Bannister, and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your operating license. The team reviewed selected procedures and records, observed activities, and interviewed personnel. Specifically, the team evaluated the inspectable areas within the Radiation Protection Strategic Performance Area that are scheduled for review every two years. These areas are:

- Radiation Monitoring Instrumentation
- Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems
- Radioactive Material Processing and Transportation
- Radiological Environmental Monitoring Program and Radioactive Material Control Program

On the basis of the sample activities and documents selected for observation and review, there were no findings of significance identified during the inspection. The team concluded that, in general, the four program areas listed above were properly implemented in accordance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

/RA/

J. Blair Nicholas, Acting Chief
Plant Support Branch
Division of Reactor Safety

Docket: 50-285
License: DPR-40

Enclosure:
NRC Inspection Report
50-285/02-09

cc w/enclosure:
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DOCUMENT NAME: R:_FCS\FC2002-09RP-Team-MPS.wpd

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10 /03 /02	10 / 06 /02			

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket:	50-285
License:	DPR-40
Report No.:	50-285/02-09
Licensee:	Omaha Public Power District
Facility:	Fort Calhoun Station
Location:	Fort Calhoun Station FC-2-4 Adm P.O. Box 399, Hwy. 75 - North of Fort Calhoun Fort Calhoun, Nebraska
Dates:	September 16 - 20, 2002
Inspectors:	Michael P. Shannon, Senior Health Physicist - Team Leader Larry Ricketson, Senior Health Physicist Bernadette D. Baca, Health Physicist Daniel R. Carter, Health Physicist
Approved By:	J. Blair Nicholas, Acting Chief, Plant Support Branch Division of Reactor Safety
ATTACHMENT:	Supplemental Information

SUMMARY OF FINDINGS

Fort Calhoun Station
NRC Inspection Report 50-285/02-09

IR 05000285/2002-009; Omaha Public Power District; 09/16/2002 - 09/20/2002; Fort Calhoun Station; Radiation Safety Team Inspection

The inspection was conducted by a team of four region-based inspectors. Based on the results of the inspection, the team did not identify any significant findings. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

2. RADIATION SAFETY
Cornerstone: Occupational Radiation Safety [OS]

2OS3 Radiation Monitoring Instrumentation (71121.03)

a. Inspection Scope

To determine the accuracy and operability of radiation monitoring instruments used for the protection of occupational workers and the adequacy of the program to provide self-contained breathing apparatus to personnel entering unknown atmospheres, the team interviewed cognizant licensee personnel and compared the following items with regulatory requirements:

- Calibration, operability, and alarm setpoint, when applicable, of selected portable radiation detection instrumentation, area radiation monitors, (RM-087, RM-091B, and RM-096) continuous air monitors, whole-body counting equipment, electronic alarming dosimeters, and personnel contamination monitors
- Calibration expiration and source response check currency on radiation detection instruments staged for use
- The status of self-contained breathing apparatuses staged and ready for use in the plant and associated surveillance records
- The licensee's capability for refilling and transporting self-contained breathing apparatus air bottles to and from the control room and operations support center during emergency conditions
- Self-contained breathing apparatus air quality checks
- Training and qualifications of control room operators and emergency response personnel for use of self-contained breathing apparatus and change-out of bottles
- Licensee audits and surveillance reports related to radiation monitoring instrumentation and self-contained breathing apparatuse programs (Quality Assurance Audit Reports 4 and 58, and Quality Assurance Surveillance Report H1-01-1)
- Corrective action documents that involved radiation monitoring instrumentation self-contained breathing apparatuses since the last inspection in this area

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety [PS]

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems (71122.01)

a. Inspection Scope

The team interviewed cognizant personnel and walked down the major components of the gaseous and liquid effluent release systems to observe ongoing activities, equipment material condition, and system configuration, as compared to the description in the Updated Final Safety Analysis Report. The team reviewed and compared the following items with regulatory requirements to determine whether the licensee had ensured adequate protection of public health and safety from exposure to radioactive material released into the public domain:

- 2000 and 2001 Radiological Effluent Release Reports
- Changes to the Offsite Dose Calculation Manual and the radioactive waste system design and operation
- Anomalous results reported in the 2000 and 2001 Radiological Effluent Release Reports
- Effluent radiological occurrence performance indicator incidents
- Collection and analysis of particulate, iodine, and gaseous samples from the auxiliary and radwaste building exhausts and liquid samples from Monitor Tank “A”
- Selected radioactive gaseous and liquid waste release permits and associated projected doses to members of the public
- Compensatory sampling and radiological analyses conducted when effluent monitors were declared out-of-service
- Monthly, quarterly, and annual dose calculations
- Selected engineered safety feature air cleaning system surveillance test results for the Control Room, Safety Injection Room, and Spent Fuel Pool Room
- Surveillance test results for the stack and vent flow rates
- Effluent radiation monitor alarm setpoint values
- Records of calibrations performed since the last inspection for selected discharge effluent radiation monitors and flow measurement devices (RM-54A, RM-055, and RM-062)

- Calibration and quality control records of counting room instrumentation associated with effluent monitoring and release activities
- Chemistry department interlaboratory comparison program results for 2001 and the first and second quarters of 2002
- Licensee audits and surveillance reports related to the radioactive effluent treatment and monitoring program (Quality Assurance Audit Nos. 49 and 63, and Quality Assurance Surveillance Report C4-00-1)
- Selected corrective action reports related to the radioactive effluent treatment and monitoring program

b. Findings

No findings of significance were identified.

2PS2 Radioactive Material Processing and Transportation (71122.02)

a. Inspection Scope

The team interviewed radiation workers and radiation protection personnel involved in material processing and transportation activities. The team observed the preparation of a shipment of radioactive laundry material (Package 02-51). The team walked down the liquid and solid radioactive waste processing systems to verify that the current system configuration and operation agreed with the descriptions contained in the Updated Final Safety Analysis Report and in the Process Control Program. The team reviewed and compared the following items with regulatory requirements:

- Adequacy of any changes made to the radioactive waste processing systems since the last inspection
- Waste stream sampling procedures and radio-chemical sample analysis results for each radioactive waste stream
- Scaling factors and calculations used to account for difficult-to-measure radionuclides
- 10 CFR Part 20, Appendix G, Quality Assurance Program
- Documentation for five non-excepted package shipments (01-32, 01-49, 02-09, 02-19, and 02-23) that demonstrated shipment packaging, surveying, labeling, marking, placarding, vehicle checks, emergency instructions, disposal manifest, shipping papers provided to the driver, and licensee verification of shipment readiness
- Transferee licenses

- Training of personnel responsible for the conduct of radioactive waste processing and radioactive material shipment preparation activities

- Licensee audits and surveillance reports related to radioactive material and shipping programs (Quality Assurance Audit 01-QUA-13 and Quality Assurance Surveillance B2-00-1)

- Selected corrective action reports related to the radioactive material and shipping programs

b. Findings

No findings of significance were identified.

2PS3 Radiological Environmental Monitoring Program and Radioactive Material Control Program (71122.03)

a. Inspection Scope

The team reviewed the radiological environmental monitoring and meteorological monitoring programs to verify that the licensee implemented them consistent with the Technical Specifications and Offsite Dose Calculation Manual. The team interviewed members of the licensee's staff responsible for implementing the radiological environmental monitoring, meteorological monitoring, and radioactive material control programs. The team observed the following activities and equipment:

- Collection and preparation of surface water, airborne particulate, and charcoal samples

- Meteorological instrumentation and data displays at the meteorological tower and control room

- The survey of materials for release from the radiologically controlled area

The following items were reviewed and compared with regulatory requirements to determine whether the licensee had an adequate program to verify the impact of radioactive effluent releases to the environment and to ensure that the licensee's surveys and controls were adequate to prevent the inadvertent release of licensed materials into the public domain:

- Implementing procedures for the radiological environmental monitoring program

- Environmental sample analytical results

- Five environmental air sampling stations (2, 3, 28, 36, and 37), one surface water sampling station (12), and five thermoluminescent dosimetry (TLD) stations (2, 3, 28, 36, and 37)

- Calibration and maintenance records for selected environmental air sampling equipment
- 2000 land use census results and changes to the radiological environmental monitoring program
- 2000 and 2001 Annual Environmental Operating Reports
- The vendor environmental laboratory's performance in the interlaboratory comparison program
- Implementing procedures for the meteorological monitoring program
- Meteorological instrument operability, reliability, and annual meteorological data recovery
- Procedures, methods, and instruments used to survey, control, and release materials from the radiologically controlled area
- Detection sensitivities of radiation survey instruments used for the release of potentially contaminated materials from the radiologically controlled area
- Criteria used for the unrestricted release of potentially contaminated material from the radiologically controlled area
- Licensee and vendor audits and surveillance reports related to radiological environmental monitoring, meteorological monitoring, and release of radioactive material programs (Quality Assurance Audit Report 63, Quality Assurance Surveillance Report B3-00-1, and NUPIC Audit 17795)
- Selected corrective action reports related to the radiological environmental monitoring, meteorological monitoring, and release of radioactive material programs

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA6 Meetings

Exit Meeting Summary

The team presented the inspection results to Mr. D. Bannister, Plant Manager, and other members of licensee management during an exit meeting conducted on September 20, 2002. The licensee acknowledged the findings presented.

The team asked the licensee whether or not any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

D. Bannister, Plant Manager
G. Cavanaugh, Supervisor, Station Licensing
P. DeAngelis, Supervisor, Radiation Protection
D. Dryden, Engineer, Station Licensing
T. Dukaiski, Supervisor, Chemistry
S. Gebers, Health Physicist, Corporate
H. Grifford, Technician, Radiation Protection
R. Haug, Manager, Chemistry
J. Mattice, Supervisor, Radiation Protection
T. Nguyen, Radiation Monitor System Engineer, Engineering
M. Puckett, Manager, Radiation Protection
K. Steele, Supervisor, Radiation Protection
R. Schmidt, Technician, Instrumentation and Controls

NRC

J. Krammer, Senior Resident Inspector, FCS
L. Willoughby, Resident Inspector, FCS

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Opened and Closed During this Inspection

None

Previous Items Closed

None

LIST OF DOCUMENTS REVIEWED

IP 71121.03
Condition Reports: 2001-2377, 2001-2387, 2002-0410, 2002-0424, 2002-0430, 2002-1664, 2002-2235, 2002-2600, and 2002-2843

IP 71122.01
Condition Reports: 2000-1775, 2000-1969, 2000-2066, 2000-2253, 2001-1156, 2001-0151, 2001-3223, 2001-3609, and 2002-0059

Liquid Batch Release Permits: 2001-063, 2001-064, 2002-134, and 2002-139

Auxiliary Building Continuous Release Permits: 2000-042, 2000-083, 2001-007, 2002-003, 2002-037, and 2002-038

Radwaste Building Continuous Release Permits: 2002-037 and 2002-038

IP 71122.02
Condition Reports: 2001-0121, 2002-0977, 2002-0978, 2002-1107, 2002-1109, 2002-2350, 2002-3220, and 2002-3704

IP 71122.03
Condition Reports: 2000 -2244, 2001 -0119, 2001-0303, 2001-0413, 2001-1064, 2001-1808, 2001-1856, 2001-2120, 2001-2938, 2002 -0214, 2202-0467, 2002-0616, 2002-0762, 2002-1079, and 2002-1289