UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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ARLINGTON, TEXAS 76011-8064

March 15, 2000

Garry L. Randolph, Vice President and
Chief Nuclear Officer
Union Electric Company
P.O. Box 620
Fulton, Missouri 65251

SUBJECT: NRC INSPECTION REPORT NO. 50-483/2000-08

Dear Mr. Randolph:

This refers to the inspection conducted on February 28 through March 3, 2000, at the Callaway Plant facility. The purpose of the inspection was to review the radiological environmental monitoring and meteorological programs. The enclosed report presents the results of this inspection.

Overall, the radiological environmental monitoring and meteorological programs were effectively implemented.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room (PDR).

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

Sincerely,

/RA/

Gail M. Good, Chief
Plant Support Branch
Division of Reactor Safety

Docket No.: 50-483
License No.: NPF-30

Enclosure:
NRC Inspection Report No.
50-483/2000-08

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	50-483
License No.:	NPF-30
Report No.:	50-483/2000-08
Licensee:	Union Electric Company
Facility:	Callaway Plant
Location:	Junction Highway CC and Highway O Fulton, Missouri
Dates:	February 28 through March 3, 2000
Inspector:	Michael P. Shannon, Senior Radiation Specialist
Approved By:	Gail M. Good, Chief, Plant Support Branch
Attachment :	Supplemental Information

EXECUTIVE SUMMARY

Callaway Plant
NRC Inspection Report No. 50-483/2000-08

An announced inspection was conducted to review the radiological environmental monitoring and the meteorological monitoring programs.

Plant Support

- The radiological environmental monitoring program was effectively maintained. Sampling stations were properly maintained and located as described in the Updated Final Safety Analysis Report. Sample collection logs and receipt documents were maintained in accordance with procedural requirements management expectations and contained the required sample analyses (Section R1.1).

- An effective meteorological monitoring program was in place. Instrumentation was calibrated in accordance with the commitments of Table 16.3-6 of the Updated Final Safety Analysis Report. The performance of the meteorological monitoring equipment exceeded the guidance contained in Regulatory Guide 1.23. Appropriate meteorological data were transmitted and displayed in the control room and emergency operations facility (Section R1.2).

- Personnel assigned to collect and process radiological environmental monitoring program samples were qualified to perform assigned tasks. Health physics management was appropriately involved in the oversight of the requalification training program and the development of the qualification cards (Section R5).

- An acceptable audit of the in-house portion of the radiological environmental monitoring program was performed by qualified auditors. No adverse findings were identified during an audit of the vendor providing contracted analytical services of environmental media (Section R7.1).

- Suggestion occurrence solution report corrective actions pertaining to the radiological environmental monitoring and meteorological programs were appropriate and, in general, completed in a timely manner (Section R7.2).

Report Details

Summary of Plant Performance

The plant operated at full power.

IV. Plant Support

R1 Radiological Protection and Chemistry Controls

R1.1 Radiological Environmental Monitoring Program

a. Inspection Scope (84750)

The radiological environmental monitoring program was reviewed to determine compliance with Technical Specifications and Offsite Dose Calculation Manual requirements and the commitments of the Updated Final Safety Analysis Report. Selected environmental sampling stations were inspected to verify that the stations were properly maintained and that sampling equipment was operable and calibrated.

b. Observations and Findings

The inspector visited and examined the following media sampling locations: airborne, thermoluminescent dosimeter, and surface water sample locations. All sample stations were properly maintained and located as described in the Updated Final Safety Analysis Report. Air sampler equipment was calibrated in accordance with procedural requirements using instrumentation traceable to known standards. Air and water samples were collected in accordance with the implementing procedures.

No problems were noted during the sample preparation, collection, and shipping of observed environmental media samples. Consumable supplies appeared to be adequate to effectively implement the program. From a review of sample collection logs and receipt forms, the inspector determined that these documents were maintained in accordance with procedural requirements and management expectations and contained the required sample analyses.

The inspector determined that the 1998 annual Radiological Environmental Operating Report and the 1998 Radioactive Effluent Release Report sections pertaining to the Meteorological and Offsite Dose Calculation Manual revisions were submitted in accordance with the requirements of Sections 6.9.1.6 and 6.9.1.7 of Technical Specifications and contained the required information. From a review of the above reports, the inspector noted that there were no abnormal plant related releases or changes to the Offsite Dose Calculation Manual that adversely affected the radiological environmental operating program.

The annual land use census was properly conducted with the results appropriately included in the annual Radiological Environmental Operating Report. Interlaboratory comparison program results were also appropriately conducted. However, only the

Environmental Protection Agency's water comparison results were recorded in the annual report. The inspector noted the contract vendor's laboratory participated in the Department of Energy's environmental measurements laboratory quality assessment program for the remaining environmental sampling media. Additionally, the licensee reviewed this comparison data for abnormal results. The inspector noted that the annual environmental operating report only included the Environmental Protection Agency's water comparison results. The licensee indicated that all comparison results would be included in future radiological environmental operating reports.

c. Conclusions

The radiological environmental monitoring program was effectively maintained. Sampling stations were properly maintained and located as described in the Updated Final Safety Analysis Report. Sample collection logs and receipt documents were maintained in accordance with procedural requirements and management expectations and contained the required sample analyses.

R1.2 Meteorological Monitoring Program

a. Inspection Scope (84750)

The meteorological monitoring program was reviewed to determine agreement with commitments in the Updated Final Safety Analysis Report and the guidance in NRC Regulatory Guide 1.23. The meteorological tower instrumentation was inspected. Meteorological data collection and displays at station facilities, instrument calibration procedures, and records were reviewed to ensure that the meteorological instrumentation was operable, properly calibrated, and maintained.

b. Observations and Findings

No regulatory problems or deficiencies were identified during the tour of the primary and backup meteorological towers and inspection of the associated instrument indicators in the control room and emergency operations facility. The inspector verified that the instrumentation agreed with the commitments in Section 16.3.3.3 of the Updated Final Safety Analysis Report and the guidance in Regulatory Guide 1.23. However, the inspector noted that in the primary meteorological tower equipment room, there was a tear in the exhaust ventilation duct expansion boot of the back-up emergency electric generator. In addition, the emergency eye wash station was not mounted or easily accessible in case of an emergency. On February 29, 2000, the licensee wrote work requests to address these observations.

Calibrations of meteorological instrumentation were properly performed at the required frequency in accordance with the commitments of Table 16.3-6 of the Updated Final Safety Analysis Report and the recommendations of Regulatory Guide 1.23. Data recovery rates exceeded 90 percent for 1998 and 1999.

c. Conclusions

An effective meteorological monitoring program was in place. Instrumentation was calibrated in accordance with the commitments of Table 16.3-6 of the Updated Final Safety Analysis Report. The performance of the meteorological monitoring equipment exceeded the guidance contained in Regulatory Guide 1.23. Appropriate meteorological data were transmitted and displayed in the control room and emergency operations facility.

R3 Procedures and Documentation

R3.1 Radiological Environmental Monitoring Program Implementing Procedures

The procedures used for sample preparation, collection, and shipment of environmental media samples were reviewed. The inspector determined that descriptive radiological environmental monitoring program implementing procedures were maintained to ensure compliance with Updated Final Safety Analysis Report commitments.

R5 Staff Training and Qualification

a. Inspection Scope (84750)

The inspector reviewed the training and qualification programs for personnel who implemented the radiological environmental monitoring program.

b. Observations and Findings

There were five health physics technical support technicians fully qualified to collect and process radiological environmental monitoring program samples. Three additional technicians were in various stages of qualification. The inspector determined that qualification tasks listed on the qualification cards were appropriate for the environmental work assigned. Requalification training covered appropriate radiological environmental monitoring program related topics. From a review of selected 1999 training group meeting minutes, the inspector determined that health physics management was appropriately involved in the oversight of the requalification training program and the development of the qualification cards.

c. Conclusions

Personnel assigned to collect and process radiological environmental monitoring program samples were qualified to perform assigned tasks. Health physics management was appropriately involved in the oversight of the requalification training program and the development of the qualification cards.

R6 Organization and Administration

The inspector reviewed the organization, staffing, and assignment of the radiological environmental monitoring program responsibilities and determined that the radiological

environmental monitoring staff had basically remained unchanged since the last inspection in July 1998. From interviews with personnel involved with the radiological environmental monitoring program, the inspector concluded that health physics management provided appropriate support to implement an effective program.

R7 Quality Assurance Program

R7.1 Radiological Environmental Monitoring Quality Assurance Program

a. Inspection Scope (84750)

The inspector reviewed quality assurance audits and surveillance reports of the radiological environmental monitoring program.

b. Observations and Findings

In-house Audits

There was one quality assurance audit (AP98-006) performed since the last NRC inspection of this area in July 1998 (three sections of the audit covered the radiological environmental monitoring program). The audit team who assessed the radiological environmental monitoring program portion of the audit consisted of three quality assurance department station members. From interviews with the lead auditor and a review of the auditor's resumes, the inspector determined that the individuals involved in the above audit had the appropriate technical training needed to assess the radiological environmental monitoring program.

Health Physics management was appropriately involved in the planning stages of the audit. The inspector determined that the audit was an acceptable review of the radiological environmental monitoring program which provided management with a good assessment of areas needing attention. The radiological environmental monitoring program portion of the audit identified two findings. Neither of the findings were regulatory issues. Both findings were properly documented in the station's corrective action program.

Vendor Audits

No problems were noted during the review of the Nuclear Procurement Issues Committee Joint Vendor Audit of Teledyne Brown Enviro Services performed between April 26 and 29, 1999. Teledyne Brown Enviro Services provided analytical services for all environmental samples with the exception of thermoluminescent dosimeter analysis. No findings were identified that adversely affected the services contracted.

c. Conclusions

An acceptable audit of the in-house portion of the radiological environmental monitoring program was performed by qualified auditors. No adverse findings were identified

during an audit of the vendor providing contracted analytical services of environmental media.

R7.2 Suggestion Occurrence Solution Reports and Corrective Actions

a. Inspection Scope (84750)

Selected suggestion occurrence solution reports were reviewed to evaluate the effectiveness of the licensee's controls in identifying, resolving, and preventing problems pertaining to the radiological environmental monitoring and meteorological programs.

b. Observations and Findings

The inspector determined that the station captured issues at the proper threshold to identify equipment and program problems. Overall, corrective actions were closed in a timely manner and proper to resolve repeat problems. However, during the review, the inspector noted that approximately five suggestion occurrence solution reports had been written since July 1998 pertaining to various problems associated with the reliability of the plant discharge downstream surface water station (SO-2). On September 24, 1997, the licensee determined that the problems associated with the reliability of the pump and the sample suction hose could be corrected by installing a larger capacity pump. From a review of licensee supplied information, the inspector concluded that the engineering design pump upgrade evaluation was scheduled to be completed by October 1, 1999; however, due to engineering staff losses, this date passed and the design process was now scheduled to be completed by the end of March 2000.

c. Conclusions

Suggestion occurrence solution report corrective actions pertaining to the radiological environmental monitoring and meteorological programs were appropriate and, in general, completed in a timely manner.

R8 Miscellaneous Radiological Protection and Chemistry Issues

R8.1 (Closed) Unresolved Item 50-483/9816-01: plant discharge significantly influenced the plant's intake surface water station (SO-1). After reviewing the licensee's evaluation of this issue and consultation with the Office of Nuclear Reactor Research, the NRC determined that the intake surface water station was not significantly influenced by the plant discharge.

R8.2 (Closed) Violation 50-483/9817-01: storing dry active waste within 10 feet of a permanent structure. On August 3, 1998, the licensee entered this issue in the station's corrective action program as SOS 98-3153.

V. Management Meetings

X1 Exit Meeting Summary

The inspector presented the inspection results to members of licensee management at an exit meeting conducted on March 3, 2000. The licensee acknowledged the findings presented. No proprietary information was identified.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

G. Randolph, Vice President and Chief Nuclear Officer
R. Affolter, Plant Manager
J. Cunningham, Supervisor, Human Performance
R. Farnam, Supervisor, Health Physics Operations
C. Graham, Supervisor, Health Physics Technical Support
J. Hiller, Engineer/NRC Interface, Quality Assurance
G. Hughes, Supervisor, Independent Safety Evaluation Group
J. Kerrigan, Senior Health Physicist, Health Physics Technical Support
J. Kovar, Senior Engineer, Quality Assurance
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R. Roselius, Superintendent, Radiation Protection and Chemistry
C. Smith, Instructor, Radiation Protection and Chemistry Training

NRC

V. Gaddy, Senior Resident Inspector
J. Hanna, Resident Inspector

INSPECTION PROCEDURE USED

IP 84750 Radioactive Waste Treatment and Effluent and Environmental Monitoring

LIST OF ITEMS OPENED, CLOSED, and DISCUSSED

OPENED

None

CLOSED

50-483/9816-01	URI	Plant discharge significantly influenced the plants intake surface water station (Section R8.1).
50-483/9817-01	VIO	Storing dry active waste within 10 feet of a permanent structure (Section R8.2).

DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

A summary of radiological environmental monitoring and meteorological programs suggestion occurrence solution reports written since July 1, 1998.

Quality Assurance Department Audit Report AP98-006

Nuclear Procurement Issues Committee Joint Vendor Audit NJ-16864

1998 Annual Radiological Environment Operating Report

Sections 6.2, 6.4, and 7.0 of the 1998 Radioactive Effluent Release Report

Procedures

APA-ZZ-01022, “Radiological Environmental and Effluent Release Programs,” Revision 4

HTP-ZZ-04143, “Operation of the Collins Model 42 River Water Composite Sampler,” Revision 9

HTP-ZZ-07001, “Collection and Shipping of Environmental Samples,” Revision 31

HTP-ZZ-07100, “Land Use Census Program,” Revision 2

HTP-ZZ-07101, “Radiological Environmental Monitoring Program,” Revision 2

HTP-ZZ-07102, “Sample Collection and Shipment for REMP,” Revision 3

HTP-ZZ-07103, “Evaluation and Reporting of REMP Data,” Revision 2