



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

April 18, 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. 50-483/2000-05

Dear Mr. Randolph:

This refers to the inspection conducted on March 27-31, 2000, at the Callaway Plant facility. The enclosed report presents the results of this inspection.

The inspection reviewed the solid radioactive waste management and transportation of radioactive materials programs. Generally, these programs met regulatory requirements.

Based on the results of this inspection, the NRC has determined that one Severity Level IV violation of NRC requirements occurred. The violation is being treated as a noncited violation (NCV), consistent with Section VII.B.1.a of the Enforcement Policy. The NCV is described in the subject inspection report. If you contest the violation or severity level of the NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011, the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Callaway Plant facility.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response, if requested, 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

Union Electric Company

-2-

Docket No.: 50-483

License No.: NPF-30

Enclosure:

NRC Inspection Report No.
50-483/2000-05

cc w/enclosure:

Professional Nuclear Consulting, Inc.
19041 Raines Drive
Derwood, Maryland 20855

John O'Neill, Esq.
Shaw, Pittman, Potts & Trowbridge
2300 N. Street, N.W.
Washington, D.C. 20037

H. D. Bono, Supervising Engineer
Quality Assurance Regulatory Support
Union Electric Company
P.O. Box 620
Fulton, Missouri 65251

Manager - Electric Department
Missouri Public Service Commission
301 W. High
P.O. Box 360
Jefferson City, Missouri 65102

Ronald A. Kucera, Director
of Intergovernmental Cooperation
P.O. Box 176
Jefferson City, Missouri 65102

Otto L. Maynard, President and
Chief Executive Officer
Wolf Creek Nuclear Operating Corporation
P.O. Box 411
Burlington, Kansas 66839

Dan I. Bolef, President
Kay Drey, Representative
Board of Directors Coalition
for the Environment
6267 Delmar Boulevard
University City, Missouri 63130

Union Electric Company

-3-

Lee Fritz, Presiding Commissioner
Callaway County Court House
10 East Fifth Street
Fulton, Missouri 65151

Alan C. Passwater, Manager
Licensing and Fuels
AmerenUE
One Ameren Plaza
1901 Chouteau Avenue
P.O. Box 66149
St. Louis, Missouri 63166-6149

J. V. Laux, Manager
Quality Assurance
Union Electric Company
P.O. Box 620
Fulton, Missouri 65251

Jerry Uhlmann, Director
State Emergency Management Agency
P.O. Box 116
Jefferson City, Missouri 65101

HARDCOPY TO:

DCD (IE06)
Branch Chief, DRS/PSB
JSDodson, DRS/PSB
RIV File

ELECTRONIC DISTRIBUTION FROM ADAMS:

Regional Administrator (**EWM**)
DRP Director (**KEB**)
DRS Director (**ATH**)
Branch Chief, DRS/PSB (**GMG**)
Inspector, DRS/PSB (**JSD**)
Senior Resident Inspector (**VGG**)
Branch Chief, DRP/B (**WDJ**)
Senior Project Engineer, DRP/B (**RAK1**)
Branch Chief, DRP/TSS (**LAY**)
RITS Coordinator (**NBH**)
D. Lange (**DJL**)
NRR Event Tracking System (**IPAS**)
Document Control Desk (**DOCDESK**)
CWY Site Secretary (**DVY**)

DOCUMENT NAME: R:_CW\CW2000-05RP-JSD.WPD

To receive copy of document, indicate in box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

RIV:PSB	PSB	C:DRS\PSB	C:DRS\B	
Peer Review	JSDodson:nh	GMGood	WDJohnson	
04/12/00 /RA/	04/12/00 /RA/	04/18/00 /RA/	04/18/00 /RA/	

OFFICIAL RECORD COPY

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.: 50-483
License No.: NPF-30
Report No.: 50-483/2000-05
Licensee: Union Electric Company
Facility: Callaway Plant
Location: Junction Highway CC and Highway O
Fulton, Missouri
Dates: March 27-31, 2000
Inspector: James S. Dodson, Radiation Specialist
Approved By: Gail M. Good, Chief, Plant Support Branch
Attachment: Supplemental Information

EXECUTIVE SUMMARY

Callaway Plant NRC Inspection Report No. 50-483/2000-05

The NRC conducted an inspection of the solid radioactive waste management and radioactive material transportation programs. Areas reviewed included: the solid radioactive waste management program, radioactive material transportation program, facilities and equipment, staff knowledge and performance, staff training and qualifications, and quality assurance activities.

Plant Support

- The licensee met regulatory requirements associated with the solid radioactive waste management program. Radioactive material was correctly stored and controlled. Radioactive waste was correctly classified and stabilized for burial. Waste manifests were prepared in accordance with station procedures (Section R1.1).
- The licensee generally met regulatory requirements for the packaging and shipping of radioactive materials and radioactive waste. Packages were properly marked and labeled, and radioactive material transport vehicles were properly placarded (Section R1.2).
- The failure to verify that the transferee's license authorized the receipt of the type, form, and quantity of byproduct material transferred was identified as a violation of 10 CFR 30.41(c). This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. The licensee documented this issue in its corrective action program as SOS-99-2704 (Section R1.2).
- There were no deviations noted from commitments in the Updated Final Safety Analysis Report. Material condition and housekeeping were good in the solid radioactive waste facilities and on-site storage areas (Section R2).
- The individuals responsible for training, transfer, packaging, and transport of radioactive material were knowledgeable of training, retraining, regulatory, and procedural requirements. Additionally, these individuals were knowledgeable of waste classification, marking, labeling, storage, documentation, vendor supplied computer software operation, and radioactive material transportation regulations (Section R4).
- The licensee provided solid radwaste and transportation personnel with the appropriate initial training and retraining (Section R5).
- The quality assurance organization provided adequate oversight of radioactive waste management and transportation activities. The quality audit and surveillances of solid radioactive waste management and transportation practices provided licensee management with adequate information to assess the program's performance (Section R7).

Report Details

IV. Plant Support

R1 Radiological Protection and Chemistry Controls

R1.1 Solid Radioactive Waste Management Program

a. Inspection Scope (86750)

The inspector interviewed licensee personnel and reviewed the following program areas:

- Waste storage and container accountability
- Waste stream sampling results
- Waste classification
- Waste characteristics
- Waste shipment manifests

b. Observations and Findings

Waste Storage and Container Accountability

During tours of the radiologically controlled areas, the inspector confirmed that radioactive waste was stored in accordance with commitments in the Updated Final Safety Analysis Report, Chapter 11.4.2.5. The inspector verified that randomly selected radioactive material containers were properly labeled and confirmed that the licensee's tracking system listed the correct location and status of the containers.

Waste Stream Sampling

The inspector reviewed the analysis results and the associated evaluations for the identified waste streams. The inspector determined that sampling and analyses were completed at the required intervals. The scaling factors used in the vendor supplied computer code were verified with current analysis results as required by procedure. Analyses were performed by a vendor laboratory and the licensee as required by procedure.

Waste Classification

The licensee used a vendor supplied computer software code to perform the calculations necessary to classify radioactive waste. The inspector reviewed sample results from selected radioactive waste shipments and confirmed that the waste shipments were properly classified in accordance with 10 CFR 61.55.

Waste Characteristics

Through record review and observations, the inspector confirmed that the licensee met the structural integrity requirements of 10 CFR 61.56 (b)(1) by using high integrity containers. No adverse findings related to the licensee's radioactive waste characteristics had been identified by burial site representatives.

Manifests

The inspector reviewed random shipping documentation and confirmed that the licensee prepared manifests included the information required by 10 CFR Part 20, Appendix G. The shipment manifests included a certification that the transported material was properly classified, described, packaged, marked, and labeled, and that it was in proper condition for transport. The certifications were signed and dated by an authorized licensee representative.

c. Conclusions

The licensee met regulatory requirements associated with the solid radioactive waste management program. Radioactive material was correctly stored and controlled. Radioactive waste was correctly classified and stabilized for burial. Waste manifests were prepared in accordance with station procedures.

R1.2 Radioactive Material Transportation Program

a. Inspection Scope (86750)

The inspector interviewed licensee personnel and reviewed selected examples of the following materials:

- Packaging
- Radiation surveys
- Shipping paper documentation
- Package marking and labeling
- Loading and storage, blocking, and bracing
- Vehicle placarding
- Driver instructions
- Emergency response information

b. Observations and Findings

Packaging

The inspector verified that the certificate of compliance and user's list were current for the Type B shipping cask used by the licensee. The licensee maintained records which documented that its Type B packages were designed to meet the applicable requirements specified in 10 CFR 71.12.

Radiation Surveys

The inspector conducted radiation surveys during tours of the radioactive waste processing and storage facilities and ensured that external radiation levels on packages were within the allowable limits of 49 CFR 173.441.

Package Marking, Labeling, and Loading and Vehicle Placarding

The inspector randomly selected 12 shipping documentation packages for review. From this review, the inspector determined that packages prepared for transport were properly marked and labeled and that radioactive material transport vehicles were properly placarded in accordance with 49 CFR 172.504 and 172.506.

Shipping Papers and Documentation

The inspector reviewed 12 randomly selected examples of shipping documentation and confirmed that the licensee provided the shipping papers and information required by 49 CFR Part 172, Subpart C, and the emergency response information required by 49 CFR Part 172, Subpart G. Additionally, the inspector verified that shipping permits, licenses, certificates of compliance, user lists, and shipping regulations were current.

10 CFR 30.41(c) states, in part that: Before transferring byproduct material to a specific licensee, the licensee transferring the material shall verify that the transferee's license authorizes the receipt of the type, form, and quantity of byproduct material to be transferred.

On October 12, 1999, Radioactive Material Shipment 99-0056, containing "A" reactor coolant pump internals, was shipped from Callaway Plant to Wyle Labs, another licensee. The shipment manifest listed a total of 490 Curies of byproduct material which exceeded the authorized 75 Curie license limit for Wyle Labs. The licensee determined that the shipper did not verify the allowable quantity of byproduct material on the transferee's license.

The failure to verify that the transferee's license authorized the receipt of the type, form, and quantity of byproduct material transferred was identified as a violation of 10 CFR 30.41(c). This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. The licensee documented this issue in its corrective action program as SOS-99-2704 (50-483/2000-05-01).

c. Conclusions

The licensee generally met regulatory requirements for the packaging and shipping of radioactive materials and radioactive waste. Packages were properly marked and labeled, and radioactive material transport vehicles were properly placarded.

The failure to verify that the transferee's license authorized the receipt of the type, form, and quantity of byproduct material transferred was identified as a violation of 10 CFR 30.41(c). This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. The licensee documented this issue in its corrective action program as SOS-99-2704.

R2 Status of Radiological Protection and Chemistry Facilities and Equipment

a. Inspection Scope (86750)

The inspector reviewed associated documentation and toured the radwaste building and on-site storage areas. The inspector also viewed various gaseous, liquid, and solid waste storage tanks, pumps, valves, and piping in the radwaste building.

b. Observations and Findings

The licensee made no significant changes to solid radioactive waste facilities since the last inspection. There were no changes in equipment since the last inspection. The inspector noted no deviations from commitments in the Updated Final Safety Analysis Report.

During the tours of the radwaste facilities and on-site storage areas, the inspector noted that the housekeeping was good. Additionally, no problems were noted with material condition in these facilities.

c. Conclusions

There were no deviations noted from commitments in the Updated Final Safety Analysis Report. Material condition and housekeeping were good in the solid radioactive waste facilities and on-site storage areas.

R4 Staff Knowledge and Performance

a. Inspection Scope (86750)

The inspector interviewed the radwaste supervisor, two certified shippers, two radwaste technicians, and the radwaste training instructor.

b. Observations and Findings

The radwaste supervisor and certified shippers were knowledgeable of regulatory and procedural requirements for solid radioactive waste management and transportation. The training instructor responsible for radwaste personnel training had a very good understanding of the regulatory training and retraining requirements. The radwaste certified shippers responsible for shipping were knowledgeable of radioactive waste classification, packaging, marking, labeling, storage, documentation, vendor supplied computer software operation, and radioactive material transportation regulations. The radwaste technicians responsible for packaging, marking, labeling, storage, loading, bracing, survey, and placarding were knowledgeable of procedural requirements and radioactive material transportation regulations.

c. Conclusions

The individuals responsible for training, transfer, packaging, and transport of radioactive material were knowledgeable of training, retraining, regulatory, and procedural requirements. Additionally, these individuals were knowledgeable of waste classification, marking, labeling, storage, documentation, vendor supplied computer software operation, and radioactive material transportation regulations.

R5 Staff Training and Qualification

a. Inspection Scope (86750)

The inspector reviewed training lesson plans and verified current and past training records for two certified shippers, two radwaste technicians, and the radwaste/hazardous materials training instructor.

b. Observations and Findings

Training lesson plans and records confirmed that the licensee provided the appropriate initial training and periodic retraining in Department of Transportation and NRC regulatory requirements. Additionally, the training and retraining programs included a review of industry lessons learned and procedures for personnel involved in the transfer, storage, packaging, and transport of radioactive material.

c. Conclusions

The licensee provided solid radwaste and transportation personnel with the appropriate initial training and retraining.

R7 Quality Assurance in Radiological Protection and Chemistry Activities

a. Inspection Scope (86750)

The inspector interviewed licensee personnel and reviewed the following items:

- Quality assurance audit
- Quality assurance surveillances
- Suggestion Occurrence Solution Reports

b. Observations and Findings

The licensee conducted one audit and two surveillances since the previous NRC inspection of solid radioactive waste management and transportation activities. The audit and surveillances were conducted in sufficient depth to identify problems and provide oversight of radwaste management and transportation activities. Deficiencies and improvement items were properly entered into the corrective action program.

The inspector reviewed a summary of Suggestion Occurrence Solution (SOS) reports relating to solid radioactive waste and transportation and selected 10 SOS reports for a detailed review. The inspector verified that the corrective actions were appropriate and completed in a timely manner.

c. Conclusions

The quality assurance organization provided sufficient oversight of radioactive waste management and transportation activities. The quality audit and surveillances of solid radioactive waste management and transportation practices provided licensee management with adequate information to assess the program's performance

V. Management Meetings

X1 Exit Meeting Summary

The inspector presented the inspection results to members of licensee management at an exit meeting on March 31, 2000. The licensee acknowledged the findings presented. No proprietary information was identified.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

W. Witt, Assistant Plant Manager
R. Roselius, Superintendent, Chemistry and Radiation Protection
J. Cruickshank, Supervisor, Radwaste
D. Anderson, Supervisor, Radwaste Training
J. Hiller, Engineer, Quality Assurance
M. Reidmeyer, Supervisor, Regional Regulatory Affairs
R. Miller, Supervisor, Radwaste
J. Laux, Manager, Quality Assurance
T. Arms, Supervisor, Radwaste
K. Sommers, Radwaste Technician
M. Guittar, Radwaste Technician

NRC

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

INSPECTION PROCEDURES USED

86750	Solid Radioactive Waste Management and Transportation of Radioactive Material
92904	Follow Up Plant Support

ITEMS OPENED AND CLOSED

Opened and Closed

50-483/2000-05-01	NCV	Failure to verify that transferee's license authorized the quantity of byproduct material transferred.
-------------------	-----	--

PARTIAL LIST OF DOCUMENTS REVIEWED

Summary list of Suggestion Occurrence Solution Reports relating to the inspection areas
(8/1/98 to 3/27/2000)

Suggestion Occurrence Solution Reports

SOS-98-3397
SOS-98-3610
SOS-99-0057
SOS-99-0463
SOS-99-0502
SOS-99-0580
SOS-99-1184
SOS-99-2583
SOS-99-2704
SOS-99-2968

Audits and Surveillances

Quality Assurance Surveillance Report SP98-083

Quality Assurance Surveillance Report SP99-023

Quality Assurance Audit Report AP99-002

Procedures

APA-ZZ-00015	"Conduct of Operations - Chemistry & Radwaste," Revision 015
APA-ZZ-01010	"Callaway Plant Radioactive Waste Management Program," Revision 9
APA-ZZ-01011	"Process Control Program Manual," Revision 5
RDP-ZZ-00100	"Radwaste/Environmental - Code of Conduct," Revision 6
RDP-ZZ-00200	"Radwaste/Environmental - Operational Guidelines," Revision 5
RTN-HC-00100	"Primary Evaporator Bottoms Tank Operation," Revision 14
RTN-HC-00300	"Primary Spent Resin Storage Tank Operation," Revision 17
RTN-HC-00400	"Secondary Spent Resin Storage Tank Operation," Revision 12
RTN-HC-00500	"Filter Handling Operation," Revision 18
RTN-HC-00900	"Packaging Radwaste in LSA Boxes," Revision 9
RTN-HC-01000	"Storage and Handling of Radwaste," Revision 12
RTN-HC-01100	"Shipment of Radioactive Materials," Revision 13
RTN-HC-01600	"Operation of the RVR-800 System," Revision 16
RTN-HC-01900	"On-site Storage Container Handling Procedure," Revision 3
RTN-HM-00300	"Handling, Storage, Evaluation and Disposal of Hazardous and Mixed Wastes," Revision 12
RTS-HC-00310	"Primary Resin Changeout/Sampling," Revision 15
RTS-HC-00410	"Secondary Resin/Charcoal Changeout/Sampling," Revision 8
RTS-ZZ-CH003	"LN 14-170 and HN-100 Series III Cask Handling Procedure," Revision 7
RTS-ZZ-CH002	"Cask Handling 10-142 Procedure," Revision 10

RTS-HC-PCP08	"Use of High Integrity Containers for Filters," Revision 2
RTS-HC-PCP06	"Use of High Integrity Containers for Resin," Revision 16
RTN-HM-00200	"Container Control Program," Revision 11
RTS-HC-01160	"Shipment of Radioactive Wastes," Revision 12
RTS-HC-02010	"Radioactive Package Transfers in the Radwaste Building," Revision 1

Training Lesson Plans

T64.R992.8	"Radwaste Continuing Training 99-2, Process Control Program"
T64.R983.8	"Radwaste Retraining 98-2, DOT/EPA"
T64.R992.8	"Radwaste Continuing Training 99-2, DOT&EPA"