



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

January 10, 2001

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

SUBJECT: CALLAWAY PLANT -- NRC INSPECTION REPORT NO. 50-483/00-16

Dear Mr. Randolph:

This refers to the inspection conducted on November 26, 2000, through January 6, 2001, at the Callaway Plant facility. The enclosed report presents the results of this inspection.

This inspection was an examination of 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 license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

No findings of significance were identified.

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

William D. Johnson, Chief
Project Branch B
Division of Reactor Projects

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

Union Electric Company

-2-

Enclosure:
NRC Inspection Report No.
50-483/00-16

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

Mark A. Reidmeyer, Regional
Regulatory Affairs Supervisor
Quality Assurance
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

Electronic distribution from ADAMS by RIV:
 Regional Administrator (**EWM**)
 DRP Director (**KEB**)
 DRS Director (**ATH**)
 Senior Resident Inspector (**VGG**)
 Branch Chief, DRP/B (**WDJ**)
 Senior Project Engineer, DRP/B (**RAK1**)
 Branch Chief, DRP/TSS (**PHH**)
 RITS Coordinator (**NBH**)

Only inspection reports to the following:
 Scott Morris (**SAM1**)
 NRR Event Tracking System (**IPAS**)
 CWY Site Secretary (**DVY**)
 Dale Thatcher (**DFT**)

R:_CW\2000\CW2000-16RP-VGG.wpd

RIV:RI:DRP	SRI:DRP/B	EPI:DRS/PSB	EPI:DRS/PSB	C:DRS/PSB
JDHanna	VGGaddy	PJEIkmann	WAMaier	GMGood
E - WDJohnson	E - WDJohnson	GMGood for	GMGood for	/RA/
1/9/01	1/9/01	1/9/01	1/9/01	1/9/01

C:DRP/B				
WDJohnson				
/RA/				
1/10/01				

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.: 50-483
License No.: NPF-30
Report No.: 50-483/00-16
Licensee: Union Electric Company
Facility: Callaway Plant
Location: Junction Highway CC and Highway O
Fulton, Missouri
Dates: November 26, 2000, through January 6, 2001
Inspectors: V. G. Gaddy, Senior Resident Inspector
J. D. Hanna, Resident Inspector
P. J. Elkmann, Emergency Preparedness Inspector
W. A. Maier, Senior Emergency Preparedness Inspector
Approved By: W. D. Johnson, Chief, Project Branch B

SUMMARY OF FINDINGS

Callaway Plant
NRC Inspection Report No. 50-483/00-16

IR 05000483-00-16; on 11/26/2000-01/06/2001; Union Electric Co; Callaway Plant. Integrated Resident & Regional Report; No findings identified.

This report covers a 6-week period of inspection by resident inspectors and 1-week onsite inspection by two regional emergency preparedness inspectors.

A. Inspector Identified Findings

None

B. Licensee Identified Findings

None

Report Details

Summary of Plant Status: The plant operated at essentially 100 percent power for the entire report period.

1. **REACTOR SAFETY**

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

The inspectors reviewed the licensee's cold weather preparations to verify that design features and implementation of cold weather protection procedures were adequate to protect mitigating systems from adverse weather effects. The inspectors verified the licensee had completed Procedure OTS-ZZ-00007, "Plant Cold Weather," Revision 6.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

The inspectors reviewed the following areas to determine if the licensee had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant, effectively maintained fire detection and suppression capabilities, and maintained passive fire protection features in good material condition. The areas reviewed were:

- Remote shutdown panel room
- Electrical switchgear Room A
- Component cooling water pump and heat exchanger area
- North and south electrical penetration rooms
- Fire protection multiplexer panels
- Electrical switchgear Room B

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12)

a. Inspection Scope

The inspectors verified proper implementation of the maintenance rule to assess the effectiveness of maintenance efforts. Specifically, the inspectors verified structure and

component scoping, characterization, safety significance, performance criteria, and the appropriateness of goals and corrective actions. These aspects of the maintenance rule were reviewed for the following components:

- Component cooling water pump room Cooler A
- Diesel Generator A output breaker
- Steam dump valves

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation (71111.13)

a. Inspection Scope

Throughout the inspection period, the inspectors reviewed the daily and weekly schedules to determine when risk significant activities were scheduled and to verify how the licensee managed risk. The inspectors discussed selected activities with operations and work control personnel regarding risk evaluations and overall plant configuration control. The inspectors evaluated the following risk evaluations:

- Removing Valve BBHV8000B (power-operated relief valve block Valve B) from service for maintenance
- Risk assessments for the weeks beginning December 4 and 11, 2000

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the following evaluations to ensure that operability was properly justified and the component or system remained available:

- Suggestion-Occurrence-Solution Report 00-2107, Common cause failure of Relay 5B of Diesel Generator B
- Suggestion-Occurrences-Solution Report 00-2797, Emergency fuel oil storage Tank B level indicator

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors observed or evaluated the following postmaintenance tests to determine whether they were adequate to verify system operability and functional capabilities:

- Main steam line steam dump control valve retest
- Residual heat removal Pump A

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed or reviewed the following surveillance tests to ensure the systems tested were capable of performing their safety function and to assess their operational readiness. Specifically, the inspectors verified that the following surveillance tests met Technical Specifications, ASME Section XI test requirements, the Final Safety Analysis Report, and licensee procedural requirements:

- Procedure OSP-SA-0017B, "Train B SIS-CSAS Slave Relay Test," Revision 2
- Procedure OSP-NE-0001A, "Standby Diesel Generator 'A' Periodic Tests," Revision 7

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP2 Alert Notification System Testing (71114.02)

a. Inspection Scope

The inspector reviewed the following documentation related to the offsite siren and tone alert radio systems:

- Federal Emergency Management Agency alert and notification system acceptance report
- Site radiological emergency plan

- Siren testing procedures
- Onsite and offsite siren test results for calendar year 2000
- Siren maintenance records
- Onsite siren and tone alert radio surveillance results
- Selected Suggestion-Occurrence-Solution reports related to alert and notification issues

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization Augmentation Testing (71114.03)

a. Inspection Scope

The inspector reviewed the following documents related to the emergency response organization augmentation system:

- Design documentation for the emergency response augmentation system
- Emergency plan commitments for emergency response organization augmentation
- Procedures for primary and backup emergency response organization notification
- Results from augmentation drills conducted during calendar year 2000
- Qualification records for a sample of 12 emergency responders
- Selected Suggestion-Occurrence-Solution reports related to emergency response augmentation issues

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspector conducted an in-office review of the following emergency action level and emergency plan changes:

- Callaway Plant Radiological Emergency Response Plan, Revision 23, Change Notice 00-002, submitted September 1, 2000
- Callaway Plant Radiological Emergency Response Plan, Revision 23, Change Notice 00-003, submitted October 16, 2000
- Callaway Plant Radiological Emergency Response Plan, Revision 23, Change Notice 00-004, submitted October 31, 2000
- Callaway Plant Radiological Emergency Response Plan, Revision 23, Change Notice 00-006, submitted November 21, 2000
- Emergency Plan Implementing Procedure EIP-ZZ-00101, "Classification of Emergencies," Revision 025, submitted September 6, 2000
- Emergency Plan Implementing Procedure EIP-ZZ-00101, "Classification of Emergencies," Revision 026, submitted November 20, 2000

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)

a. Inspection Scope

The inspector reviewed the following documents related to the licensee's corrective action program:

- Site-wide corrective action Procedure APA-ZZ-00500, "Corrective Action Program," Revision 29
- Summaries of 471 corrective actions assigned to the emergency preparedness department during calendar years 1999 and 2000
- Details of 30 selected Suggestion-Occurrence-Solution reports
- 10 CFR 50.54(t) audit checklist and plan for calendar year 2000
- Four self-assessments for calendar year 2000

The inspector also interviewed personnel responsible for conducting the last completed 10 CFR 50.54(t) audit.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Drill and Exercise Performance

a. Inspection Scope

The inspector reviewed the following documents related to the drill and exercise performance indicator in order to verify the licensee's reported data:

- Drill schedules for calendar year 2000
- Scenario descriptions
- Drill evaluation worksheets
- Drill evaluation records
- Performance indicator summary sheets
- Performance indicator reports

b. Findings

No findings of significance were identified.

.2 Emergency Response Organization Drill Performance

a. Inspection Scope

The inspector reviewed the following records related to emergency response organization participation in order to verify the licensee's reported data:

- Emergency response organization rosters for the first, second, and third quarters of calendar year 2000
- List of key emergency response organization positions
- Drill participation records for the second quarter of calendar year 1998 through the third quarter of calendar year 2000
- Drill attendance sheets for 11 selected key emergency response organization participants
- Performance indicator summary sheets
- Performance indicator reports

b. Findings

No findings of significance were identified.

.3 Alert and Notification System Reliability

a. Inspection Scope

The inspector reviewed siren testing records for calendar year 2000 to verify the accuracy of data reported for this performance indicator.

b. Findings

No findings of significance were identified.

4OA6 Management Meetings

Exit Meeting Summary

The resident inspectors presented their inspection results to Mr. Garry Randolph, Senior Vice President and Chief Nuclear Officer, and other members of licensee management on January 5, 2001.

The emergency preparedness inspectors presented their inspection results to Mr. J. Laux, Manager, Quality Assurance, and other members of licensee management at the conclusion of their inspection on December 21, 2000.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

R. Affolter, Vice President, Nuclear
J. Blosser, Manager, Operations Support
M. Evans, Superintendent, Protective Services
J. Laux, Manager, Quality Assurance
G. Randolph, Senior Vice President and Chief Nuclear Officer
M. Reidmeyer, Regional Regulatory Affairs Supervisor
M. Taylor, Manager, Nuclear Engineering
W. Witt, Plant Manager

ITEMS OPENED AND CLOSED

Opened

None

Closed

None

DOCUMENTS REVIEWED

The following documents were selected and reviewed by the inspectors to accomplish the objectives and scope of the inspection and to support any findings:

Adverse Weather Protection

Procedure OTN-BN-0001, "Borated Refueling Water Storage Tank"
Procedure OTN-BL-0001, "Reactor Makeup Water System"

Fire Protection

Fire Barriers General Installation Notes from Bechtel Drawing Number E-2R8900, Revision 51

Maintenance Rule Implementation

Expert Technical Panel Meeting NET 00-0417, October 25, 2000
Expert Technical Panel Meeting NET 00-0155, November 15, 2000
Expert Technical Panel Meeting NET 00-0161, November 27, 2000

Emergency Preparedness Procedures

EIP-ZZ-00200, "Augmentation of the Emergency Organization," Revision 8
KDP-ZZ-00006, "Emergency Preparedness Computer Software Control," Revision 6
KDP-ZZ-00007, "Emergency Preparedness Calculation Index," Revision 2

KDP-ZZ-02001, "Drill and Exercise Program," Revision 0
KSP-ZZ-0001, "Alert and Notification Availability," Revision 0
KS-ZZ-0003, "Augmentation," Revision 1

Other Documents

SA 00-EP-001, "Self Assessment of Accountability Process"

SA 00-EP-002, "Self Assessment of Annual Exercise"

SA 00-EP-003, "Self Assessment of Team 22 RERP Drill"

SA 00-EP-004, "Self Assessment of the Emergency Telephone Directory"

AP 00-006, "Third Quarter 2000 Quality Assurance Report," October 19, 2000

Audit AP 00-008, "Plant Operations Team, 4th Quarter Checklists"

Desk Top Instruction DTI-029, Revision 0, "Quality Assurance Audit Guide," SP99-071,
Surveillance Report, "Annual 10 CFR 50.54(t) Review Requirements of the Emergency
Preparedness Program"

Callaway Nuclear Power Plant Site-Specific Offsite Radiological Emergency Preparedness Alert
and Notification System Quality Assurance Verification, May 18, 1987

ATTACHMENT 2

NRC'S REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
<ul style="list-style-type: none">•Initiating Events•Mitigating Systems•Barrier Integrity•Emergency Preparedness	<ul style="list-style-type: none">•Occupational•Public	<ul style="list-style-type: none">•Physical Protection

To monitor these seven cornerstones of safety, the NRC used two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, or RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.