

February 8, 1995

Union Electric Company
ATTN: Mr. Donald F. Schnell
Senior Vice President - Nuclear
Post Office Box 149 - Mail Code 400
St. Louis, MO 63166

Dear Mr. Schnell:

This will acknowledge receipt of your letter dated January 20, 1995, in response to our letter dated December 6, 1994, transmitting a Notice of Violation associated with Inspection Report No. 50-483/94012. This report summarized the results of an unannounced fire protection inspection.

We reviewed your response to Unresolved Item 50-483/94012-02 regarding an eight hour discharge test of emergency batteries. The information you provided as the basis for not conducting these tests will be forwarded to NRR for their review.

We reviewed your response to Violation 50-483/94012-01. With the additional information provided, we agree with your position. Therefore, this violation was retracted.

We reviewed your response to the inspection report statement that management oversight was weak. Your conclusion that management oversight of the fire protection program as presently constituted is strong fails to address the issues which led us to conclude otherwise. In our inspection report we indicated that management oversight was weak in selected areas of the fire protection program. We did not indicate that there was a total management breakdown in the program. Clearly there are several areas where we acknowledged the existence of strong performance. We pointed out to you during our meeting on December 21, 1994, that our conclusions were made based on the findings identified during the inspection and on the continuing findings identified by the resident inspector staff. For example, during the meeting the resident staff expressed significant concerns for how Callaway handles transient combustibles in the plant. In addition, an example of an impairment problem was described to your staff.

Your response indicated a disagreement with our inspection report statement that a fire watch was not being properly briefed for required duties between two boundaries (between a diesel generator room and a switchgear room and between two switchgear rooms) requiring a continuous fire watch. Callaway's

9502150059 950208
PDR ADOCK 05000483
P PDR

IEO
11

D. F. Schnell

2

February 8, 1995

position is that a continuous fire watch was maintained for the two switchgear rooms and that a continuous fire watch is not required for the Diesel Generator room boundary. As identified in the inspection report, this issue will be forwarded to NRR for their consideration.

Sincerely,

/s/ G. E. Grant

Geoffrey E. Grant, Director
Division of Reactor Safety

Docket No. 50-483

Enclosure: Ltr dtd 01/20/95 D. F. Schnell,
Union Electric, to US NRC w/att

cc w/o encl: G. L. Randolph, Vice President
Nuclear Operations
J. V. Laux, Manager,
Quality Assurance
H. David Bono, Supervising
Engineer, Site Licensing

cc w/encl: K. Drey
C. John Renken, Engineer
Policy & Federal Department
Gerald Charnoff, Esq.
R. A. Kucera, Deputy Director
Department of Natural Resources
Chairman, Illinois Commerce
Commission

Distribution:

Docket File w/encl
PUBLIC IE-01 w/encl
OC/LFDCB w/encl
DRP w/encl

DRS w/encl
RIII PRR w/encl
SRI, Callaway w/encl
Region IV w/encl

SRI, Wolf Creek w/encl
LPM, NRR w/encl

SEE ATTACHED DISTRIBUTION

DOCUMENT NAME: G:CALLAWAY.RES

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	RIII:DRS	RIII:DRP	RIII:EIC	RIII:DRS	RIII:DRS
NAME	Schrum/kjc	Farber	DeFayette	Shafer	Grant <i>EG</i>
DATE	02/ /95	02/ /95	02/ /95	02/ /95	02/8/95

OFFICIAL RECORD COPY

D. F. Schnell

2

February 8, 1995

position is that a continuous fire watch was maintained for the two switchgear rooms and that a continuous fire watch is not required for the Diesel Generator room boundary. As identified in the inspection report this issue will be forwarded to NRR for their consideration.

Sincerely,

Geoffrey E. Grant, Director
Division of Reactor Safety

Docket No. 50-483

Enclosure: Ltr dtd 01/20/95 D. F. Schnell,
Union Electric, to US NRC w/att

cc w/o encl: G. L. Randolph, Vice President
Nuclear Operations
J. V. Laux, Manager,
Quality Assurance
H. David Bono, Supervising
Engineer, Site Licensing

cc w/encl: K. Drey
C. John Renken, Engineer
Policy & Federal Department
Gerald Charnoff, Esq.
R. A. Kucera, Deputy Director
Department of Natural Resources
Chairman, Illinois Commerce
Commission

Distribution:

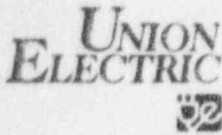
Docket File w/encl	DRS w/encl	SRI, Wolf Creek w/encl
PUBLIC IE-01 w/encl	RIII PRR w/encl	LPM, NRR w/encl
OC/LFDCB w/encl	SRI, Callaway w/encl	
DRP w/encl	Region IV w/encl	

DOCUMENT NAME: G:CALLAWAY.RES

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	RIII:DRS	<input checked="" type="checkbox"/> C	RIII:DRP	<input checked="" type="checkbox"/> E	RIII:EIC	<input checked="" type="checkbox"/> E	RIII:DRS	<input checked="" type="checkbox"/> N	RIII:DRS	
NAME	Schrum/kjc <i>DS</i>		Farber <i>MY</i>		DeFayette <i>RUXO</i>		Shafer <i>VB</i>		Grant	
DATE	02/ /95		02/2/95		02/2/95		02/2/95		02/ /95	

OFFICIAL RECORD COPY



January 20, 1995

Donald F. Schnell
Senior Vice President
Nuclear

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

ULNRC-3127

Gentlemen:

**REPLY TO NOTICE OF VIOLATION
INSPECTION REPORT NO. 50-483/94012
CALLAWAY PLANT**

This responds to Mr. W. D. Shafer's letter dated December 6, 1994, which transmitted a Notice of Violation and an unresolved item for events discussed in Inspection Report 50-483/94012. As agreed in the NRC/Union Electric meeting on December 21, 1994, this response is due by January 20, 1995. Our response to the violation and unresolved item is presented in the attachment. It should be noted that Union Electric contests the violation. Additionally, UE does not agree with conclusions in the inspection report regarding management oversight of certain elements of the Fire Protection (FP) program. Our position regarding this conclusion is also addressed in the attachment.

None of the material in the response is considered proprietary by Union Electric Company.

If you have any questions regarding this response, or if additional information is required, please let me know.

Very truly yours,

Donald F. Schnell

DFS/tmw

Attachment: 1) Response to Violation and Unresolved Item

9501240390

FEB - 2 1995

ULNRC-3127

Page 2 of 2

cc: →J. B. Martin - Regional Administrator, USNRC Region III
M. J. Farber - Chief, Reactor Projects Section 3A, USNRC Region III
L. R. Wharton - USNRC Licensing Project Manager (2 copies)
USNRC Document Control Desk (Original)
W. D. Shafer, Chief Maintenance and Outage Section, USNRC Region III
Manager - Electric Department, Missouri Public Service Commission
B. L. Bartlett - USNRC Senior Resident Inspector
T. A. Baxter - Shaw, Pittman, Potts, and Trowbridge

Response to Violation 50-483/94012-01

Statement of Violation

During an NRC inspection conducted on October 31 through November 4, 1994, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions", 10 CFR Part 2, Appendix C, the violation is listed below:

Technical Specification 6.8.1 requires adherence to fire protection program implementing procedures.

Callaway Administrative Procedure, APA-ZZ-00742, "Control of Ignition Sources", Revision 11, requires that a Hot Work Fire Watch, if required, shall be posted at the work site before initiation of the hot work.

Contrary to the above:

On November 1, 1994, the inspector observed grinding and welding activities in the emergency diesel generator room without a person performing the duties of a fire watch (50-483/94012-01(DRS)).

This is a Severity Level IV violation (Supplement I).

Basis for Disputing This Violation

Union Electric believes no violation of NRC requirements or the referenced Callaway procedure occurred. Therefore, UE contests the violation. The following provides our basis for disputing the violation.

Description of Occurrence

During the Diesel Generator/Essential Service Water (DG/ESW) outage on November 1, 1994, a welding job was being worked in the Diesel Generator Building. This job involved installing a cap on a 1" branch from a 6" ESW line. The job was in a tight location, and the welders recognized that it would not be possible to get a grinding wheel onto the weld afterwards. The welders decided to 'hot pass' (one welder passes the welding stick to another while the weld is being made) the stick to assure a quality weld was made initially. As a result, during the course of the work, the welders recognized that for a short duration (five to ten seconds) both welders would have their face shields down and both would be concentrating on the welding.

The welders were both aware of Callaway's hot work permit system, procedures and expectations. They had checked the area for combustibles, and had discussed the fire watch expectations. They had obtained a fire extinguisher and evaluated the work place. The work was being performed within two feet above the concrete floor of the DG room. There were no gratings or drains close to the work. There was no diesel fuel or oil on the floor. The welders determined that no additional craft were required to support the evolution, and that the non-welding craftsman would function as the fire watch as the other welded. The short duration of time when both would have their hoods down was considered inconsequential. The purpose of the fire watch is to identify fires as they begin. Expectations at Callaway have always allowed the designated fire watch to perform incidental activities while functioning as the fire watch. In this case, the 'hot pass' was an incidental activity.

Fire Watch Expectations During Hot Work

Fire watches at Callaway provide a first line identification of a fire for activities involving hot work. The purpose of the fire watch is to identify a fire in its earliest stage and assure notification and extinguishment are accomplished directly. The fire watch is to have a fire extinguisher present to extinguish the fire.

The fire watch also reviews the expected work and work area, determining the need for additional abatement, containment and personnel to accomplish fire watch duties. If the work is over grating for example, fire blankets and possibly even additional fire watches might be needed for each elevation. If combustibles are present that cannot be removed, appropriate measures are taken (e.g., wrapping in fire blankets, canceling the hot work until the combustibles can be removed or protected, etc.).

The fire watch may perform other incidental activities, as long as such activities do not require leaving the immediate area or distract the fire watch from monitoring the work area. The incidental activities can be: gathering and organizing tools, housekeeping, cleaning tools or parts, tightening bolts, knocking slag off welds, direct support for the person doing the hot work (as long as the fire watch is able to watch the work area for a fire). As such, it is recognized that there will be short periods of time where the fire watch may not be directly viewing the work area. The fire watch is to assure that those time periods remain short so even a small fire will be identified in a timely manner.

The fire watch is expected to discuss the work and his evaluation of the work area with the craft performing the work. When the fire watch responsibilities are shared between two craft, the discussion assures the craft member not performing the hot work will be the fire watch.

Mitigating Circumstances

During this particular incident, the safety of the plant was not jeopardized. The Diesel Generator was tagged out for maintenance, and numerous individuals were in the room. The mechanical craft supervisor (also a qualified fire watch) witnessed performance of the welding. Since the craft were meeting Callaway expectations, there was no requirement for coaching or remedial action during the hot work.

The craft made a safe and conscious decision on how to progress with this work, taking into consideration the physical limitations for accomplishing the weld, the status of the safety related equipment, the expectations for fire watch at Callaway, the physical location of the work close to the concrete floor of the room, the minimal amount of combustibles, the accessibility of a fire extinguisher and knowing the location of other fire extinguishers in the room. The craft did not take credit for the management, craft, operators, and others in the room during the hot work activity. Had they been the only two people in the room, the work and fire watch would have been accomplished in the same manner.

Corrective Actions

Union Electric does not believe any specific corrective action is required since no violation of regulations occurred. A fire watch was posted in accordance with our procedure. The actions taken by the craft met management expectations and procedural requirements. The present program is effective in controlling hot work, and personnel are aware of and support the expectations outlined above. The craft involved did think through the hot work evolution and its impact on plant equipment and the potential for a fire. The craft showed excellent use of the "STAR" (Stop - Think - Act - Review) technique in anticipating difficulties with using a grinder and showed good initiative and use of their technical skills in formulating an approach that satisfied procedural requirements.

Based on the above Union Electric believes no violation occurred and, therefore, contests the violation.

Unresolved Item 50-483/94012-02

Statement of Unresolved Item

Failure to conduct periodic discharge tests to ensure an 8-hour minimum battery power supply for the emergency battery lights is considered an unresolved item.

Union Electric's Position

A review of Callaway commitments, the FSAR, Code of Federal Regulations, Nuclear Regulatory Commission documents BTP CMEB 9.5-1, Generic Letter 86-10, Inspection Procedure 64100 and Information Notice 90-69 indicate that Callaway has not committed to perform eight-hour discharge tests on the Emergency Battery Lights (EBL) associated with fire protection.

The eight-hour battery discharge test is discussed in section 5.3 of the EPRI, Emergency Battery Unit Maintenance and Application Guide. The guide states that the need for periodic discharge tests on EBL batteries is a controversial topic. The only operating characteristic that the test verifies is battery capacity at the time of the test. It does not guarantee post test capacity. The guide states that the performance of a discharge test is frequently questioned as to whether the limited information gained by the test justifies the expense. A new EPRI study is currently in process which is designed to establish a correlation between EBL battery conductance and impedance with battery capacity. This will provide an economical and reliable method of trending and predicting battery capacity without the potentially detrimental effects of a battery discharge test. Union Electric is presently studying battery conductance trending for capacity verification and battery replacement prediction and supports the project EPRI is pursuing.

The issue of an eight-hour discharge test at Callaway was initially brought up during an NRC inspection in November 1990. At that time the technical reasons against performing the discharge test were discussed with the inspector. At the request of the inspector, several EBLs selected by the inspector were eight-hour tested. All EBLs tested met or exceeded the eight-hour test. The issue of the eight-hour EBL test was brought up again during the recent NRC inspection in November 1994. Callaway's technical position against performing the test has not changed based on the following assessment.

Assessment of 8-hour EBL Test

Battery capacity is a function of the specific gravity of the electrolyte, the float charge voltage level being maintained on the battery, and the amount of plate material within the battery. At float voltages a negligible amount of battery material is displaced from the plates and the capacity of the battery remains relatively constant throughout the rated life of the battery, barring deep discharges and other detrimental battery conditions.

The negative impacts of eight-hour discharge tests include:

- 1) Eight-hour discharge tests cause the battery to undergo a deep discharge cycle. Sulfating from the deep discharge cycle can cause active material to be lost when the battery recharges. Any permanent removal of plate material reduces battery capacity.
- 2) If performed properly and with temperature effects on the battery rating taken into consideration, the eight-hour test can indicate a pass/fail condition of an EBL. However, the pass/fail test does not provide any trendable data to predict battery failure. An EBL that demonstrates design compliance on one test can suddenly fail the next test. The internal design of these batteries does not allow monitoring of individual cells during the testing. The voltage of the battery may hold to an acceptable level during the test, but given the 75% battery cutoff voltage, an individual cell could approach cell polarity reversal.
- 3) If a service discharge test is to be performed, the discharge test must be performed on the EBL as a unit, because the real parameter of concern is lighting. The eight-hour battery test would result in an excessive deep discharge of the battery and is not a practical test for small EBL batteries. The cost of a single performance test on a battery would exceed the cost of a new battery, and as such replacement of the battery without the test would be more justifiable and cost effective.

Summary

In summary, Callaway has no commitment to perform eight-hour testing on the EBL's. Technically, no useful trendable information is obtained from the test and it is potentially detrimental to the EBL batteries.

NRC Conclusion Regarding Management Oversight

The inspection report transmittal letter contains a conclusion that "management oversight was weak in control of hot work, the impairment system, transient combustibles and the use of fire watches". As discussed in the December 21 meeting with NRC, Union Electric disagrees with this conclusion. Although any program devised is capable of improvement, we believe management oversight of fire protection as presently constituted is strong. The following discussion provides our basis for this conclusion.

- As stated in the NOV response, we believe no violation of fire watch requirements occurred.
- A number of inspection observations in the report indicate the Callaway fire protection program is performing well, including:
 - a low number of fires and proper fire brigade response
 - a low number of impairments
 - a low backlog of fire protection equipment repairs
 - excellent licensee audits and surveillances of fire protection
 - thorough 50.59 evaluations of fire protection changes
 - no areas containing substantial quantities of combustibles that pose a threat to 3 hour barriers
 - fire protection equipment in good material condition.
- As noted in the NOV response, the mechanical craft supervisor was present at the location of the presumed violation during performance of the welding. This is an example of good management oversight.
- We have a consistent record of satisfactorily handling multiple impairments of fire protection hardware.
- Although not mentioned in the report, the inspector noted as positive the diverse training and experience of fire protection personnel. He also acknowledged the low threshold for problem identification and corrective action.

- The report indicates a fire watch was not briefed that two boundaries (between a diesel generator room and a switchgear room and between two switchgear rooms) required a continuous fire watch. Callaway's position is that a continuous fire watch was maintained for the two switchgear rooms and that a continuous fire watch is not required for the Diesel Generator room boundary. The fire watch therefore had been properly briefed and was aware of his duties. This was verified in subsequent discussions with the Plant Fire Marshal.

There were other less significant points of disagreement discussed at the December 21 meeting. We believe the foregoing record substantiates the strong performance of our fire protection program, including management oversight. Union Electric, therefore, does not agree with the NRC conclusion regarding weak management oversight.