

Omaha Public Power District
444 South 16th Street Mall
Omaha, Nebraska 68102-2247
402/636-2000

June 15, 1995
LIC-95-0121

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station PI-137
Washington, DC 20555

Reference: 1. Docket No. 50-285
2. Letter from NRC (A. B. Beach) to OPPD (T. L. Patterson)
dated April 16, 1995

Gentlemen:

SUBJECT: NRC Inspection Report No. 50-285/95-04, Reply to a Notice of
Violation

The subject report transmitted a Notice of Violation (NOV) resulting from an NRC inspection conducted February 26 through April 8, 1995 at the Fort Calhoun Station.

The Omaha Public Power District (OPPD) is very sensitive to procedural error problems and conducts frequent observations and surveillances by Plant Management, our Nuclear Safety Review Group, the Quality Assurance Group, and Senior Management to look for these kinds of problems. This heightened awareness is part of the reason that the fuel movement problem was self-identified by OPPD.

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U.S. Nuclear Regulatory Commission

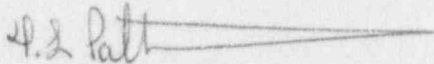
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Attached is OPPD's response to this NOV.

If you should have any questions, please contact me.

Sincerely,



T. L. Patterson
Division Manager
Nuclear Operations Division

TLP/epm

Attachment

c: Winston and Strawn
L. J. Callan, NRC Regional Administrator, Region IV
T. Y. Liu, Acting NRC Project Manager
W. C. Walker, NRC Senior Resident Inspector

REPLY TO A NOTICE OF VIOLATION

Omaha Public Power District
Fort Calhoun Station

Docket: 50-285
License: DPR-40

During an NRC inspection conducted on February 26 through April 8, 1995, 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 (TS) 5.8.1 states, in part, that written procedures and administrative policies shall be established, implemented and maintained that meet or exceed the minimum requirements of Regulatory Guide 1.33.

- A. Regulatory Guide 1.33, Appendix A, Section 1.1 states, in part, that refueling and core alterations should be covered by written procedures.

Operating Procedure OP-11, "Reactor Core Refueling," Revision 19, Section 3.4, states, in part, that core alterations must be completed in the sequence prescribed in Appendix A, "Fuel Movement Sequence and k-Infinity Map."

Contrary to the above, on March 14, 1995, licensed operators removed from the core the fuel bundle located in Position C13, out of the prescribed sequence.

- B. Regulatory Guide 1.33, Appendix A, Section 8.b states, in part, that surveillance tests listed in the TS should be covered by written procedures.

Surveillance Test Procedure OP-ST-ESF-0002, "Diesel Generator No. 1 and No. 2 Auto Operation," Revision 10, Section 9.42, states that Relay 86-BX/OPLS be reset and the supervisory light be verified as "ON".

Contrary to the above, the licensed operator checked the procedure step that the light was "ON", when, in fact, the inspector noted that the light was "OFF".

This is a Severity Level IV violation (285/9504-01) (Supplement I).

OPPD Response

A. The Reason for the Violation

Example A.

On March 4, 1995, with the Fort Calhoun Station (FCS) in a refueling outage, plant personnel were proceeding with off-loading the reactor core for a refueling outage. During offload of the fuel from the reactor core, the fuel handling machine operator removed the fuel element in core location C13 instead of the element at core location E15. This is a violation of the fuel handling procedure, OP-11, "Reactor Core Refueling," Appendix A.

All personnel who move fuel with the Fuel Handling Machine are NRC licensed reactor operators or senior reactor operators. In addition, a NRC licensed senior reactor operator is responsible for supervising all Fuel Movements in containment. The reactor operator operating the Fuel Handling Machine is also required to maintain continuous communication with a reactor operator in the control room (Control Room Communicator).

At FCS the fuel is located in the reactor core using two different coordinate systems. One is an above water indexing system that uses a letter number sequence as indicated in the first paragraph. The other provides a 5-digit readout, in inches, corresponding to the distance of the fuel handling machine trolley and bridge from a reference position. For instance, core location C13 corresponds to bridge coordinate 567.42 inches and trolley coordinate 583.68 inches. Core location E15 corresponds to bridge coordinate 583.84 inches and trolley coordinate 567.45 inches. The above water indexing system uses lettering on the wall of the refueling cavity with a bull's eye that moves with the bridge to indicate column location. The number sequence is on the bridge and as the trolley moves a bull's eye indicates the row. The Fuel Handling Machine is generally positioned to within one quarter of an inch of a given location.

For the fuel bundles involved in this incident the first three digits of the bridge and trolley coordinates are identical. This contributed to the error in the fuel movement. This error occurred for the following reasons:

- Both the Fuel Handling Machine Operator and the Senior Reactor Operator supervising the operation failed to adequately self check during this event. The Fuel Handling Machine Operator lined up over the wrong core location due to reversing the bridge and

trolley coordinates. The Senior Reactor Operator (SRO) on the Fuel Handling Machine failed to perform a check of the above water index system. Although this second check was not required by procedure OP-11, at the time the error was made, it was routinely performed by most SRO's who supervise fuel movement.

- On the Spent Fuel Handling Machine, in the Auxiliary Building, the bridge position readout is on top of the trolley position readout. On the Fuel Handling Machine the trolley position is to the left of the Bridge position. The order, in which the data was entered into Appendix A to OP-11, was bridge position, trolley position. The order of data entry had been changed for a fuel reracking performed in 1994 to make the form easier to use during the reracking procedure. The form as used during this incident forced the operator to read off the indications from right to left.
- The Fuel Handling Machine Operator read the bridge and trolley coordinates to the Control Room Communicator, but, did not specify which of the coordinates was the bridge coordinate and, which was the trolley coordinate. In addition, the Fuel Handling Operator was not asked by the Control Room communicator to provide clarification of the coordinates provided, he assumed that the coordinates were provided in the sequence listed in OP-11.

Example B.

As described in the citation, **surveillance test procedure OP-ST-ESF-0002, "Diesel Generator No. 1 and No. 2 Auto Operation," Revision 10**, was being done, in part, by a Control Room Operator on the morning of March 27, 1995. The Control Room Operator, in performing step 9.42 of the procedure, checked to ensure that the supervisory lights were responding in a manner consistent with the switch alignment and his knowledge of the plant. The operator overlooked the requirement to verify the lights "ON" since he expected the lights to be "OFF". In addition, when the procedure was changed it was not noted that the procedure could be performed such that the supervisory lights could be either "ON" or "OFF." This part of the procedure is used to recover from the test. As stated just prior to step 9.39 in the note, "steps 9.39 through 9.50 may be performed concurrently." Therefore, the operator may perform the steps in any order, or, all at once. Checking that the supervisory lights are "ON" or "OFF" at any time during the recovery steps from this procedure does not affect the safe operation of the plant.

The test, as written, could have had the operator check to insure that the supervisory lights were "ON" when the step immediately before had set a bypass switch to the "bypass" position which had, correctly, turned the lights "OFF." The operator, as indicated in the violation, incorrectly checked the procedure step as indicating that the lights were "ON" when he meant to indicate that the lights were indicating correctly, i.e. "OFF."

The portion of the test noted in the violation, i.e. the check of the supervisory light indications, had recently been added to the test procedure. This test procedure step had never been used prior to the 1995 refueling outage.

B. Corrective Steps Which Have Been Taken and the Results Achieved

Example A.

1. Procedure OP-11 has been revised. This revision will require the second person at the fuel handling machine to verify, using the above water index system, the core location that the fuel handling machine is currently at prior to grappling an assembly during a core offload or lowering an assembly during a core onload. The Control Room Communicator will document the completion of this second check.
2. The Licensed Operators have been instructed on the importance of proper communications in providing the bridge and trolley coordinates to the control room (such as using repeat-backs). This was accomplished during pre-job briefings with all personnel involved in moving fuel. This was done to ensure that each coordinate is specified and repeated back to the Fuel Handling Machine Operator.

Example B.

The anomaly between expected and received light indication was noted in the remarks for procedure OP-ST-ESF-0002. The procedure was completed and no on-the-spot change was made since the error was in the recovery portion of the procedure. An Incident Report was written to document this issue (IR 95-0218). The procedure has now been corrected to eliminate the step that had the operator check the supervisory light indications.

2. The operator involved has been counselled by plant management on the importance of procedural compliance.

C. Corrective Steps Which Will be Taken to Avoid Further Violations

Example A.

Appendix A to OP-11 will be reviewed and revised to incorporate the lessons learned in the 1995 refueling outage. These will include adding a checkoff integrated into Appendix A to OP-11 to require an independent confirmation using the above water indexing system.

Example B.

All licensed operators will be trained on this event and the importance of procedural adherence and attention to detail by September 30, 1995.

D. Date When Full Compliance Will Be Achieved

OPPD is currently in full compliance.