Omaha Public Power District
444 South 16th Street Mall
Omaha NE 68102-2247

September 15, 1997
LIC-97-0150

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-137
Washington, DC 20555

References: 1. Docket No. 50-285
2. Letter from NRC (T. P. Gwynn) to OPPD (S. K. Gambhir) dated August 15, 1997

SUBJECT: NRC Inspection Report No. 50-285/97-15, Reply to a Notice of Violation

The subject report transmitted a Notice of Violation (NOV) resulting from an NRC inspection conducted June 15 through August 2, 1997 at the Fort Calhoun Station (FCS). Attached is the Omaha Public Power District (OPPD) response to this NOV.

If you should have any questions, please contact me.

Sincerely,

James W. Chase /or

S. K. Gambhir
Division Manager
Engineering and Operations Support

SKG/ddd

Attachment

IE01

c: Winston and Strawn
E. W. Merschoff, NRC Regional Administrator, Region IV
L. R. Wharton, NRC Project Manager
W. C. Walker, NRC Senior Resident Inspector

190020

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 June 15 through August 2, 1997, two violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" NUREG 1600, the violations are listed below:

A. 10 CFR Part 50, Appendix B Criterion XVI, states, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.

Contrary to the above, the corrective actions implemented by the licensee were not effective as evidenced by the following examples:

1. Prior corrective action implemented by the licensee, in May 1996, to ensure that deficiency stickers were removed from the control room following the completion of maintenance was not effective. On June 17, 1997, the inspectors identified that a deficiency sticker was not removed from the control room following maintenance on the motor-driven fire pump. The maintenance on the pump was completed on June 9, 1997.

2. Prior corrective action implemented by the licensee, in May 1996, to prevent plant personnel from damaging plant valves due to overtorquing was not effective. On February 27, 1997, during the disassembly of the Boric Acid Tank CH-11B totalizer bypass valve, the licensee discovered that the lower wedge and the wedge spring were missing and that the valve could not be relied on for isolation. The licensee determined the valve failed while being overtorqued in the closed direction.

This is a Severity Level IV Violation (285/97015-01) (Supplement I)

B. Technical Specification 5.8.1 requires, in part, that written procedures be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, recommends, in part, that procedures should be written covering administrative procedures for the plant fire protection program.

Standing Order SO-G-58, Revision 24, "Control of Fire Protection System Impairments," requires in Step 5.1.4 that impairments to all fire suppression systems or equipment require preparation of a Form FC-1142 impairment permit.

Contrary to the above, on July 9, 1997, the inspectors identified that no fire impairment permit was in place and no compensatory measures were implemented in Diesel Generator Room 2 as required by Standing Order SO-G-58, prior to assembling scaffolding which effectively blocked the sprinkler system for Diesel Generator Number 2.

This is a Severity Level IV Violation (285/97015-04) (Supplement I)

OPPD Response to Violation A Example 1

1. **The Reason for the Violation**

   The reason for this violation is failure of maintenance and operations personnel to follow the procedural requirements of SO-M-101, "Maintenance Work Control." This event and other similar events which have occurred since implementation of the revised work control process on September 9, 1996 have been due to poor human performance.

2. **Corrective Steps Which Have Been Taken and the Results Achieved**

   a. The individuals involved in this incident have been counseled regarding their responsibilities for control of work request stickers.

   b. A memo has been issued to Operations personnel to reinforce Management's expectations regarding control of work request stickers.

3. **Corrective Steps Which Will Be Taken to Avoid Further Violations**

   a. Additional reinforcement of Management's expectations for control of work request stickers will be provided to Operations personnel during Operations Requalification Training Rotation 97-06.

   b. Toolbox briefings are being given to Operations Control Center, Planning, and Maintenance personnel to reinforce Management's expectations for control of work request stickers. These briefings will be completed by September 19, 1997.

c. Counseling and disciplinary action will be utilized as appropriate to ensure that personnel are held accountable for proper control of work request stickers.

4. **Date When Full Compliance Will Be Achieved**

OPPD is currently in full compliance.

OPPD Response to Violation A Example 2

1. **The Reason for the Violation**

Failure of the Boric Acid Tank CH-11B Totalizer Bypass Valve CH-462 lower disc wedge was due to excessive stem thrust caused by inappropriate use of a valve or pipe wrench. This valve type was selected primarily due to its availability. Modification scheduling pressure made short procurement lead time a priority. There is no evidence that anyone involved with the modifications was aware of the operating limitations described in the vendor manual concerning seating torque or of the need for these limitations to be communicated to other plant personnel. A proper design review should have ensured that the valve's operating limitations were captured and transmitted to station personnel.

2. **Corrective Steps Which Have Been Taken and the Results Achieved**

a. The Boric Acid Tank CH-11B Totalizer Bypass Valve was rebuilt.

b. An investigation was performed to determine the number and configuration of the missing pieces of the valve disc. Anchor/Darling destructive testing data demonstrates that the lower wedge always breaks into five pieces at specific locations whenever the valve stem is torqued to an average of 145 ft-lb (crack initiation) plus an additional 20 ft-lb (causes total lower wedge failure).

c. A recovery effort was performed to find the five disc wedge parts and the wedge spring. This effort was successful in recovering the wedge spring and three of the wedge disc pieces. Since the three lower wedge pieces recovered from CH-11B were broken at the same specific locations as the Anchor/Darling destructive test items, it was postulated that there are two small stellite pieces unaccounted for in the Boric Acid Injection System. An operability determination, addressing the two missing pieces, was completed and the Boric Acid System declared OPERABLE. It was determined that the remaining two missing pieces of the wedge disc do not pose a problem with system operability due to the piping configuration of the boric acid addition system. These two pieces are likely trapped in a low flow point or "dead leg" of the piping downstream of Boric Acid Pump CH-4B.

d. An investigation was performed to determine if any similar valves types were installed in the plant. It was determined that twelve Anchor/Darling 2" - 1878 type valves were installed in the Chemical and Volume Control System as part of two plant modifications. Six valves were installed under a modification completed on April 29, 1992 and six valves were installed as part of a modification completed on June 10, 1992.

e. Caution tags were initially placed on this valve and the eleven other Anchor/Darling manufactured valves of similar design warning of the effects of excessive stem thrust. Subsequently, permanent plastic labels have been placed on the twelve Anchor/Darling vaives warning of the dangers of over torquing the valves in lieu of the Caution Tags.

f. On-shift training was conducted for Operations personnel on this event.

g. This event was discussed in detail during Operations Requalification Training Rotation 97-5 for all licensed and non-licensed operations personnel. This requalification training cycle was completed on September 9, 1997.

h. A detailed review of the Modification Review Process and the root cause analysis for this event were discussed in detail during Third Quarter Engineering Generic Continuing Training.

3. **Corrective Steps Which Will Be Taken to Avoid Further Violations**

Operations is implementing a more restrictive valve wrench program. This program will be implemented by September 30, 1997.

4. **Date When Full Compliance Will Be Achieved**

OPPD is currently in full compliance.

OPPD Response to Violation B

1. **The Reason for the Violation**

The cause of this event was inadequate work preparation on the part of the work crew in ensuring that required impairment permits were obtained. Contributing to this cause was a lack of familiarity with the requirements of Standing Order SO-G-58 "Control of Fire Protection System Impairments." From a generic standpoint several other factors were likely to have contributed to this event including a failure of personnel to recognize that fire protection equipment was impaired, inadequate communication concerning a near miss of this same event occurring in the other DG room, and inaccurate perceptions of the risk associated with the placing of the scaffolding.

2. **Corrective Steps Which Have Been Taken and the Results Achieved**

a. The required fire protection impairment permit was generated, including initiation of required compensatory measures.

b. A special Plant Stand-Down was conducted on July 7, 1997 to address the human performance concerns related to the fire protection impairment program. The format included a briefing by managers and supervisors at the department level. This briefing consisted of a discussion of the Fire Protection System Impairment violation which occurred in the Number 2 Diesel Generator Room on July 8, 1997 (285/97015-04) and the reasons for this event. Other similar events were also discussed during this briefing. The briefing included a discussion of the requirements of fire protection system impairments as described in SO-G-58 "Control of Fire Protection System Impairments" and SO-G-91 "Control and Transportation of Combustible Materials".

3. **Corrective Steps Which Will Be Taken to Avoid Further Violations**

No further action is necessary at this time.

4. **Date When Full Compliance Will Be Achieved**

OPPD is currently in full compliance.