Nebraska Public Power District

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August 29, 1994

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Subject: Reply to a Notice of Violation
NRC Inspection Report No. 50-298/94-15
Cooper Nuclear Station, NRC Docket 50-298, DPR-46

Gentlemen:

The Nebraska Public Power District (District) hereby submits its response to the Notice of Violation (NOV) transmitted with NRC Inspection Report No. 50-298/94-15. This inspection report documents the results of the NRC inspection conducted by Messrs. R. A. Kopriva and W. C. Walker during May 8 through June 18, 1994, on a review of activities authorized at Cooper Nuclear Station (CNS). The NRC identified three violations during its inspection of CNS. An explanation of the violations and corrective actions taken and planned in response to each violation are presented below. Also, the NRC noted two items: 1) communications between the NRC resident inspectors and plant management and, 2) senior personnel in the Control Room were displaying relaxed and casual attitude toward their duties. These two issues will be addressed by Cooper Nuclear Station.

Violation

A. *10CFR73.55(d)(2) states, in part, that at the point of personnel and vehicle access into a protected area, all hand carried packages shall be searched for devices such as firearms, explosives, and incendiary devices or other items which could be used for radiological sabotage.*

Contrary to the above, at 12:55 p.m. on June 9, 1994, at the point of personnel access into a protected area, the licensee did not search a hand-carried package for devices such as firearms, explosives, and incendiary devices, or other items which could be used for radiological sabotage in that a security guard entered the protected area with a hand-carried package that had not been searched.

This is a Severity Level IV violation (298/9415-01) (Supplement I).

Admission or Denial of the Violation

The District admits the violation.

Reason for the Violation

The reason for the violation is failure of the Access Control officer and the on duty Security Shift Supervisor (not a security guard) to follow procedural requirements thus causing an incomplete search. The proper method to gain access within the protected area is to place hand-held and metallic items in a tray, place the tray on the materials scanning machine conveyor belt, step into the metal detector and wait for the red light to go out, then proceed to the explosive detector, step into the explosive detector and wait for the tone to exit. Should either the metal detector or the explosive detector alarm, a second attempt is allowed to pass through the particular detector. If the person is unable to successfully pass through either detector, a search of the person will be performed. A security guard will then perform a frisk of the person with a hand-held detector for the second failure to successfully pass through the metal detector and identifies any items that alarm the hand-held detector. For second failure to successfully pass through the explosive detector a hands-on pat-down is performed by security personnel. Thereafter, the person retrieves the articles from the materials scanning machine, that have been examined by security personnel, proceeds to the appropriate badge issue window, asks for his/her badge, verifies the badge and proceeds to the turnstile. At the turnstile, the person inserts the badge into the card reader, then enters in a Personal Identification Number (PIN) into the keypad, and after hearing the release click proceeds through the turnstile.

The Access Control officer, as positioned, failed to recognize that the on duty Security Shift Supervisor, who had received an alarm on his first attempt to process through the metal detector, had placed a cigarette pack on top of the adjacent x-ray machine in order to successfully process through the detector on the authorized second attempt. The individual then retrieved the cigarettes and processed through the explosive detector thus ensuring it was properly searched for explosives.

Corrective Steps Taken and the Results Achieved

Upon gaining access to the protected area, the Security Shift Supervisor realized his cigarettes had not been completely and properly searched. The incident was recorded in accordance with 10CFR73.71 as a self-identified security event. Security personnel were briefed on the incident, and the Security Shift Supervisor was counseled.

Corrective Steps That Will Be Taken to Avoid Further Violations

Personnel error was the root cause of the event. The location of the search equipment and the position of the officer monitoring the equipment from the access control booth were contributing causes. The monitoring officer did not have a straight line of sight to the equipment. An enhancement modification to relocate equipment and a search officer directly at the end of each processing lane will ensure complete observation and control of individuals and hand carried items being searched, thus minimizing the potential for recurrence of similar incidents. This enhancement modification will be complete by September 30, 1994.

Date When Full Compliance Will Be Achieved

The District is in full compliance.

Violation

B. *10CFR Part 50, Appendix B, Criterion V states, in part, that activities affecting quality shall be prescribed by documented instructions of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions.*

Contrary to the above, on March 16, 1994, the licensee used an inadequate special instruction to perform check valve maintenance in that no specific instructions were given for the use of a feeler gauge, which is required for the installation of a flexitallic gasket to verify proper gasket crush.

This is a Severity Level IV violation (298/9415-02) (Supplement I).

Admission or Denial of the Violation

The District admits the violation.

Reason for the Violation

The reason for the violation is inadequate procedural guidance to install the hinge pin cover, which was left to the "skill of the craft." The cover is torqued to the valve body to < 0.0015 inches clearance, considered "metal-to-metal contact," to obtain proper crushing of the flexitallic gasket.

The instructions which installed the cover did not specify that metal-to-metal contact was required for proper gasket crush. This was due to inadequate installation guidance.

Corrective Steps Taken and the Results Achieved

The cover and valve body were repaired and metal-to-metal contact was obtained. Post-Maintenance Testing, which consists of an Inservice Leak Test, remains to be performed following reactor startup and system pressurization. The metal-to-metal fit and stud nut torque of the other seven reactor feed check valve hinge pin covers were checked with no discrepancies and no signs of leakage noted.

Operability of the valve is not a concern. During the 1993 Refueling Outage (as opposed to the stated March 1994 date in the violation), when the modifications were conducted, internal critical dimensions were verified to be acceptable prior to valve bonnet installation, and the valve passed the Local Leak Rate Testing. Modifications made due to the hinge pin cover leak during this outage could not cause any internal critical dimension to exceed specified tolerances.

Corrective Steps That Will Be Taken to Avoid Further Violations

The procedures governing work instructions, including maintenance on these valves (7.2.44.1) is being revised to incorporate lessons learned during this repair and

the maintenance work request procedure (7.0.1.2) has been revised to include examples of "skill of the craft," such that torquing is not considered "skill of the craft" and requires procedural guidance.

Date When Full Compliance Will Be Achieved

Full compliance will be achieved November 30, 1994.

Violation

C. The Cooper Nuclear license states, in part, that the facility is authorized to operate at steady-state, reactor core power levels not in excess of 2381 megawatts (thermal).

Contrary to the above, from 1980 to April 1994, at those times when the reactor was operated at full power, the actual reactor power exceeded the steady state limit of 2381 megawatts (thermal) in that actual power was approximately 2400 megawatts (thermal) due to the licensee not compensating for an error in the calibration of the pressure transmitters used for feedwater flowrate determination.

This is a Severity Level IV violation (298/9415-03) (Supplement I).

Admission or Denial of the Violation

The District admits the violation.

Reason for the Violation

The reasons for this violation are 1) inadequate guidance in the minor design change, 2) failure to identify the problem during operating experience review, and 3) inadequate training and assignment of responsible reviewers.

Minor Design Change (MDC) 80-058, in 1980, replaced the original Barton 368 differential pressure transmitters used for feedwater flow measurement with Rosemount 1151DP Alphaline differential pressure transmitters (note: a draft Condition Report, provided to the NRC resident, incorrectly stated that the original transmitters were GE 555). MDC 80-058 did not address static pressure effects on the instrument zero error and span error. The design engineer apparently compared the specification accuracy of the two transmitters and overlooked the stated pressure effect of the Rosemount 1153DP transmitters.

In March, 1986, the engineer reviewing IE Information Notice 85-100, "Rosemount Differential Pressure Transmitter Zero Point Shift," failed to recognize that the 1151DP transmitters were fundamentally the same instrument as the Rosemount Model 1153, Series B transmitter discussed in the IE Information Notice or incorrectly excluded the 1151DP transmitters from review because they were non-essential (not safety-related).

General Electric Service Information Letter (SIL) No. 452 Supplement 1, November 18, 1988, discussed the possible zero and span shifts due to static pressure effects on differential pressure transmitters. However, the engineer performing the SIL review failed to adequately address the recommendations in the

SIL, particularly that the static pressure effects were applicable to the installed feedwater flow transmitters.

Corrective Steps Taken and the Results Achieved

Upon discovery, reactor power was reduced by 20 MW thermal and the Average Power Range Monitors (APRM) Gain Adjustment Factor was maintained between 0.95 and 1.00. General Electric performed an evaluation and determined that plant safety was not compromised. The District performed a review of all the recommendations provided in General Electric SIL 452, Supplement 1. A software correction factor was added to compensate for the error of the static pressure shift on the transmitter span. This action was an interim action, until such time the feedwater flow transmitters could be correctly calibrated. Both feedwater flow transmitters were recalibrated in accordance with the manufacturer's instructions and General Electric's recommendations during June 1994. This calibration accounted for the static pressure effects on the instrument.

Corrective Steps That Will Be Taken to Avoid Further Violations

The District is in process of performing a review of the design change process to enhance control of calibration data to determine the actions necessary to ensure control is rigorous enough to prevent recurrence of similar instrument calibrations. Also, the District is performing an intensive effort reviewing the existing Operating Experience Review program, screening OER documentation from the NRC, INPO, and vendors, including IE Bulletins, Generic Letters, IE Information Notices, SOERs, and SILs, to determine the effectiveness of the existing program and to make recommendations for improving the program. Additionally, training is being conducted to make personnel aware of this incident and the Engineering Continuing Training Program will be revised to include the aspects of this particular incident.

Date When Full Compliance Will Be Achieved

The District is in full compliance.

If there are any questions about the information presented or on other matters, please call.

Sincerely,

G. R. Horn
Vice President - Nuclear

/nr
Attachment

cc: Regional Administrator
USNRC - Region IV
Arlington, Texas

NRC Resident Inspector Office
Cooper Nuclear Station

NPG Distribution