OCT -2 1989

In Reply Refer To:
Docket: 50-267/89-08

Public Service Company of Colorado
ATTN: A. Clegg Crawford, Vice President
Nuclear Operations
P.O. Box 840
Denver, Colorado 80201-0840

Gentlemen:

Thank you for your letter of August 31, 1989, in response to our letter and the attached Notice of Violation dated August 3, 1989. As a result of our review, we found that additional information, as discussed with your Mr. M. H. Holmes (during telephone calls on September 21 and 22, 1989) was needed. Specifically, we noted that the surveillance test procedures for the cross-connect valves and for the PCRV cooling water high flow alarms had been revised, but you had not indicated that the cross-connect valves had been operated using the revised procedures or that the high flow setpoint values had been verified to be correct.

It is our understanding, based on our conversations with Mr. Holmes, that the revised flow test surveillance procedures were performed on August 21 and September 21, 1989, and that the cross-connect valves in question were stroked on September 22, 1989, using the revised procedure. If our understanding of the above information is correct, no further response is required because we find your reply to be responsive to the concerns raised in our Notice of Violation. We will review the implementation of your corrective actions during a future inspection to determine that full compliance has been achieved and will be maintained.

Sincerely,

Original Signed By
J. L. Milhoan

James L. Milhoan, Director
Division of Reactor Projects

cc:
Fort St. Vrain Nuclear Station
ATTN: C. Fuller, Manager, Nuclear
Production Division
16805 WCR 19½
Platteville, Colorado 80651

*RIV:C:OPS	*D:DRS	D:DRP
JEGagliardo/lb	LJCallan	JLMilhoan
/ /89	/ /89	10/2/89

*Previously concurred

IE01
1/1

Fort St. Vrain Nuclear Station
ATTN: P. Tomlinson, Manager
Quality Assurance Division
16805 WCR 19½
Platteville, Colorado 80651

Colorado Public Utilities Commission
ATTN: Ralph Teague, P.E.
1580 Logan Street OL1
Denver, Colorado 80203

Colorado Radiation Control Program Director

bcc to DMB (IE01)

bcc distrib. by RIV:

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A. Clegg Crawford
Vice President
Nuclear Operations

August 31, 1989
Fort St. Vrain
Unit No. 1
P-89340

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

Docket No. 50-267

SUBJECT: NRC Inspection Report
89-08

REFERENCE: 1) NRC Letter, Milhoan to Williams, dated August 3, 1989 (G-89253)

2) PSC Letter, Brey to Calvo, dated May 27, 1989 (P-88184)

3) NRC Letter, Hietner to Williams, dated April 19, 1989 (G-89145)

4) PSC Letter, Crawford to Hebdon, dated June 16, 1989 (P-89218)

Dear Sirs:

This letter is in response to the Notice of Violation received as a result of the inspection conducted by Messrs. J. E. Gagliardo, D. R. Hunter and R. B. Vickrey from May 22 to May 26, 1989. The following response to the items contained in the Notice of Violation is hereby submitted.

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IDENTIFICATION OF VIOLATION:

A) Inadequate Testing of Cross-Connect Valves

Technical Specification SR 5.3.4 requires that valves that must be manually positioned for actuation of the safe shutdown mode of operation "shall be tested for operability by partial stroking every 92 days unless they cannot be operated during normal plant operation. A full functional test shall be performed annually, or at the next scheduled plant shutdown if such test was not performed during the previous year, provided that the surveillance interval does not exceed 18 months".

Contrary to the above, the licensee has not included two of the manually positioned cross-connect valves (V-46121 and V-46122) between the firemain and the reactor water cooling system, which are used for safe shutdown, in their surveillance test procedure (SR 5.3.4c3-Ax), which annually tests other valves of this type.

B) Failure To Test High Flow Alarms

Technical Specification SR 5.4.5 requires that the PCRV cooling water system scanner alarms shall be functionally checked monthly and calibrated annually or at the next plant shutdown, not to exceed 18 months.

Contrary to the above, the PCRV cooling water system scanner high flow alarms were not included in the surveillance test procedures (SR 5.4.5-M and SR 5.4.5-A), and there was no evidence that the high flow alarms had been checked monthly or calibrated annually.

RESPONSE TO ITEM A: INADEQUATE TESTING OF CROSS-CONNECT VALVES

1) The Reason for the Violation If Admitted:

The violation is admitted.

Valves V-46121 and V-46122 provide the outlet flow path in the once-through mode of firewater cooling for the PCRV liner cooling system. Technical Specification SR 5.3.4 requires testing of valves "that must be manually positioned for actuation of the safe shutdown cooling mode of operation". The basis of SR 5.3.4 states that "Safe Shutdown Cooling, the systems or portions of systems involved, are discussed in Section 10.3.9 and 10.3.10 of the FSAR and are represented in FSAR, Figure 10.3-4". FSAR Section 10.3.9 states that "Conservatively, no credit is taken for PCRV liner cooling system heat removal during Safe Shutdown Cooling".

Although no credit is taken for PCRV liner cooling during Safe Shutdown Cooling, it is an available alternate cooling mode. Conservatively, PSC's intent is to test all such valves which may be manually positioned to initiate once through fire water cooling via the PCRV liner cooling system. Surveillance procedure SR 5.3.4c3-AX, "Safe Shutdown Cooling Manually Operated Valves" was developed for this purpose. Valves V-46121 and V-46122 were inadvertantly omitted from the surveillance procedure when the procedure was orginally written.

2) The Corrective Steps Which Have Been Taken And The Results Achieved:

The flow path requirements for once through fire water cooling via the PCRV liner cooling system were re-reviewed. V-46121 and V-46122 were the only two valves in the flow path that were found to be omitted. Surveillance procedure SR 5.3.4c3-AX has been revised to include V-46121 and V-46122.

3) The Corrective Steps Which Will Be Taken To Avoid Further Violations:

No further corrective action is required.

4) The Date When Full Compliance Will Be Achieved:

Full compliance was achieved with the issuance of revised surveillance procedure SR 5.3.4c3-AX, "Safe Shutdown Cooling Manually Operated Valves", on September 1, 1989.

RESPONSE TO ITEM B: FAILURE TO TEST HIGH FLOW ALARMS

1) The Reason For The Violation If Admitted:

The violation is admitted.

Technical Specification surveillance requirement, SR 5.4.5, for "alarms" had been understood to apply to the control room annunciator, audible and visual, alarm which is actuated by only low flow. This alarm is not actuated by high flow. Flows in excess of a predetermined programmed setpoint are not audibly alarmed but are identified with a series of asterisks printed next to the measured flow value on the computer display console and on the flow scanner printout. The scanner must be viewed, or a printout must be obtained, to determine if the programmed setpoint has been exceeded.

Surveillance requirement, SR 5.4.5, requires that a scanner flow readout be obtained monthly. Since the readout depicts actual flow and the programmed high flow setpoints, high flows are noted during review of the readout even if the asterisks are not printed next to the actual value. Conservatively, PSC had previously implemented surveillance procedure SR-RE-OP/RE-26-BiM "System 46 Flow And Temperature Scan Evaluation" to obtain a flow readout on a weekly basis. High flows are checked on a more frequent basis than that specified in the Technical Specifications.

The high/low flow setpoint values are contained in the scanner program and therefore do require periodic calibration. The flow sensors are calibrated and correct sensor calibration values are verified by SR 5.4.5-AX2, "PCRV Cooling Water Flow Scan Calibration".

2) The Corrective Steps Which Have Been Taken And The Results Achieved:

Surveillance procedure SR 5.4.5-M "PCRV Cooling Water Flow Scan Functional Test" has been revised to verify that a series of asterisks are printed next to the measured flow value on the flow scanner when the high flow setpoint has been exceeded. In addition, surveillance procedure SR 5.4.5-A1, "PCRV Cooling Water Flow Scan Calibration" has been revised to verify that the scanner program contains the correct high flow setpoint values.

3) The Corrective Steps Which Will Be Taken To Avoid Further Violations:

No further corrective action is required.

4) The Date When Full Compliance Will Be Achieved:

Full Compliance was achieved with the issuance of revised surveillance procedure SR 5.4.5-A1, "PCRV Cooling Water Flow Scan Calibration", on August 28, 1989.

In addition to the response directed by the Notice of Violation, Reference 1 requested the following:

In addition to the response directed by the Notice of Violation, you are requested to provide in your response the corrective actions taken or planned regarding the operation of Reactor Water Cooling System (System 46) in a manner that will assure the system is capable of performing its design function. Specifically, you are requested to address your practices of assuring that flow adjustments will result in closer monitoring of cooling water outlet temperatures, and will result in the appropriate resetting of the high flow and low flow alarm set points.

You are also requested to provide your rationale for not testing, on a routine basis, the System 46 relief valves and check valves. Additionally, you are requested to provide us your rationale for concluding that the System 46 surge tanks are not significantly degraded without periodic inspections. These items were all potential examples of a failure to test violation and are discussed in paragraph 2.1.1 of the attached report; however, rather than cite them herein, we offer you the opportunity to explain your position fully.

CORRECTIVE ACTION TAKEN REGARDING THE OPERATION OF SYSTEM 46:

Surveillance procedure SR-RE-26-BiM, previously SR-RE-OP/RE-26-BiM, "System 46 Flow and Temperature Scan Evaluation", has been revised. The procedure has been revised to monitor and evaluate cooling water temperatures in accordance with the frequency, methodology and criteria included in the last submittal of the Fort St. Vrain Upgraded Technical Specifications (Reference 2). NRC Preliminary concurrence with the Upgraded Technical Specifications is contained in Reference 3. The low and high flow setpoints have been reset as appropriate based on the methodology and criteria contained in SR-RE-26-BiM.

CORRECTIVE ACTIONS REGARDING SYSTEM 46 RELIEF AND CHECK VALVE TESTING AND TANK INSPECTION:

A testing program for the relief valves in System 46 was being addressed under a plan to develop a comprehensive In-Service Inspection Program (ISI) at Fort St. Vrain. This ISI program was modified following the announcement to end operations no later than June, 1990. The plan was presented to the NRC in correspondence P-89218 (Reference 4). That letter specifies that a program to test valves will be developed and implemented 90 days after the start of defueling. This program will address the System 46 relief valves.

A formal check valve testing program is being implemented at Fort St. Vrain. The program was reviewed with the NRC during this inspection visit. The concern expressed, in the report, included the failure to consider the safety significance of valves in the selection process for the check valves to be tested using the acoustic monitoring technique. There was also a concern regarding the failure to define the criteria for expanding the sample size based on negative test results. The method of selection of the check valves to be tested will be re-evaluated considering the following:

- whether the check valve will be used during defueling,
- the specific purpose of the check valve during defueling,
- the safety significance of the check valve,
- the check valve design to determine if it has been a problem for the industry; e.g. swing checks,
- whether recent maintenance, that would preclude the need to perform additional testing, had occurred.

This re-evaluation will focus on 6" and larger valves.

Techniques to be used in the program will include, as appropriate, acoustic monitoring, x-ray, backflow testing, and internal inspection. Specific criteria for expanding the sample, when problems are identified, will be included in a program document.

PSC previously did not have a preventive maintenance program that performed internal inspection of the surge tanks associated with System 46. An inspection could not be accomplished, without an extended plant outage, until after the discontinuation of plant operation in June, 1990. Preventive maintenance activities for these tanks will be developed and placed on the integrated plant schedule after the start of defueling.

Should you have any questions, please contact Mr. M. H. Holmes at (303) 480-6960.

Sincerely,

A. Clegg Crawford
Vice President
Nuclear Operations

ACC:DLW/bw

cc: Region IV
R. Farrell