

SEP 11 1989

In Reply Refer To:  
Docket: 50-267/89-15

Public Service Company of Colorado  
ATTN: Robert O. Williams, Jr., Senior  
Vice President, Nuclear Operations  
P.O. Box 840  
Denver, Colorado 80201-0840

Gentlemen:

Thank you for your letter of August 14, 1989, in response to our letter and Notice of Violation dated July 14, 1989. We have reviewed your reply and find it responsive to the concerns raised in our Notice of Violation.

Sincerely,

Original Signed By:  
Thomas P. Gwynn

James L. Milhoan, Director  
Division of Reactor Projects

cc:  
Fort St. Vrain Nuclear Station  
ATTN: C. Fuller, Manager, Nuclear  
Production Division  
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Fort St. Vrain Nuclear Station  
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Colorado Public Utilities Commission  
ATTN: Ralph Teague, P.E.  
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Denver, Colorado 80203

Colorado Radiation Control Program Director

bcc to DMB (IE01)

RIV:DRP/B *dm*  
RPMullikin;df  
9/6/89

C:DRP/B *AK*  
TFWesterman  
9/8/89

*TPG*  
D:DRP  
*for* JLMilhoan  
9/11/89

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PDR ADOCK 05000267  
Q FDC

IE01  
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bcc distrib. by RIV:

RRI

Section Chief (DRP/B)

RPB-DRSS

MIS System

K. Heitner, NRR Project Manager (MS: 13-D-18)

DRS

R. D. Martin, RA

Project Engineer (DRP/B)

Lisa Shea, RM/ALF

RSTS Operator

RIV File

DRP



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

**A. Clegg Crawford**  
Vice President  
Nuclear Operations

REC-24 1989

REFERENCE: NRC Letter, Milhoan to Williams, dated July 14, 1989 (G-89234)

This letter is in response to the Notice of Violation 8915-01 received as a result of the inspection conducted by Mr. P. W. Michaud during the period of June 23-27, 1989 (See Reference). The following response is hereby submitted:

Failure To Provide Adequate Administrative Control Of Plant Changes That Affect Safety-Related Plant Procedures

Technical Specification AC 7.4 requires that written procedures as recommended in Appendix A of Safety Guide 33, November 1972, shall be established, implemented and maintained for activities affecting plant operation.

Contrary to the above, on March 22, 1989, a change was made to the method of secondary heat balance calculation by the licensee's reactor support group without revising Procedure OPQP-IV, "Plant Operation Between 30% and 100% Power." This resulted in operation above the authorized maximum power level of 82 percent of full power, by up to 1.6 percent on June 22-23, 1989, for a period of approximately 4 hours.

This is a Severity Level IV violation. (Supplement I) (267/8915-01)

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August 14, 1989

(1) The Reason For The Violation If Admitted

The violation is admitted.

There are three different indications of reactor power available to the operators, as displayed on the data logger: primary heat balance, secondary heat balance, and linear power channels. The secondary heat balance uses more directly measured data (i.e. feedwater flow, temperature, and pressure) than the primary heat balance, and is used as a more accurate indication of reactor power at higher power levels.

At approximately 55 percent reactor power, cold reheat steam (steam entering the reheater section of the steam generators) attemperation is initiated as required to balance hot reheat (steam exiting the reheater section of the steam generators) and main steam temperatures due to the increased heat transfer design of the reheater section. This attemperation flow must be accounted for in the secondary heat balance calculations to ensure an accurate calculated reactor power level. Prior to March 22, 1989, this update to the secondary heat balance program was performed manually on data logger screen 2278 per procedure OPOP-IV or data logger screen 6049 per procedure SOAP-4, "Plant Operations Shift Turnover." On March 22, the secondary heat balance update function was deleted from screen 2278, disabled from screen 6049, and assigned to screen 2274.

Prior to initiating the secondary heat balance program changes, it was recognized that operator training would be required, and a training seminar was conducted over a five week period ending March 15, 1989. Training and procedure changes have commonly been initiated as a result of changes to the plant computer. PSC procedure TSP-27, "Plant Computer Changes," identifies how to request and initiate a plant computer change, however, the need for associated changes to plant procedures is not addressed. Thus, the instructions to operators in OPOP-IV and SOAP-4 concerning secondary heat balance update requirements were overlooked.

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

The requirement for operators to manually update the secondary heat balance calculation when attemperation flow is initiated was evaluated and determined to be unnecessary. The plant computer can automatically detect initiation of attemperation flow based on positive flow indication. The secondary heat balance calculation program has been modified to account for attemperation flow automatically. OPOP-IV has been revised to instruct operators to confirm this automatic change to the calculation, and SOAP-4 has been corrected by deleting the secondary heat balance manual update procedure for screen 6049.

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On June 28, 1989, plant management directed that all computer changes will require documentation of Operations Department procedure reviews and Operations Department management approval. This direction was made via Memo PPC-89-2045 and was implemented to provide interim control until a detailed procedure is prepared.

Fort St. Vrain operation is limited to 82 percent reactor power by the NRC. Operations Order 87-10 was issued by PSC in 1987 to administratively restrict reactor power to 81 percent and instructed operators to observe this power limitation as indicated by the secondary heat balance and average linear power channel indication. Operations Order 87-10 has been superseded by Operations Order 89-03 to administratively control reactor power below 80 percent by the most conservative indication of primary heat balance, secondary heat balance, or linear power channels.

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

A new procedure to ensure adequate control of plant computer changes has been prepared and is in routing for review and approval. This procedure will require that each computer change be evaluated for procedural impact, and any required procedure changes must be completed before the computer changes are implemented. The new procedure will be implemented by September 30, 1989.

Procedures primarily affected by plant computer changes have been identified and reviewed to determine if other discrepancies exist that may have the potential for affecting plant operation. No discrepancies were found which affect operator action or plant operation. However, some incorrect references were identified and will be corrected by August 31, 1989. A computer search of other plant procedures will be conducted by August 31, to identify any other procedures that may be affected by plant computer changes.

Due to the importance reactor power indication has in safe plant operation, further evaluation will be performed to identify if there are any other procedural or computer errors related to reactor power indication. This evaluation will be performed and any identified changes implemented by September 30, 1989.

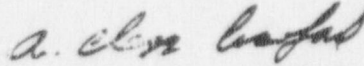
(4) The Date When Full Compliance Will Be Achieved

Full compliance will be achieved by September 30, 1989, including the implementation of the new procedure to control plant computer changes, corrections to procedure references found to be incorrect, and any necessary procedural changes resulting from the additional evaluations.

August 14, 1989

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

Sincerely,



A. Clegg Crawford  
Vice President,  
Nuclear Operations

ACC/MJ:drg

cc: Regional Administrator, Region IV  
ATTN: Mr. T. F. Westerman, Chief  
Projects Section B

Mr. Robert Farrell  
Senior Resident Inspector  
Fort St. Vrain

Mr. Robert M. Quillen, Director  
Radiation Control Division  
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