



Public Service™

January 4, 1988
Fort St. Vrain
Unit No. 1
P-88009

**Public Service
Company of Colorado**
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R.O. WILLIAMS, JR.
VICE PRESIDENT
NUCLEAR OPERATIONS

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

Docket No. 50-267

SUBJECT: I&E Inspection Report 87-17

REFERENCE: NRC Letter, Beach to
Williams, dated December
4, 1987 (G-87424)

Gentlemen:

This letter is in response to the Notice of Violation received as a result of inspections conducted by Messrs. R.E. Farrell, P.W. Michaud, E.A. Plettner and M.E. Skow during the period July 1-31, 1987. In a phone conversation between PSC's Mr. Dave Goss and the NRC's Mr. William McNeill (Region IV), the NRC granted an extension on the I&E Inspection Report 87-17 response submittal to January 15, 1988. The following responses to the items contained in the Notice of Violation are hereby submitted:

A. Inadequate Design Control

Criterion III of 10 CFR 50, Appendix B states, in part, "Design changes, including field changes, shall be subject to design control measures commensurate with those applied to the original design and be approved by the organization that performed the original design unless the applicant designates another responsible organization."

The licensee's approved quality assurance plan in paragraph B.5.3.3, states, "All design modifications designated for permanent change to FSV and to be changed by PSCo are authorized and controlled by use of a Change Notice System. This system assures the required reviews and approvals are obtained prior to and on completion of the design task. . . ." This paragraph also states, "Temporary design modifications or configurations to FSV are authorized and controlled by use of the Temporary Configuration Report (TCR) System... Those temporary modifications or configurations to be made permanent are processed through "Change Notice System."

Contrary to the above, during July 1-31, 1987, a review of the licensee's temporary configuration report log showed the following temporary configurations, which are currently installed and have been installed for a sufficient length of time to be considered permanent design changes and were not processed through the "Change Notice System" as required.

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1. TCR 85-11-05, which superseded TCR 82-10-15, dated October 25, 1982, installed 1/4 inch copper lines with pressure gauges to test reactor vessel penetrations. This temporary change had been installed for approximately 5 years.
2. TCR 85-11-06, which superseded TCR 82-05-03, dated May 27, 1982, installed a pressure differential indicator to monitor compliance with Technical Specification LCO 4.2.7.d. This temporary change had been installed for approximately 5 years.
3. TCR 86-04-04, which superseded TCR 85-12-15, which superseded TCR 81-08-65, which superseded a temporary change done under Procedure ADM-22, Form 1, Number 6-15, originally installed June 25, 1979, installed a level control on one valve and a manual control on another valve. Both of these valves are seismically qualified and required for reactor vessel depressurization following a design basis event. This temporary change had been installed for approximately 8 years.
4. TCR 86-02-04, which superseded TCR 84-08-05, originally installed December 3, 1984, placed isolation transmitters between instrument connections and a recorder to monitor compliance with Technical Specification LCOs 4.2.1 and 4.2.2. This temporary change had been installed for approximately 3 years.
5. TCR 86-01-24, which superseded TCR 81-08-81, which superseded ADM-22, Form 1, Number 11-14, originally installed November 9, 1977, lifted leads to allow the moisture monitor low flow alarm system to comply with the existing Technical Specifications. This temporary change had been installed approximately 10 years.
6. TCR 85-12-25, which superseded TCR 81-08-54, which superseded ADM-22, Form 1, Number 2-7, originally installed February 10, 1976, added temporary thermocouples to measure ambient temperature and flow element temperature in the moisture monitor penetrations. This was done to assure compliance with LCO 4.4-1, Table Note t(3), page 4.4-9 of the Technical Specifications. This temporary change had been installed for approximately 11 years.
7. TCR 86-01-29, which superseded TCR 83-05-12, originally installed May 13, 1983, installed nupro "t" type filters on the inlet sample lines to the plant protection system moisture monitors. This temporary change had been installed approximately 4 years.

8. TCR 86-01-21, which superseded TCR 81-06-07, originally installed June 24, 1981, installed leads in control room panel I G5 for connecting a recorder on the indication to ME-9306 and ME-9307. ME-9306 and ME-9307 are the analytical moisture monitors. This temporary change had been installed approximately 6 years.

This is a Severity Level IV violation. (Supplement I).

- (1) The reason for violation if admitted:

The violation is admitted. This violation is the result of weaknesses in the design change system which allowed Temporary Configuration Reports (TCRs) to be used to initiate permanent changes. Over the years, as the Change Notice (CN) process became more complex and lengthy, TCR's were often used to initiate quick changes which were then left in place with the intent of making them permanent with a subsequent CN. The resulting effect of this practice was a significant backlog of changes covered by TCRs that had not been processed through the design change process.

- (2) Corrective steps which have been taken and results achieved:

The backlog of open TCRs has been a concern of PSC for some time. As a result of feedback from the Senior Resident Site Inspector, NRC Inspection Report 87-17 and PSC internal commitments, immediate actions and short term programs have been initiated which will:

- (1) eliminate the backlog of TCRs which were used to modify the plant on a permanent basis.
- (2) incorporate the TCR process into overall design change program improvements.

A program was established and is being aggressively pursued which will eliminate the backlog of permanent change TCRs. These TCRs were reviewed to determine their permanent or temporary status or need for removal and verify their classification as to safety related, Technical Specification impact or non-safety related. A Justification for Continued Operation (JCO) was prepared for all TCRs classified safety related or as having Technical Specification impact. These JCOs were reviewed and found acceptable by the Sr. Resident Site Inspector prior to the plant's rise to power above 35 percent reactor power. Design responsibilities for these TCRs which are to be made permanent have been assigned and scheduling of these design activities are being monitored on an ongoing basis.

For those TCRs determined to be permanent which have been classified as safety related or that have Technical Specification impact, PSC has committed to reach TCR closure during the upcoming circulator outage scheduled to begin on March 12, 1988. For permanent TCRs which were classified as non-safety related, closure will occur prior to the completion of the fourth refueling outage.

Station Manager Administrative Procedure Eighteen (SMAP-18) "Processing of Temporary Configuration Reports," has been revised, effective November 19, 1987, and is currently in effect. The key revisions to SMAP-18 augmented the controls, processing and reviewing requirements for temporary plant configurations. Temporary alterations to plant equipment/systems to meet special operational conditions are intended to be of short duration. Such alterations must not violate Technical Specification requirements or involve an unreviewed safety question. Temporary configurations are not intended to be made into permanent design changes. However, in certain cases operating experience may show the need for making a temporary configuration a permanent part of the plant configuration.

SMAP-18 contains the procedural elements and requirements for controlling the initiation and processing of a TCR. Specifically, the key elements defined include:

- Updating of the special handling documents to reflect the TCR configuration and subsequent removal.
- Testing requirements following TCR installation and restoration to demonstrate affected system or equipment operability.
- Interfacing with Quality Assurance to effect reviews and process witness points.
- Enhancing the scope of the analyses, handling and tagging of the TCR alteration.
- Including a basis or justification for continued operation in the safety review.
- Limiting the life of a temporary configuration and requiring appropriate engineering reviews and management approvals for extension.

A 90 day life has been established. If an extension beyond 90 days is required, an engineering review and approvals by the Station Manager and the Manager, Nuclear Engineering Division are required. This review will consist of a

determination as to the feasibility of making the TCR a permanent change with a schedule for CN approval and construction. Any extension beyond 180 days requires the review and approval of the Vice President, Nuclear Operations.

FSV Administrative Procedure Q-11, 'Test Control', was revised to reflect the changes to SMAP-18, effective November 18, 1987.

- (3) Corrective steps which will be taken to avoid further violations:

The actions and procedural requirements described in 2) above will be sufficient to prevent further violations.

- (4) Date when full compliance will be achieved:

Full compliance will be achieved with the closure of the safety related/Technical Specification associated TCRs during the circulator outage scheduled for March 12, 1988 and closure of the non-safety related TCRs during the fourth refueling outage scheduled for February, 1989.

B. Excessive Operator Overtime

Technical Specification AC 7.1.1.2.i states that members of the plant staff who perform safety related functions (e.g., senior reactor operators, reactor operators, auxiliary operators, health physicists, and key maintenance personnel) should to the extent practical, work an 8 hour day, 40 hour week, while the plant is operating. Additionally, individuals should not be permitted to work more than 16 consecutive hours. Also, an individual should not be permitted to work more than 24 hours in any 48 hour period, nor more than 72 hours in any 7 day period.

Contrary to the above,

1. In the period June 17 through June 23, 1987, a senior reactor operator worked more than 72 hours in a 7 day period.
2. In the period June 2 through June 8, 1987, a reactor operator worked more than 72 hours in a 7 day period.

This is a Severity Level IV violation. (Supplement I).

- (1) The reason for the violation if admitted:

In association with the above guidelines defined in Technical Specification AC 7.1.1.2.i, this Technical Specification also states "If unusual circumstances arise requiring deviation from the above guidelines, such deviation shall be authorized by the Station Manager or his designee, or higher levels of management. The paramount consideration in such authorization shall be that significant reductions in the effectiveness of operating personnel would be highly unlikely."

The violation is admitted. The conditions which led to the violation are due to the following:

- No formal program existed for pre-authorizing overtime in excess of the guidelines.
- Demands on the Operations staff due to extended outage conditions.
- The effects of lost time (vacations, sick leave, etc.) on staff schedules.

(2) The corrective steps which have been taken and the results achieved:

A formal program to monitor and identify overtime in excess of established guidelines has been established. On September 17, 1987, a program for monitoring overtime hours was presented to all affected Supervisors in the Nuclear Production Division. Requirements of the program were documented by Interoffice Memo PPC-87-3236, "Time Reporting for Personnel Working Under Technical Specification AC 7.1.1.2.i". The contents of the memo and the substance of the program are briefly outlined as follows:

- All Supervisory personnel were instructed to discuss the guidelines contained in the Technical Specifications with their staff.
- Circumstances under which deviation from the guidelines are allowed were clearly defined. The level of Management approval required to allow such deviation was identified. In particular, it was stressed that Management approval must be obtained prior to exceeding overtime guidelines.
- A system requiring the daily completion of time cards for all Nuclear Production Division non-management employees was implemented. This system provides a

means for Supervisory and Payroll personnel to better monitor for excessive overtime.

Since the implementation of this system no individuals have exceeded guidelines without proper prior approval. In those cases where guidelines were exceeded, measures were taken to provide assurance that the individual's quality of work on safety related functions was not affected by fatigue.

- (3) Corrective steps which will be taken to avoid further violations:

An Outage Management Program has been established for the plant. The process of planning and scheduling outage activities for the foreseeable future is underway. Effective outage preplanning will minimize the impact on plant resources in the future.

The formal program to monitor and identify overtime in excess of guidelines will continue with increased management attention. The use of a computerized system to aid this effort is being investigated. If appropriate, a computerized system will be obtained and implemented.

- (4) The date when full compliance will be achieved:

Compliance, upon implementation of the above described program, was achieved on October 5, 1987.

C. Breaker Identification and Failure to Follow Procedures

Criterion V of 10 CFR 50, Appendix B and the licensee's approved quality assurance plan (FSAR Appendix B, Section B.5.3.4.a) requires that applicable regulatory requirements, FSAR design bases, codes, standards and quality requirements are correctly incorporated into the drawings, specifications and other controlling documents.

1. Contrary to the above, the identification of breakers on the 120 VAC vital electrical distribution system panels were found not to be in agreement with the 120 VAC system drawings E-1097 and E-1098.

This is a Severity Level IV violation. (Supplement I).

- (1) The reason for violation if admitted:

The violation is admitted. The violation was due to personnel inattentiveness to plant and engineering

procedures. The procedures require that modifications to FSV systems are reflected in design documents.

- (2) Corrective steps which have been taken and results achieved:

In response to the discrepancies noted by the inspection of the 120 VAC vital electrical distribution system panels, a complete walkdown of those panels was performed by the FSV plant electricians and engineering staff. The results of the walkdown were compared to the applicable drawings (E-1097, E-1098, E-1102, E-1102A, E-1103, E-1103A, E-1104 and E-1105). A Change Notice (CN-2673) was issued to update these drawings to reflect the as-built conditions.

- (3) Corrective steps which will be taken to avoid further violations:

The FSV modification system is in the process of being upgraded to avoid these types of problems. An overview of the changes was presented at the September 10, 1987, Inspection and Enforcement Conference meeting held at the NRC Region IV headquarters.

PSC is actively pursuing an aggressive schedule to implement a more effective configuration management program. The major elements of this program include the interfacing requirements of the design change process, design requirements or design bases and document control. Integration of all aspects of these elements into an effective program will ensure that the plants' physical and functional characteristics/requirements are accurately reflected and implemented.

- (4) Date when full compliance will be achieved:

CN-2673 was issued September 21, 1987, and the work package was completed on October 14, 1987.

2. The licensee's Procedure SOAP-5, "FSV Operation's Equipment Check and Performance Data Recording Procedure," Issue 3, requires in paragraph 4.3.2, "General Area Inspection Items," Item P, "Safety Hazards," Sub-item 2, that ". . . gas bottles are secured."

Contrary to the above,

- (a) On July 8, 1987, a full nitrogen bottle was found in the reactor building free standing and not secured by chains.

- (b) On July 8, 1987, a compressed gas bottle was found secured by its neck in the building housing the batteries for the alternate cooling method.

This is a Severity Level IV violation. (Supplement I).

- (1) The reason for the violation if admitted:

The violation is admitted. The violation is due to a lack of attention to detail and the failure of individual workmen to conform to established administrative controls.

- (2) The corrective steps which have been taken and the results achieved:

Management attention was directed to this issue prior to the issuance of the Notice of Violation. Interoffice Memo PPC-87-2569, "Bottle Restraints" had been generated by the Station Manager. The memo, dated July 20, 1987, was directed to all Nuclear Production Division personnel. All personnel were reminded of existing requirements to secure all high pressure bottles properly.

Enhancements to General Employee Training (GET) were also initiated in response to this issue. GET Lesson Plan Number GE 012.04, "Plant and Personnel Safety" was revised effective October 21, 1987 to include additional emphasis on the need to provide adequate bottle restraints. GET is provided to all Nuclear Production personnel on an initial and on-going basis. All subsequent presentations of GET have included the revised material.

The plant was walked down to identify the locations of all high pressure gas bottles and assess the adequacy of existing bottle restraints. A weekly surveillance was developed to provide assurance and documentation that high pressure bottles are secure and restrained in the proper manner.

- (3) Corrective steps which will be taken to avoid further violations:

Enhancements to applicable GET Lesson Plans with regards to this issue have been made permanent. This training is provided to all site-assigned personnel initially and on an annual basis.

A weekly surveillance, SR-OP-45-W, "High Pressure Bottle Restraint Verification Checklist", has been developed. The purpose of SR-OP-45-W is to visually inspect high pressure

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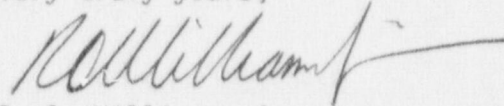
bottles for proper restraint and to physically ensure chain/strap continuity and integrity once per week. The surveillance provides assurance and documentation that high pressure bottles are secure and restrained in the proper manner. The new procedure received the consideration and approval of the Plant Operations Review Committee on December 15, 1987. SR-OP-45-W was issued effective December 18, 1987. Responsibility for performance of this surveillance will be rotated among Nuclear Production Departments such that more personnel will participate in the process of bottle restraint verification and thus gain ownership and awareness of the issue.

- (4) The date when full compliance will be achieved:

Full compliance was achieved effective December 18, 1987.

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

Very truly yours,



R. O. Williams, Jr.
Vice President, Nuclear Operations

ROW:JRJ/jw

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