

MAR 29 1988

In Reply Refer To:  
Docket: 50-267/87-34

Public Service Company of Colorado  
ATIN: Robert O. Williams, Jr.  
Vice President, Nuclear Operations  
2420 W. 26th Avenue, Suite 15c  
Denver, Colorado 80211

Gentlemen:

Thank you for your letter of March 11, 1988, in response to our letter and Notice of Violation dated February 3, 1988. We have reviewed your reply and find it 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,

L. J. Callan, Director  
Division of Reactor Projects

cc:  
Fort St. Vrain Nuclear Station  
Manager, Nuclear Production Division  
16805 WCR 194  
Platteville, Colorado 80651

Fort St. Vrain Nuclear Station  
P. Tomlinson, Manager, Quality  
Assurance Division  
(same address)

Colorado Radiation Control Program Director

Colorado Public Utilities Commission

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LJCallan  
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Company of Colorado  
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March 11, 1988  
Fort St. Vrain  
Unit No. 1  
P-88083

R.O. WILLIAMS, JR.  
VICE PRESIDENT  
NUCLEAR OPERATIONS



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

Docket No. 50-267

SUBJECT: NRC Inspection Report 87-34

- REFERENCES:
- (1) NRC letter, Callan to Williams, dated February 3, 1988 (G-88026)
  - (2) PSC letter, Williams to Document Control Desk, dated January 6, 1988 (P-88006)
  - (3) PSC letter, Williams to Document Control Desk, dated January 6, 1988 (P-88007)

Gentlemen:

This letter is in response to the Notice of Violation (Reference 1) received as a result of the inspection conducted by Messrs. R. E. Farrell and P. W. Michaud during the period November 22 through December 31, 1987. As discussed with Mr. T. F. Westerman on March 2, 1988, an extension of this response was granted until March 11, 1988 in order to address any NRC concerns discussed at the PSC/NRC management meeting on March 3, 1988. The following response to the item contained in the Notice of Violation is hereby submitted:

Inadequate Procedural Controls

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

The licensee's quality assurance program as documented in FSAR, Appendix B, Section B.5.5.2, states, in part, "Each Change Notice package authorizing a modification or selected non-routine

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maintenance to the Plant, or any part thereof, requires the development of a Controlled Work Procedure," and "All maintenance, inspection, and surveillance activities are performed to procedures authorized under controls imposed by the FSV Administrative Procedures Manual."

Contrary to the above:

- o On December 7, 1987, a wire was incorrectly terminated following maintenance, in violation of the procedural requirements of Clearance 17895, causing a reactor scram signal and equipment damage.
- o Also, on December 7, 1987, a wire to be lifted during a test was incorrectly specified by Station Service Request 87509817 resulting in a loss of offsite power.
- o On December 21, 1987, emergency lighting batteries were damaged beyond repair due to the failure to establish proper installation requirements in Control Work Procedure (CWP) 87-47 through 56, 182, and 183.

This is a Severity Level IV violation. (Supplement I)(267/8734-01)

(1) The reason for violation if admitted:

The violation is admitted. Licensee Event Report 87-029 (Reference 3) described the first instance of inadequate procedural controls cited in the Notice of Violation. The identified cause of the incorrect termination of the cable 7487 wire was the inattentiveness on the part of both the electrician and the individual who performed the subsequent independent verification and functional test.

The identified cause of the second instance of inadequate procedural control, described in Licensee Event Report 87-028 (Reference 2), was failure of the test procedure preparer to properly incorporate precautions that would ensure that the Reserve Auxiliary Transformer (RAT) would not trip during the test. A contributing factor was a deficiency in Station Manager Administrative Procedure 23 (SMAP-23) which does not require that an independent review be performed on Post Maintenance Tests.

In the third instance cited of inadequate procedural controls the damage to the new emergency lighting system was caused when a portion of the manufacturer's installation precautions was omitted from the work instructions. The actual installation and wiring was done properly; however, the precautions related to battery storage and re-charging when not in service were not included in the work instructions by the designer and therefore not performed by maintenance personnel. When the pre-operational test was performed, the batteries were already discharged, resulting in boiling several batteries dry when the charging circuitry was energized.

PSC recognizes that although the instances cited had variable conditions (i.e. plant status, personnel involved, work activity in progress, etc.), personnel error or procedural inadequacy were present in each case. In further discussing the cited instances with plant personnel, PSC has determined that a primary factor in all three instances was a perception by performance level personnel that management was emphasizing the need for plant operation, without an adequate and simultaneous emphasis on the need for quality work performance. Additional contributing factors included the use of personnel new to Fort St. Vrain who, although qualified to perform the work, are still becoming familiar with new programs, procedures, and are still gaining experience with Fort St. Vrain plant systems.

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

In the first instance, the Superintendent of Maintenance and Station Manager discussed this event in detail with the individuals who returned the clearance on cable 7487. The results of mislanding the lead, including personnel safety, equipment damage, and associated costs were covered. It was emphasized that work must be performed correctly above all other considerations.

In the second instance the deficient test procedure was corrected and the affected relay was successfully tested and verified to be operable. Following the test, all systems and components involved were returned to their normal configuration. To ensure an independent review of Post Maintenance Test Procedures, a revision to SMAP-23 has been initiated.

In the third instance, new replacement batteries have been received, installed and successfully tested. Emphasis on preparing better work instructions is an essential element being incorporated into PSC's overall enhancement to the design control program. PSC recognizes the need to carefully plan all modification activities, including post modification testing, as part of the design control process.

PSC executive management has met with instrument and control technicians, plant electricians and all intermediate levels of supervision to discuss the importance of controlled maintenance activities. Proper troubleshooting techniques and the need to ensure accurate configuration management were also emphasized. Executive management has also impressed upon these personnel that many areas of support activities (and the quality of these activities) have the potential to directly impact maintenance tasks. PSC has a goal of zero defects in all maintenance activities which is shared by maintenance, support and management personnel alike. Discussions have been held with all levels of management to emphasize the importance of quality work performance as a fundamental factor in meeting plant operational schedules. All levels of management are involved in ensuring Nuclear Operations personnel are aware of the direct relationship

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of quality to all activities supporting plant operations, and the need for feedback when conditions appear suspect.

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

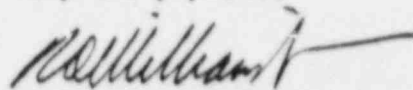
To address the condition related to lifted leads, an interim policy and administrative process concerning lifted leads has been implemented on a pilot basis. A final policy and supporting administrative procedures are being developed using extensive contributions from personnel who actually perform maintenance and testing activities related to lifted leads. Additionally, improvements in the post maintenance testing program are being formulated. Executive management will meet with mechanical maintenance personnel to emphasize the importance of quality work, configuration management and proper troubleshooting techniques. Management personnel will also be cautioned to pay particular attention to work performed by newer Fort St. Vrain personnel who, although they may be qualified by training and experience, may still not be completely familiar with specific Fort St. Vrain programs, procedures, equipment of systems.

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

The formal policy and supporting administrative procedures related to lifted leads will be issued by May 31, 1988. The revision to SMAP - 23 concerning an independent review of post maintenance test procedures will be issued by April 30, 1988. Executive meetings with mechanical maintenance and management personnel will be complete by March 31, 1988.

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

Very truly yours,



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

ROW:DG/dd

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

Mr. Robert Farrell  
Senior Resident Inspector  
Fort St. Vrain