



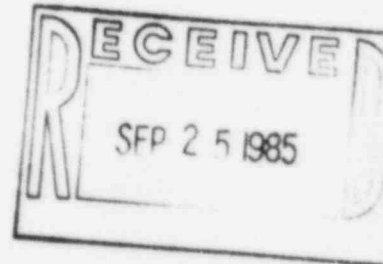
Public Service™

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Public Service
Company of Colorado

September 23, 1985
Fort St. Vrain
Unit No. 1
P-85335

Regional Administrator
Attn: Mr. E. H. Johnson
Region IV
U. S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011



Docket No. 50-267

SUBJECT: I&E Inspection Report 85-07

REFERENCE: NRC Letter, Johnson to
Lee, dated 08/21/85
(G-85352)

PSC Letter, Warembourg to
Johnson, dated 08/16/85
(P-85239)

Dear Mr. Johnson:

This letter is in response to the Notice of Violation received as a result of inspections conducted at Fort St. Vrain during the period March 1-31 and April 1-30, 1985. The following responses to the items contained in the Notices of Violation are hereby submitted:

1. Failure to Follow Surveillance Procedure

Fort St. Vrain Technical Specifications, Section 7.4 require that written procedures be established, implemented and maintained . . . for surveillance and test activities. Licensee Surveillance Procedure SR 5.51b-SA, "Loss of Offsite Power," requires that the 480 volt bus 1 to bus 2 tie breakers be opened after testing, that the time for helium circulator restoration be entered, that the time for return of equipment to normal be entered and that hand switch positions be entered.

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Contrary to the above, it was found after completion of surveillance procedure SR 5.51b-SA on March 18, 1985, that:

- * The 480 volt bus 1 to bus 2 breaker was closed.
 - * Helium circulator restoration was not entered.
 - * The time for equipment return to normal was not entered.
 - * Handswitch positions were not entered on Data Sheet 10.
- This is Severity Level IV Violation (Supplement I.D.) (8507-09).

(1) The reason for the violation if admitted:

- * The Operator opened the bus tie, HS-9237, and did not receive the green light. At this time he closed back in and changed the light bulb. The Operator changed the light bulb at this time. The on-coming shift was in and ready to relieve personnel. In the course of shift relief the Operator forgot to mention this problem with the on-coming shift.
- * Helium circulator restoration was not entered because the Operator entered the PSC Clearance number which did not pertain to this circulator. The Operator inadvertently enter the Clearance number in the wrong space. The error was noted when the surveillance was verified and it was corrected.
- * The time for equipment return to normal was not entered.
- * Data Sheet 10 handswitch position blanks were marked N/A instead of recording actual handswitch position.

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

- * This situation was discussed and the equipment was returned to normal on the 4-12 shift. A formal reprimand for failure to fill out correct data was issued to the effected personnel. All Operations personnel have been informed of the correct procedures to follow.
- * SMAP-1 has been revised to direct Operators how to correctly fill out surveillance procedures. Unnecessary use of 'N/A' has been eliminated.

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

Shift Turnover policies are being reviewed administratively and by QA on a continuing basis. These policies will be monitored frequently by plant management to ensure the proper exchange of information is occurring.

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

June 1, 1985.

2. Failure to Follow Maintenance Procedures

Fort St. Vrain Technical Specifications, Section 7.4, require that written procedures be established, implemented and maintained for safety-related maintenance.

Maintenance Procedure MP-22 requires that:

- * The welder qualification record and MP-100 be in the work package.
- * Cleanliness be maintained.
- * Approved solvents be used.
- * Flammable liquids be stored in safety containers.
- * A fire extinguisher be available.

Contrary to the above, it was found for work on HV-2253 and HV-2254 that

- * An MP-100 and welder qualification record were not in the work package.
- * Cleanliness was not maintained.
- * An unapproved solvent was used.
- * Flammable liquids were not stored in safety containers.
- * A fire extinguisher was not in the immediate area.

This is a Severity Level IV Violation (Supplement I.D.) (8507-08).

(1) The reason for the violation if admitted:

- * Welder qualification record and MP-100 were not included in the work package of repair to HV-2253. - The valve repair work was assigned to a maintenance contractor to provide manpower and supervision to complete the necessary repairs. When the as-found condition of the valve body and seat indicated that major repairs by a qualified valve specialist would be required, PSC acquired the services of a Rockwell Valve Company Field Service Repairman who, upon two previous occasions, performed similar repairs to Fort St. Vrain valves. The contractor supervision assumed that since the Rockwell repairman had performed similar repairs in accordance with Fort St. Vrain Procedures, that there should not be any problems. The Rockwell repairman proceeded with the repairs called for in the Controlled Work Procedure, using Rockwell Procedures and forgetting that MP-100 is required to initiate all Maintenance Department weld repair procedures or to include a copy of his welder qualification in the Work Package. This resulted from an inadequate job briefing.
- * Cleanliness was not maintained. - Neither the Rockwell valve repairman or the contractor felt that 100% plugging of the upstream and downstream piping was necessary. The Rockwell repairman would place a dam like arrangement using fire retardant cloth in the piping to prevent migration of metal grindings and slag during the periods of welding or grinding. At the end of the shift, a laborer would enter the 16" valve and clean out the cavity and adjacent piping and remove the fire retardant cloth dam. At the time the inspector noted the infraction, the dams had been removed but due to an ingress of water, the valve had not been cleaned in accordance with procedural requirements.
- * An unapproved solvent was used. - A can of dye penetrant solvent that was frequently used by QC personnel to clean the valve for dye penetrant checks was left at the job site and was apparently the unapproved solvent referred to. The lack of job briefing resulted in the use of the dye penetrant solvent rather than the alcohol solvent provided at the job site when the Rockwell repairman cleaned the repair area of the valve. Dye penetrant solvent is an approved cleaner per QC test procedures but is not listed as an approved solvent in MP-22.

- * Flammable liquids not in approved safety containers. - Contract personnel were not properly briefed by their supervisory personnel and allowed alcohol solvent to be brought to the job site in the shipping containers. They were of the impression that approved safety containers were required in the Reactor Building but not necessary in the Turbine Building.
 - * Fire extinguisher was not in the immediate area. - Contractor supervision did not feel that a fire watch was necessary because grinding and welding was performed within the 3 foot deep valve body that prevented all sparks and hot metal slag from being a hazard to the plant.
- (2) The corrective steps which have been taken and the results achieved:
- 1) When apprised of the noted infractions, a PSC Maintenance Supervisor was immediately sent to meet with the Contractor Superintendent and the Rockwell repairman. The following corrective actions were initiated:
 - a) The Work Package that performed the repairs was reviewed with the Rockwell repairman and the proper procedures, documents and records were added. The repairman and the contractor were instructed in the use of Controlled Work Procedures and Welding Procedures.
 - b) The Contract Superintendent was instructed to stop work on the valve until adequate pipe plugs were fabricated and installed to prevent migration of grindings and slag into system piping.
 - c) The dye penetrant solvent was removed from the work site and workmen were advised that only QC personnel could use that solvent to clean the valve because it was called for in their procedures but not in the procedures that controlled the work that they were doing.
 - d) Flammable liquids that were not in approved safety containers were removed from the work site to be put in approved containers. Workmen were instructed that safety containers were required for flammable liquids any where within the plant area.
 - e) The Contractor Superintendent was instructed to assign a qualified fire watch with a portable fire extinguisher in accordance with MP-100 instructions when the work resumed.

- 2) After implementation of this corrective action, the work was resumed and was completed without incident and in full compliance of applicable procedures.

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

- 1) A number of actions were initiated to address not only the noted infractions but addressed other areas of maintenance that were identified by PSC management as weak or needing improvement. Those that address the noted infractions are:

- a) Because of an identified weakness in the supervisory structure of the maintenance contractor that contributed heavily to this situation and problems during the previous outage, the maintenance contract with that company was terminated and a new contract was placed in effect with a new maintenance contractor that has assured management that they will provide a supervisory staff that is superior to the previous contractor.

- b) A program, through the Training Department, was initiated that provided training to familiarize contractors with the specific procedures that all personnel must adhere to while performing any type of maintenance. This training was given to all contract trade personnel and to the contractor supervisory staff. This program is now given to all new contract personnel within one week of completing the initial General Employee Training class.

- c) A Fire Prevention Work Permit procedure is being developed that will better define fire protection requirements and controls.

- d) A procedure that will provide guidelines and instructions for the purpose of implementing tool/material control and system safeguards is in the process of being developed.

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

- 1) The change in contractor has been completed.
- 2) The procedure training of all contract personnel on site was completed on August 7, 1985.
- 3) The Fire Prevention Work Permit will be in effect by January 1, 1986.

- 4) The procedure to provide tool/material control and system safeguards will be in place by March 1, 1986.

Full compliance will be achieved by March 1, 1986.

3. Inadequate Maintenance Procedures

Fort St. Vrain Technical Specifications, Section 7.4, require that written procedures be established, implemented and maintained for . . . safety-related maintenance.

- a. Licensee Procedure Q-5, "Instructions, Procedures, and Drawings," Issue 3, dated August 31, 1983, requires that the licensee maintain and employ technical documents from the AE/NSSS.

Contrary to the above, technical notes on NSSS drawings for control rod drives were not reflected in the work instructions for control rod drives.

- b. Licensee Procedure Q-9, "Controlled Work Procedures," Issue 6, dated December 5, 1984, requires the use of a controlled work procedure that reflects job requirements such as fabrication instructions. Change Notice 1994, "Fabrication and Installation of the Slack Cable Bushing Cap", dated March 28, 1985, stated in the check list that all material was properly identified.

Contrary to the above, bushing caps manufactured by PSC were stored in the warehouse under code No. 1504244 without other identification and without material traceability records.

This is a Severity Level V Violation (Supplement I.E.) (8507-05).

(1) The reason for the violation if admitted:

- a. The Fuel Handling Procedure Work Packets (FHPWP's) for the control rod drives were based upon the NSSS supplied operation and maintenance (O&M) manual and the PSC generated maintenance procedure. These documents generally incorporated those drawing notes associated with the maintenance of the control rod drive and orificing assemblies (CRDOA's) based on a review of CRDOA drawings and the O&M manual. However, not all pertinent drawing notes were specifically addressed in the procedures.
- b. Slack cable bushing caps were manufactured using non-safety related bar stock from Stock Code No. 1509244. This was done due to an erroneous interpretation of the application that the caps were to be used for. The actual application was indeed safety related.

As CRDOA's were worked, the slack cable bushing caps were checked out of the parts distribution center, identified by Stock Code No. 1509244, and installed in accordance with the Fuel Handling Procedure Work Packet and CN-1994. The installation of each slack cable bushing cap was verified by Quality Control.

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

- a. When it was discovered that the FHPWP's had not addressed all maintenance notes on the NSSS supplied manufacturing drawings, an independent review was conducted. A total of 362 CRDOA assembly drawings and the applicable sections of the O&M manual were reviewed. A total of 734 drawing notes were found to contain requirements which would apply to the installation, procurement, and manufacture of CRDOA components. A total of 26 requirements, which related to the refurbishment program, were found not to be fully implemented into the FHPWP. Seven requirements were found not to be fully implemented in the purchase order requirements. Each of these requirements were addressed and transmitted to the NRC by letter P-85239. The conclusion of the independent review was that all essential technical engineering requirements had been included in the FHPWP's. Furthermore, none of the omissions, additions or changes constituted a condition which would require rework of the CRDOA's.

- b. The material used to construct the slack cable bushing caps was traced to PSC Purchase Order 32839 and associated chemical analysis certificate of the Aluminum 2024 T351 CF. The tensile strength of this aluminum is 68,000 psi and the yield strength is 47,000 psi. The material specified in CN-1994 was Aluminum 2011-T3. Aluminum 2011-T3 has a tensile strength of 55,000 psi and a yield strength of 43,000 psi. The material used is a higher grade than specified in CN-1944 and is thus acceptable for this application. NCR 85-935 documents this evaluation.

To provide proper material traceability an internal purchase order was generated to provide the slack cable bushing caps Stock Code No. 1722322 and associated material traceability.

The slack cable bushing caps were identified adequately in accordance with FSV Administrative Procedure P-5, and the identification was maintained until the time they were installed on the CRDOA and the installation was verified by Quality Control.

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

- a. The Maintenance Administrative Procedure 11 (MAP-11) states that:

"The Procedure Author is responsible for ensuring that the reference documentation is appropriate and is the latest information available. . ."

This will avoid further violation as a result of the current program to rewrite all maintenance procedures.

- b. No further corrective action is required.

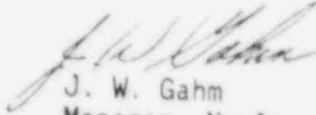
(4) The date when full compliance will be achieved:

- a. PSC plans to have completed its program to rewrite all maintenance procedures by January 1, 1987 in accordance with the Nuclear Performance Enhancement Program.
- b. September 23, 1985.

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Should you have any further questions, please contact
Mr. M. H. Holmes, (303) 571-8409, ext. 201.

Sincerely,



J. W. Gahm
Manager, Nuclear Production
Fort St. Vrain Nuclear
Generating Station

JWG/djc