

APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-267/84-26

License: DPR-34

Docket: 50-267

Licensee: Public Service Company of Colorado (PSC)  
P. O. Box 840  
Denver, Colorado 80201

Facility Name: Fort St. Vrain Nuclear Generating Station

Inspection at: Fort St. Vrain (FSV) Site, Platteville, Colorado

Inspection Conducted: September 1-30, 1984

Inspector: *G. L. Plumlee III* 10-11-84  
G. L. Plumlee III, Senior Resident Inspector (SRI) Date

Approved: *R. E. Ireland* 10/19/84  
R. E. Ireland, Acting Chief Date  
Special Projects & Engineering Section

Inspection Summary

Inspection Conducted September 1-30, 1984 (Report: 50-267/84-26)

Areas Inspected: Routine/Reactive, announced inspection of Licensee Action on Previous Inspection Findings; Operational Safety Verification; Maintenance; IE Bulletin Followup; Control Rod Drive Event Followup; and Review of Periodic and Special Reports. The inspection involved 50 routine inspector-hours onsite, 7 routine inspector-hours offsite, 28 reactive inspector-hours onsite, and 3 reactive inspector-hours offsite.

Results: Within the six areas inspected, one violations (failure to follow procedures, paragraph 4) and one open item (annunciator deviation, paragraph 3) were identified.

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DETAILS

1. Persons Contacted

Principal Licensee Employees

L. Bishard, Maintenance Supervisor  
\*T. Borst, Support Services Manager/Radiation Protection Manager  
\*W. Craine, Superintendent of Maintenance  
R. Craun, Supervisor Nuclear Site Engineering  
M. Deniston, Shift Supervisor  
J. Eggebrotten, Technical Services Engineering Supervisor  
D. Evans, Shift Supervisor  
\*M. Ferris, QA Operations Manager  
\*W. Franek, Superintendent Operations  
\*C. Fuller, Station Manager  
\*J. Gahm, Manager Nuclear Production  
J. Hunter, Shift Supervisor  
J. Jackson, QA/QC Supervisor  
\*J. McCauley, Results Engineering Supervisor  
P. Moore, QA Technical Support Supervisor  
\*M. Niehoff Site Engineering Manager  
\*F. Novachek, Technical/Administrative Services Manager  
H. O'Hagen, Shift Supervisor  
\*T. Orlin, Superintendent QA Services  
T. Prenger, QA Engineering Coordinator  
G. Redmond, MQC Supervisor  
G. Reigel, Shift Supervisor  
T. Schleiger, Health Physics Supervisor  
\*L. Singleton, Manager QA  
H. Starner, Coordinator Nuclear Site Construction  
J. Van Dyke, Shift Supervisor Administration  
S. Willford, Training Supervisor

The SRI also contacted other plant personnel including reactor operators, maintenance men, electricians, technicians, and administrative personnel.

\*Denotes those attending the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (50-267/8414-11): Circuit Optimization Documentation for IE Circular 79-02 and IE Bulletin 79-27 (CAAR-829). Refer to paragraph 5 of this report.

### 3. Operational Safety Verification

The SRI reviewed licensee activities to ascertain that the facility is being operated safely and in conformance with regulatory requirements and the licensee's management control system is effectively discharging its responsibilities for continued safe operation.

The review was conducted by direct observation of activities, tours of the facility, interviews and discussions with licensee personnel, independent verification of safety system status and limiting conditions for operations, and review of facility records.

Logs and records reviewed included:

- . Shift Supervisor Logs
- . Reactor Operator Logs
- . Equipment Operator Logs
- . Auxiliary Operator Logs
- . Technical Specification Compliance Logs
- . Operations Order Book
- . Operations Deviations Reports
- . Clearance Log
- . Temporary Configuration Reports
- . Plant Trouble Reports

During tours of accessible areas, particular attention was directed to the following:

- . Monitoring Instrumentation
- . Radiation Controls
- . Housekeeping
- . Fluid Leaks
- . Piping Vibrations
- . Hanger/Seismic Restraints
- . Clearance Tags
- . Fire Hazards

- . Control Room Manning
- . Annunciators

Items of concern identified during plant tours were reported to the licensee for correction and consisted of items such as the need to repair damaged lagging, conduit pulled loose, identification tags missing from valves, oil on the deck, valve packing leaks, and the misuse of magenta and yellow tape used to identify radiation hazards.

During a tour of the control room on September 17, 1984, the SRI determined that an operator information assessment group (OIAG) notice had not been issued concerning the modification in progress under CN 1707. As previously identified in NRC Inspection Report 84-16, the OIAG meets on a weekly basis to discuss any changes to procedures, Technical Specifications, plant systems, etc.; it then puts out an information notice to the people involved with the change. Discussion with the licensee indicated that the OIAG had not met during the past several weeks resulting in delays in providing the necessary information to the operators. The SRI stressed the importance of keeping operators informed. The OIAG's charter for weekly meetings was developed with this as a goal.

On September 20, 1984, during a review of the operations deviation report log, the SRI determined that deviation status tags had been hanging on control room annunciators at Panel I-06C Windows 1-3 and 2-3 since August 1980, due to the windows being mislabeled. The licensee was informed that this appeared to be another example of previously reported weaknesses in their tagging system, in that deficiencies are not being corrected in a timely manner. This is considered an open item (8426-01) pending completion of corrective actions necessary to return the annunciators to normal.

No violations or deviations were identified.

#### 4. Maintenance (Monthly)

The SRI reviewed records and observed work in progress to ascertain that the following maintenance activities were being conducted in accordance with approved procedures, Technical Specifications, and appropriate Codes and Standards. The following maintenance activities were reviewed and observed:

CN 1707/CWP 84-113 Reroute Loop 2 Circulator Helium/Water Drains to the High Pressure Separator (HPS); Reroute the Loop 2 HPS Drains to the Bearing Water Surge Tank (BWST)

CN 1603/CWP 84-153 Replacement of the Control Room Make-Up Filter

During a review of the design analysis for CN 1707 on September 17, 1984, just prior to returning Loop 2 to service, the SRI determined that, as worded, the design analysis appeared to require a change notice (CN) reissue prior to returning the system to service. The analysis stated, in part, "Due to the complexity of the analysis required for load changes on the snubber deck, and the time required for these calculations, this CN is approved for construction by Engineering judgement, and snubber deck load calculations will follow in a CN Reissue." This was brought to the licensee's attention and a CN reissue was prepared to correct this assumption. The SRI reviewed the preliminary reissue submitted for independent verification on September 19, 1984. The reissue supported the conclusion that the modifications performed by this CN would not overstress the snubber deck.

During a review of the work in progress under CWP 84-113, the SRI determined that the control work procedure (CWP) did not contain flushing instructions as required by the licensee's commitment to ANSI N45.2.1-1973, "Cleaning of Fluid Systems and Associated Components During the Construction Phase of Nuclear Power Plants," and as directed by the licensee's Control Work Procedure Manual (CWPM)-1C, "General Mechanical Planning Considerations and Mechanical Planning Checklist." Further reviews in this area have indicated that the failure to use the CWPM during CWP preparation has been a common practice at FSV. It is of particular concern that the failure to follow the CWPM had previously been identified by the licensee's QA audit program and documented in their corrective action program in November 1983, with a disposition that the CWPM would be revised prior to January 1, 1985. However, the corrective action did not address the failure to follow procedures.

The licensee's apparent failure to completely address and correct their own findings in a timely manner indicates a weakness in their corrective action program. As a result, commitments to industrial standards as defined in the FSAR and CWPM apparently have been overlooked during the preparation of CWPs which implement design modifications. The licensee was informed of the above findings and was told that the failure to follow procedures which are Technical Specification requirements is considered a violation (8426-02). Immediate corrective action to date has been the issuance of inter-department memo NFG-84-0175, dated September 27, 1984, which stresses the importance of using the planning checklists in the CWPM. To ensure that proper planning is incorporated in CWPs being prepared, the memorandum requires each CWP is to be independently reviewed prior to issuance. The reviewer must verify that the CWP had been prepared in accordance with the CWPM and that any or all special instructions are included in the work package.

The SRI had no further questions in this area.

5. IE Bulletins

The SRI verified by record review, observation, and discussion with the licensee the actions taken in response to IE Bulletins and reviewed the following bulletin:

(Closed) IE Bulletin 79-27: Loss of Non-Class 1-E Instrumentation and Control Power System Bus During Operation. As identified previously in NRC Inspection Report 84-14, this Bulletin would be closed upon resolution of Unresolved Item 8414-11. Based on a review of the licensee's evaluation of this issue as documented in inter-department memo NDS-84-0573, dated August 16, 1984, the SRI considers Unresolved Item 8414-11 closed. The licensee's memorandum addressed circuitry optimization for FSV's newly installed inverter static transfer switches.

No violations or deviations were identified.

6. Control Rod Drive (CRD) Event Followup

Due to the safety significance of this event which occurred on June 23, 1984, as documented in NRC Inspection Reports 84-18 and 84-22, the SRI spent considerable inspection effort in this area. The following is a chronological summary of the SRI's observations for this reporting period:

- . On September 5, 1984, the SRI reviewed a Special Test T-242 and observed testing in progress. Its purpose was to lift the auxiliary transfer cask (ATC) approximately 4 inches and actually observe the control rod cannister string using video equipment to verify borescope observations, previously reported in NRC Inspection Report 84-22, and measure radiation levels. This information was obtained and used to determine a procedure for removal of the damaged CRDM from the reactor.
- . On September 11, 1984, the SRI reviewed CN 1872/CWP 84-213, "Provide Temporary Lifting Device for Reactor Building Crane." This was a modification to a special lifting device for the overhead crane to allow an ATC lift of approximately 50 inches in order to remove the damaged mechanism from Region 7 and transfer it to the hot service facility (HSF). The SRI also reviewed Fuel Handling Procedure Work Packet - 82 that had been developed for this transfer and observed the transfer on swing shift which was performed in accordance with the procedure. CRD-25 from Region 7 was moved to the east port of the HSF for inspection.

- . On September 12, 1984, the SRI inspected CRD-25 through the HSF viewing window and determined that one absorber string was hanging down with damaged absorber sections and shock absorber evident. The other string was fully retracted. CRD-29, which had previously been refurbished, was removed from Equipment Storage Well (ESW) 5 and installed in Region 7.
- . On September 17, 1984, CRD-21 from Region 35 was removed and stored in ESW 5. It will be refurbished due to an unacceptable back EMF acceleration.
- . On September 18, 1984, CRD-44 was removed from ESW 4 and installed in Region 35. This CRD had previously been refurbished. The CRD-25 200 assembly was raised and inspected. Small pieces of shredded cable strands were found as well as two pieces of cable approximately 4 inches long, one approximately 12 inches long, and one approximately 4 to 5 feet long.
- . On September 19, 1984, the SRI reviewed the Special Test T-244 that had been developed and was being used for the CRD-25 200 assembly inspection and viewed the damaged CRDM from outside its confinement structure. The SRI also reviewed the video tape of the Region 7 plenum area inspection that was performed on September 12, 1984, prior to the installation of CRD-29 into Region 7. The video tape appeared to indicate the following: (1) a damaged reactor isolation valve (RIV) seal ring, (2) some kind of screw or pin laying on the RIV gate edge, and (3) a strand of cable laying on top of the center plenum element between two coolant holes.
- . On September 20, 1984, CRD-2 was removed from Region 27 and placed in ESW 4. Its shim motor will be refurbished due to unacceptable back EMF acceleration. CRD-11 was removed from the west port of the HSF and temporarily installed in Region 27. Refurbishment of CRD-11 was complete but the frayed cables, as identified in NRC Inspection Report 84-22, need to be replaced. Also it was installed without a shim motor and position potentiometer. CRD-13 was removed from ESW 2 and placed in the west port of the HSF for refurbishment of its shim motor and repairs to position instrumentation.

- . On September 22, 1984, CRD-4 was removed from Region 37 and placed in ESW 2. Its shim motor will be refurbished due to an apparent motor grounding problem. CRD-7 from ESW 6 was installed in Region 37 upon completion of shim motor and 200 assembly refurbishment.
- . On September 25, 1984, CRD-26 was removed from Region 9 and placed in ESW 6 due to a faulty rod "out" limit switch.
- . On September 27, 1984, CRD-13 was removed from the west port of the HSF and installed in Region 9 upon refurbishment of its shim motor and repairs to position instrumentation. CRD-26 was removed from ESW 6 and placed in the west port of the HSF to refurbish its shim motor.
- . During this reporting period, the SRI also reviewed the following licensee correspondence on this subject:
  - P-84341 September 7, 1984
  - P-84351 September 13, 1984
  - P-84370 September 24, 1984

No violations or deviations were identified.

7. Report Reviews

The SRI reviewed the following reports for content, reporting requirement, and adequacy:

Monthly Operations Report for the month of August 1984

Thirty-second Startup Report covering the period from May 23, 1984, through August 20, 1984

Semi-Annual Radioactive Effluent Release Report covering the period January 1, 1984, through June 30, 1984

No violations or deviations were identified.

8. Exit Interview

Exit interviews were conducted at the end of various segments of this inspection with Mr. J. W. Gahm, Manager, Nuclear Production, and/or other members of the PSC staff as identified in paragraph i. At the interviews, the SRI discussed the findings indicated in the previous paragraphs. The licensee acknowledged these findings.



9. PSC/FSV Reorganization

During the month of September 1984, the following organizational changes were implemented:

- . Mr. M. H. Holmes, previously Nuclear Services Manager, assumed the responsibility of Nuclear Licensing Manager reporting to H. L. Brey.
- . Mr. L. M. McBride, previously Fort St. Vrain Station Manager, became Nuclear Fuel and Analysis Manager reporting to H. L. Brey.
- . Mr. C. H. Fuller, Technical/Administrative Services Manager, was appointed Fort St. Vrain Station Manager reporting to J. W. Gahm.
- . Mr. F. J. Novachek, Technical Services Engineering Supervisor, was appointed Technical/Administrative Services Manager reporting to J. W. Gahm.
- . Mr. F. J. Borst, previously Radiation Protection Manager, assumed the responsibilities of Support Services Manager.
- . Mr. J. K. Eggebrotten, Senior Plant Engineer, was appointed to Technical Services Engineering Supervisor reporting to F. J. Novachek.

In addition to the changes listed above the maintenance quality control unit was transferred to the quality assurance division.

INSPECTOR'S REPORT  
 Office of Inspection and Enforcement

Plumlee, G.L. III

REVIEWER

R.E. Ireland R. Ireland

INSPECTORS

LICENSEE/VENDOR	TRANSACTION TYPE	DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits)	REPORT				NEXT INSPIC DATE	
			NO.	SEQ.	MO.	YR.		
Public Service Co. of Colo. Fort St. Vrain	<input checked="" type="checkbox"/> I - INSERT <input type="checkbox"/> M - MODIFY <input type="checkbox"/> D - DELETE <input type="checkbox"/> R - REPLACE	05000267	8426	A				

PERIOD OF INVESTIGATION/INSPECTION						INSPECTION PERFORMED BY						ORGANIZATION CODE OF REGION/HQ CONDUCTING ACTIVITY (See IEMC 0530 "Manpower Reporting—Weekly Manpower Reporting" for code)					
FROM			TO			1 - REGIONAL OFFICE STAFF			2 - RESIDENT INSPECTOR			3 - PERFORMANCE APPRAISAL TEAM			REGION	DIVISION	BRANCH
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REGIONAL ACTION (Check one box only)		TYPE OF ACTIVITY CONDUCTED (Check one box only)														
<input type="checkbox"/> 1 - NRC FORM 591	<input type="checkbox"/> 2 - REGIONAL OFFICE LETTER	<input checked="" type="checkbox"/> 02 - SAFETY	<input type="checkbox"/> 03 - INCIDENT	<input type="checkbox"/> 04 - ENFORCEMENT	<input type="checkbox"/> 05 - MGMT. AUDIT	<input type="checkbox"/> 06 - MGMT. VISIT	<input type="checkbox"/> 07 - SPECIAL	<input type="checkbox"/> 08 - VENDOR	<input type="checkbox"/> 09 - MAT. ACCT.	<input type="checkbox"/> 10 - PLANT SI	<input type="checkbox"/> 11 - INVENT. VER.	<input type="checkbox"/> 12 - SHIPMENT/EXPORT	<input type="checkbox"/> 13 - IMPORT	<input type="checkbox"/> 14 - INQUIRY	<input type="checkbox"/> 15 - INVESTIGATION	

INSPECTION/INVESTIGATION FINDINGS (Check one box only)				TOTAL NUMBER OF VIOLATIONS AND DEVIATIONS				ENFORCEMENT CONFERENCE HELD				REPORT CONTAIN 2.790 INFORMATION				LETTER OF REPORT TRANSMITTAL DATE					
<input type="checkbox"/> 1 - CLEAR	<input type="checkbox"/> 2 - VIOLATION	<input type="checkbox"/> 3 - DEVIATION	<input type="checkbox"/> 4 - VIOLATION & DEVIATION	A	B	C	D	A	B	C	D	A	B	C	D	MO.	DAY	YR.	MO.	DAY	YR.
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5	3	07	0.3	A	0.01						B	5	9	27	0.3	A	0.08							
5	6	27	0.3	A	0.12	1.00					B	5	9	27	0.6	A	0.40							
5	7	17	0.7	A	0.26	0.85	C				B					A								
5	9	07	1.3	A	0.01						B					A								

MODULE SEQUENCE IF  
 VIOLATION OR DEVIATION

DOCKET NO. (8 digits) OR LICENSE  
NO. (BY PRODUCT) (13 digits)

REPORT

MODULE NUMBER

INSPECTOR'S REPORT  
(Continuation)

Office of Inspection and Enforcement

05000267

NO. 8426

SEQ. 5627031

1

VIOLATION SEVERITY OR DEVIATION						U	SITE	
1	2	3	4	5	6		IM	DATE
			X					

VIOLATION OR DEVIATION (Enter up to 2400 characters for each item. If the text exceeds this number, it will be necessary to paraphrase. Limit lines to 50 characters each.)

- 1.
- 2. Contrary to the Controlled Work Procedure Manual, the NRC
- 3. inspector determined that the CWPM was not being used as
- 4. guidance during preparation of CWPs.
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