

U. S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT  
REGION IV

IE Inspection Report No. 50-267/80-12

Docket No. 50-267

License No. DPR-34

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

Facility Name: Fort St. Vrain Nuclear Generating Station

Inspection at: Fort St. Vrain Site, Platteville, Colorado

Inspection Conducted: June 1-30, 1980

Inspectors: *M. W. Dickerson* 7/14/80  
M. W. Dickerson, Senior Resident Reactor Inspector Date

*R. E. Collins* 7/14/80  
R. E. Collins, Resident Reactor Inspector Date

*S. R. Dean* 7/11/80  
S. R. Dean, Reactor Inspector Date

*J. P. Jaudon* 7/11/80  
J. P. Jaudon, Reactor Inspector Date

Reviewed by: *J. E. Gagliardo* 7/12/80  
J. E. Gagliardo, Chief, Nuclear Support Section Date

Approved by: *T. F. Westerman* 7/12/80  
T. F. Westerman, Chief, Reactor Projects Section Date

Inspection Summary

Inspection on June 1-30, 1980 (Report No. 50-267/80-12)

Areas Inspected: Routine announced inspection of review of procedures; physical protection; report review; implementation of audit program; review of plant operations; follow-up on inspector identified and unresolved items; review of previous items of noncompliance; surveillance; maintenance;

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operational safety verification; and review of circulars and bulletins. The inspection involved 305 inspector-hours on-site by four (4) inspectors.

Results: Within the ten (10) areas inspected, no apparent items of non-compliance or deviations were identified in nine areas; three (3) items of noncompliance were identified (Infraction - Failure to follow procedures, two examples, paragraph 3a; Infraction - Failure to implement an equipment control procedure, paragraph 3a; and deficiency - Failure to maintain records required by T/S LCO 4.2.9 - paragraph 3b) in one area.

DETAILS1. Persons Contacted

L. Brey, QA Manager  
W. Franek, Results Supervisor  
W. Franklin, Shift Supervisor  
J. Gamm, Supervisor Technical Services  
J. Glass, Maintenance Scheduler  
E. Hill, Operations Superintendent  
W. Hillyard, Administrative Services Manager  
D. Hood, Shift Supervisor  
F. Mathie, Operations Manager  
T. Orlin, Superintendent Operations QA  
P. Tixler, QA Technician  
D. Warembourg, Manager Nuclear Production

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

2. Licensee Action on Previous Inspection Findings

(Closed) Open Item (50-267/8002-01): LI-4102-3 to be added to Master Calibration List and Ambiguous records for level instruments. LI-4102-3 was added to the Master Calibration List on April 29, 1980. A review of the calibration history for this instrument and discussion with representatives of the licensee indicate that the records are valid, however, the instrument had been re-numbered. Additionally, Instrument LI-2519 has not been in use since 1976 and a Change Notice has been issued for its removal.

(Closed) Item of Noncompliance (50-267/8006-1): Calibration records of transfer devices not maintained and SR5.4.1.1.6c-R utilized EGG 440 in lieu of EGG 992. Steps have been included in procedures to perform a before and after use calibration test of the moisture standards used and to record the results. Additionally, SR5.4.1.1.6c-R has been revised to allow the use of either EGG 440 or EGG 992.

(Closed) Item of Noncompliance (50-267/8006-2): Region Temperature rises exceeded LCO 4.1.9 requirements. To prevent recurrence the operating staff was advised by a Communications memo dated April 15, 1980 that a literal interpretation of the LCO was to be followed. In addition, a request for a technical specification change has been forwarded to NRR.

(Closed) Item of Noncompliance (50-267/808): Diesel generator day tanks not maintained at greater than 500 gallons. The operation order addressing proper maintenance of the tank levels was rerouted to all Shift Supervisor and Operators and SOP 92-04 which includes an alternate method of filling the tanks was routed to all equipment operators for training purposes. Additionally the turbine building log sheet now contains an hourly check of the day tank level.

3. Operational Safety Verification

The inspector reviewed licensee activities to ascertain that the facility is being operated safely and in conformance with regulatory requirements, and that 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.

Included in the inspection were observation of control room activities, review of operational logs, records, and tours of accessible areas. Logs and records reviewed included:

- . Shift Supervisor Logs
- . Reactor Operator Logs
- . Technical Specification Compliance Log
- . Operating Order Book
- . System Status Log
- . Form 1 Log (Jumper Log)
- . Plant Trouble Reports
- . Selective Valve Lineups

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

- . Monitoring Instrumentation
- . Radiation Controls
- . Housekeeping

- . Fluid Leaks
- . Piping Vibration
- . Hanger/Seismic Restraints
- . Clearance Tags
- . Fire Hazards
- . Control Room Manning
- . Annunciators

The operability of selected systems or portions of systems were verified by walkdown of the accessible portions. The observations were for the:

Emergency Diesel Generator  
 Reactor Plant Cooling System  
 Helium Circulator Auxiliary System  
 Purification System

Procedures were also reviewed and observations were made of surveillance procedures for gas release No. 448 (SR 5.8.1 abc-M, Radioactive Gaseous Effluent System Test and for Liquid Effluent System Instrumentation Functional Test). Both tests were performed satisfactorily. The inspector also verified that plant radiation monitors were operable and that their setpoints were as specified on the master setpoint list for the following monitors:

RT-93250-1	RT-93250-13
RT-93252-1	RT-93250-5
RT-93251-1	RT-93251-6
RT-93252-2	RT-93252-6
RT-93250-3	RT-93251-5
RT-93251-3	RT-93251-7
RT-93250-2	RT-93252-7
RT-93250-4	RT-93250-8
RT-93251-4	RT-93251
RT-93252-4	RT-93251-9

a. Facility Tours and Observations

During observations in the control room, on June 12, 1980, at 7:50 a.m., the inspector noted that Recorder XVI 4102-1 for the circulating water makeup storage pond was not inking. A check of the chart showed that it had not been inking since about 10:00 p.m. on June 11, 1980. The chart had been changed about 10:00 p.m. on June 11, 1980 and had been date stamped at midnight. However, the pen was not inking at that time and had not been inking since the chart was changed. No Plant Trouble Report (PTR) had been written, as required by ADM-28 to report that the recorder was not working properly. Moreover, at the time the instrument was observed not to be inking, the pen from the recorder was found on the floor near the instrument.

Technical Specification AC 7.4.a requires in part that, "Written Procedures shall be established, implemented and maintained . . . ." and Administrative Procedure No. 28 for Data Logs, Data Sheets and Charts, Section 3.2, states that a responsible person shall check the charts or recorders at least once per shift to be sure that the recorders are inking and that at midnight they are to stamp each chart with a new date, and if the recorder is not working properly, to write a Plant Trouble Report. The failure to fulfill these requirements were discussed with the licensee at which time it was pointed out that this was an apparent item of noncompliance for failure to follow procedures and was considered an infraction.

During a plant tour on June 17, 1980 at 2:00 p.m., seals were found missing from valves V11661, V11665 and V11681 of the reserve shutdown system although the valves were open as required by Overall Plant Operating Procedure I (OPOP I). This procedure contains the sealed valve checklist for System II which requires certain valves to be sealed in position prior to plant startup. This checklist had last been completed on March 24, 1980 and no reason for a change is known to have occurred. The plant power level at the time the missing seals were discovered was approximately 2%. The licensee replaced the seals upon notification.

Technical specification AC 7.4.a requires in part that "Written procedures shall be established, implemented and maintained . . . ." and OPOP I, section B requires that certain valves be locked in position prior to plant startup. Section B.31.a contains the sealed valve list for System II (Reserve Shutdown System). Contrary to these requirements, the valves noted were found not sealed. The failure to fulfill these requirements were discussed with the

licensee at which time it was pointed out that this was an apparent item of noncompliance and was considered an infraction (8012-1).

On June 17, 1980 at approximately 5:00 p.m. the inspector noted a piece of paper attached to H5-2191-1 in the control room stating "Broke (Name) Fixin." Upon questioning by the inspector the licensee replaced this with system status tag #1041 indicating that "B" circulator auxiliaries should be left isolated until PDT-2177-1 was repaired. This tag was placed on hand switches H5-2191-1 and H5-2191-3 which control the circulator 1B bearing water supply and circulator 1B Helium supply.

The inspector determined from discussions with representatives of the licensee that PDT-2177-1 had been taken out of service (physically removed) at approximately 10:30 a.m. June 17, 1980, and at that time PTR 6-251 was issued. However, no existing formal equipment control procedures in use by the licensee were utilized to properly control the removal and status of the equipment association with the removal of the PDT from service.

Technical Specification 7.4.a.1 requires that written procedures shall be established, implemented and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, November 1972.

Appendix A of Regulatory Guide 1.33, item 1.e, requires procedures for equipment control.

Contrary to the above, proper procedural equipment control was not exercised for the removal of PDT-2177-1. This matter was discussed with the licensee who was informed that this was an apparent item of noncompliance and was considered an infraction (8012-2).

b. Review of Logs

During the inspector's review of control room logs it was determined that readings required by Technical Specification LCO 4.2.9 had not been recorded on the day shifts of June 10, 1980, June 16, 1980 and on the 12-8 shift of June 17, 1980.

Technical specification LCO 4.2.9 requires the total helium leakage through all primary closure seals in any group of penetrations not to exceed an equivalent leak rate of 400 lbs/day at a differential pressure of 10 psi and that the total helium leakage through all secondary closure seals shall not exceed an equivalent leak rate of 400 lbs/day at a differential pressure of 688 psi.

Temporary relief from LCO 4.2.9, granted by NRR on June 5, 1980 is to be in effect until the next refueling Shutdown. This relief provides for relaxation to 700 lbs/day with certain administrative controls. Two of these controls are: (1) Radiation process monitors for the reheat steam system will be monitored once per shift for indication of primary coolant leakage into the secondary system, (2) check and record the interspace differential pressure once per shift to comply with LCO 4.2.7. An operations order effective June 5, 1980 also placed these requirements in effect plus the recording of the results in the operator's log.

Contrary to these requirements the data was not recorded as specified. This matter was discussed with the licensee who was informed that it was an apparent item of noncompliance and was considered a deficiency (8012-3).

The inspector had no additional questions in these areas.

#### 4. Surveillance (Monthly)

The inspector reviewed all aspects of surveillance testing involving safety-related systems. The review included observation and review relative to Technical Specification requirements. The surveillance tests reviewed and observed were:

SR 5.4.1.1.11a-M	Hot Reheat Pressure Scram Test
SR 5.4.1.1.15b-M	High Reactor Building Temperature
SR 5.2.16a-M	PCRV Closure Leakage Determination
SR 5.2.11-W	Primary Reactor Coolant Radioactivity Analysis
SR 5.2.20a	ACM Generator Load Test
SR 5.6.1a-W	Standby Diesel Generator Test
SR 5.8.2bc-M	Radioactive Liquid Effluent System Instrumentation Functional Test
SR 5.8.1abc-M	Radioactive Gaseous Effluent System Test

No items of noncompliance or deviations were identified.

#### 5. Maintenance

The inspector reviewed records and observed work in progress to ascertain that maintenance activities were being conducted in accordance with

approved procedures, Technical Specifications and appropriate codes and standards:

PTR 6-053	Repair PDT-2179-1
PTR 6-251	Ruptured Bellows on PDT-2177-1
PTR 6-225	PV-21243 Repair-not maintaining setpoint
PTR 6-224	PV-21243-1 Repair leak
PTR 5-019	Reactor Building Louver broken air line reported as Reportable Occurrence (RO 80-32)

No items of noncompliance or deviations were identified.

6. IE Bulletins/Circulars

The inspector verified by record review, observation and discussion with representatives of the licensee, the action taken in response to IE Bulletins/Circulars.

The following bulletins were reviewed:

80-12      Decay Heat Removal System Operability - Not applicable to Fort Saint Vrain.

The following Circulars were reviewed:

79-10      Pipefittings Manufactured from Unacceptable Material - No material from either Liberty Equipment and Supply Company, Kennewick, Washington or Tube Turns Division, Chemtron Corporation of Louisville, Kentucky was purchased during the years 1978 or 1979.

80-05      Emergency Diesel Generator Oil Addition and On site Supply - The licensee has determined that oil can be added during operation and the oil parts have been identified and tagged with the type of oil required. Procedures have been provided in each diesel generator room which include a check of the oil level against the amount added. A source of controlled warehouse stock of oil has also been established.

80-10      Failure to Maintain Environmental Qualification of Equipment - An internal memo dated May 15, 1980 indicates compliance with the suggested actions except for a need to update procedure EMP-1. A check of the procedure indicates that it was revised on June 18, 1980 to include insulating type materials.

No items of noncompliance or deviations were identified.

7. Review of Plant Operations

The inspector reviewed several aspects of facility operations to determine if they were being accomplished in accordance with regulatory requirements. Reviewed were emergency preparedness security; and review and audit.

a. Emergency Preparedness

The inspector observed and verified that the following emergency equipment was operable:

Emergency Kits

Emergency Control Center

Emergency Communications System

b. Security

The inspector attended a portion of one training lecture provided to physical security personnel and verified that the lesson plan objectives and schedule were being met. Additionally, the inspector observed that three individuals attained acceptable scores during the conduct of weapons qualification.

c. Review and Audits

The inspector attended two Plant Operating Review Committee (PORC) meetings to verify membership, meeting frequency and that licensee follow-up was consistent with meeting decisions. The inspector also witnessed portions of an audit of administrative controls conducted by members of the Quality Assurance organization.

No items of noncomformance or deviations were identified.

8. Audit Program

The inspector reviewed the Quality Assurance Program to determine if it was in compliance with Technical Specifications and 10 CFR 50, Appendix B, Criterion XVIII. The inspector reviewed two recently completed audits to verify their compliance with requirements and that the "deficiencies" identified therein were being followed up and corrected. The audits reviewed were:

. NFSC-C-80-1, Corrective Actions

. QAA-2401-80-01, Fire Protection

Although no items of noncompliance or deviations were noted in the inspection of the audit program, it was noted that the licensee had failed to implement a previous commitment; specifically, to establish a trend evaluation program. (IE Inspection Report No. 50-267/79-15, paragraph 3, page 10). The fact that this commitment was not being met was also documented in the report of audit NFSC-C-80-1 and in the Manager of Quality Assurance's memo QAS-80-0145, dated May 15, 1980. This issue is considered to be an open item (8012-4) and will be reviewed during a subsequent inspection.

9. Procedure

The inspector reviewed selected plant procedures, which were chosen because of their safety significance and history of review by the NRC. For those procedures examined, the inspector made a determination, based upon Technical Specifications, FSAR descriptions, applicable Regulatory Guides and ANSI Standards, whether the technical content of the procedures provided adequate guidance such that the evaluations and/or operations could be accomplished within these limitations. The procedures were also reviewed to determine whether or not changes and their approval had been performed in accordance with Technical Specification requirements.

The inspector examined a portion of the temporary changes made to existing basic procedures ensuring that the review requirements specified in the Technical Specifications were being performed by the licensee. The inspector also verified that temporary changes did not alter the intent of the basic procedures.

The following procedures were inspected:

a. Administrative Control

ADM-10 "Administrative Procedure for Clearance and Use of Status Tags," Revision 10

Public Service Company of Colorado's "Manual of Safe Practice"

ADM-05 "Administrative Procedure for Preparing and Issuing Operating Procedures and Procedural Changes," Revision 5

b. Operating Procedures

OPOP No. 1, System 12, "Reserve Shutdown System," Revision 12

OPOP No. 1, System 46, "PCRV Cooling Water System," Revision 12

OPOP No. 1, System 48, "Alternate Cooling Method," Revision 43

Standard Operating Procedures

SOP 12-05, "Reserve Shutdown System," Revision 5

SOP 48-01, "Alternate Cooling Method," Revision 12

c. Emergency Procedures

Section D, "Circulator Trips," Revision 10

Section E, "Abnormal Reactor Power Change," Revision 17

d. Maintenance

MP-12-2, "Installation of Rupture Disc and Absorber Material,"  
Revision 3

MP-16, "Consolidated Safety Relief Valve Inspection and Repair,"  
Revision 4

MP-102, "Procedure for the Calibration of Mechanical Maintenance  
Tools and Equipment," Revision 5

The inspector's review of the above listed procedures did not disclose any items of noncompliance. However, the equipment control provisions of ADM-10, "Administrative Procedure for Clearance and Use of Status Tags," and the "Manual of Safe Practices," appear to the inspector to be in deviation from ANSI N18.7-1972.

The inspector found that Section 377.02 of the licensee's "Manual of Safe Practices," and ADM-10 provided instructions for the control of clearances used for equipment maintenance testing, and/or training. They required that the request for clearance be made by the "maintenance foreman" or "clearance holder" to the supervisor. Requests were in written form signed by the "maintenance foremen" and designated the "qualified man" who was the "clearance holder." The shift supervisor, or his delegate, would carry out the necessary clearing and attach all necessary auxiliary cards. The auxiliary clearance cards had

the number of the clearance card, and the radiation work permit number, if required. It was noted by the inspector and pointed out to the licensee that the auxiliary clearance cards did not indicate the valve or breaker identification number nor its desired position. A clearance card was merely a warning to plant personnel not to operate/reposition this valve or breaker. The clearance holder then observed the placing the clearance card on the clearance point, the main clearance point usually being a breaker or valve. When the clearance holder was satisfied that the clearance is complete he signs the clearance card and begins work on the equipment. Upon completion of the work, the clearance holder informs the shift supervisor and he or his delegate removes the main and auxiliary clearance tags. The procedures did not require an independent verification of removal of the clearance tags or verification that the affected system had been returned to an operable status. Licensee representatives who were interviewed confirmed that an independent verification of tag removal and system verification was not routinely made.

Section 5.1.5 of ANSI N18.7-1972 requires that procedures shall be provided for the control of equipment to maintain reactor and personnel safety and to avoid unauthorized operation of equipment. The procedures shall require independent verification to ensure that necessary measures such as tagging equipment have been implemented correctly.

The licensee committed to ANSI N18.7-1972 in a letter to the NRC, dated December 17, 1976. The failure to provide independent verification of clearance tags in the above administrative procedures constitutes an apparent deviation from this commitment to ANSI N18.7-1972. Licensee representatives stated that it was their opinion that the equipment control procedures were in accordance with their commitment to ANSI N18.7-1972 and is not a deviation from this commitment. The inspector identified this item as an unresolved item (8012-5) and has referred it to NRC Headquarters for resolution.

Reportable Occurrence No. 50-267/79-54/03-1-0 provides a recent example in which the equipment control system possibly failed. This occurrence illustrates the need for independent verification during the positioning of clearance tags, system alignment, removal of clearance tags and system realignment to operability.

#### 10 Physical Protection

The inspector verified that the shipment of new fuel arrived intact and is as shipped from its point of departure.

No items of noncompliance or deviations were identified.

11. Report Reviews

The inspector reviewed the following report for content, reporting requirements and adequacy.

The fourteenth startup report for Fort St. Vrain for the period February 23, 1980 through May 22, 1980. Also reviewed was the Monthly Operations Report for May 1980.

No items of noncompliance or deviations were identified.

12. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. One unresolved item (8012-5) disclosed during the inspection is discussed in paragraph 9.

13. Exit Interviews

Exit interviews were conducted at the end of various segments of this inspection with Mr. D. Warembourg (Manager, Nuclear Production) and/or other members of the Public Service Company staff. At the interviews, the inspector discussed the findings indicated in the previous paragraphs. The licensee acknowledged these findings.