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

IE Inspection Report No. 50-267/79-22

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: December 1-28, 1979

Inspectors: R G Spangler /for 1/10/80
M. W. Dickerson, Senior Resident Reactor Inspector — Date

R G Spangler /for 1/10/80
R. Smith, Reactor Inspector — Date

R G Spangler /for 1/10/80
R. E. Collins, Resident Reactor Inspector — Date

Approved By: G L Madsen /for 1/10/80
T. F. Westerman, Chief, Reactor Projects Section — Date

Inspection Summary

Inspection December 1-28, 1979 (Report No. 50-267/79-22)

Areas Inspected: Routine, announced inspection of Reserve Shutdown System; Radiation Protection; Surveillance; Part 21 Report; Maintenance; Physical Security; Plant Operations; Training; Requalification Training; followup on items of noncompliance; and followup on inspector identified and unresolved problems. The inspection involved 168 inspector-hours on-site by three (3) NRC inspectors.

Results: Within the eleven (11) areas inspected, two items of noncompliance were identified (infraction - failure to follow procedures (two examples), paragraphs 4 and 8; infraction - failure to write a procedure as required by Technical Specifications, paragraph 4).

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DETAILS

1. Persons Contacted

L. Brey, QA Manager
W. Crane, Maintenance Superintendent
W. Franek, Results Supervisor
J. Gamm, Supervisor Technical Services
E. Hill, Superintendent of Operations
W. Hillyard, Administrative Services Manager
J. Liebelt, Electrical Supervisor
I. Mathie, Operations Manager
J. Solakiewicz, Superintendent Operations QA
G. Turner, Supervisor of Security
D. Warembourg, Manager Nuclear Production

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

2. Licensee Action on Previous Inspection Findings

(Open) Unresolved Item (50-267/7512-1): Records Procedure. The records procedure is to be changed to reflect the requirement for record retention periods. The change is expected to be completed by January 1, 1980.

(Closed) Open Item (50-267/76-09): Compliance with ANSI N45.2.11, Quality Assurance requirements for the design of nuclear plants. The licensee has completed and implemented procedures QAP 1400, QAP 1700, IWP 2 and ENG 1 and 2, in accordance with the requirements of ANSI N45.2.11 - 1974.

(Open) Unresolved Item (50-267/7714-1): Pulled Fuses. The licensee has indicated that the required input for a procedure for the control of fuses will be completed by May 1, 1980.

(Closed) Unresolved Item (50-267/7901-2): PROC Review of TS 7.1.2.e(7) requirements. The Plant Operations Review Committee has initiated review of additional areas of reactor operation as specified in a PORC policy memo.

(Closed) Open Item (50-267/7912): Status tags not controlled. Changes have been made to ADM-10 which provide for use and control of the status tags.

(Closed) Unresolved Item (50-267/7914): ACM diesel generator doors unlocked. Keys for the diesel generator doors are now controlled by the shift supervisor and instructions for security checks of the doors by the guards have been issued.

(Closed) Item of Noncompliance (50-267/7915): Valves found not sealed, valves found closed, and no PTR written for inoperative recorder. The inspector has reviewed the corrective action specified in the licensee's letter dated December 3, 1979 and this matter is considered closed.

3. Physical Protection

The inspector reviewed portions of the licensee's physical protection program by review of selected records and observation of the activities of access control, search, escorting, and communications.

No items of noncompliance or deviations were identified.

4. Review of Plant Operations

A review of plant operations was conducted to ascertain whether facility operation was in conformance with the requirements established in Technical Specifications, 10 CFR, and Administrative Procedures, or licensee commitments discussed in correspondence to the Commission.

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
- Form 1 Log (Jumper Log)
- Plant Trouble Reports
- Selective Valve Lineups

During the tour 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

During this aspect of the inspection, the inspectors noted that (a) a trash container located in the auxiliary electric equipment room was found to be overflowing with paper and had a cardboard box piled on top of the trash container, and (b) on the lower level of the reactor building adjacent to the hydraulic oil system, numerous oil soaked paper towels were stuffed between the concrete wall and the work area, a garbage can was full of soiled paper towels and was overflowing, a partial bucket of oil was stored adjacent to the garbage can and additional paper towels and empty boxes were strewn about the work area. The failure to control the combustible material is contrary to the requirements specified in Administrative Procedure ADM-30.

ADM-30, Procedure for Control of Combustibles, Section 4.2, requires that, "Flammable items such as some anti-C clothing and wiping rags shall be kept in a noncombustible bin or container until required and placed in approved small waste storage upon disposal." Additionally, Criterion V of Appendix B to 10 CFR 50 requires in part that, "Activities affecting quality . . . shall be accomplished in accordance with these instructions, procedures, or drawings." This is further amplified by the licensee's approved QA Plan, Final Safety Analysis Section B.5(c) which states in part, "The various aspects of plant operation will be defined and controlled by written procedures . . . ."

The licensee was informed that failure to control the combustibles specified above in accordance with the approved procedures was considered an item of noncompliance.

On December 4, 1979, the inspector discussed with operators and the shift supervisor how the instructions entered in the operations log, Book 11, page 0-1 at 0905 on December 3, 1979, were being handled. The entry as stated read in part that, " . . . both primary and secondary coolant can be shut off #1 46 hrs. to not exceed 400°F Top Hd He Temp. or #2 120 hrs. to not exceed 760°F top Hd He Temp." At 1235, the entry read "All P/C and S/C shut off for WA 825-21." A copy of Data Sheet 2, "Calculating the Hours Forced Cooling May Be Off (knowing maximum fuel temperature to be allowed)" was available in the control room.

It became apparent during the discussions that no written instructions were available to either the shift supervisor or the operators and that confusion existed on how to utilize this information. Some operators had recorded core outlet temperature during the time when coolant was off, although temperatures at this time would not be representative of fuel or top head temperatures. Moreover, the controlling aspect was the time that flow could be off before the specified temperatures would be exceeded and therefore, required return of the flow within these times, depending upon restrictions regarding the restart of the steam generator coolant flow. When this became apparent, the inspector

discussed the problem with the Manager of Nuclear Production who indicated he would correct this situation. This failure to provide written procedures/instructions is contrary to the requirements of Technical Specification 7.4.a, Procedures, Administrative Controls.

Technical Specification 7.4.a requires in part that, "Written procedures shall be established, implemented and maintained covering . . . 1. The applicable procedures recommended in Appendix A of Regulatory Guide 1.33, November 1972." Contrary to this requirement, no written procedure was available to the shift supervisor or operators for the removal of forced cooling (primary and secondary) from the reactor. The licensee was informed that failure to provide the written procedure in accordance with the requirement specified above was considered an item of noncompliance.

Since the work in progress required that coolant be shut off, WA 825-21 was broken up into discrete packages. The coolant was restored within the required time periods. Some of the core outlet temperatures at specified times with coolant restored were:

Date	Time	Deg. F
12/3/79	0800	254°
12/3/79	2400	234°
12/4/79	0200	237°
12/4/79	0400	236°
12/4/79	0600	239°
12/5/79	1000	273°
12/6/79	1000	370°
12/10/79	1200	340°

The inspector had no additional questions in this area.

5. Startup Report

The thirteenth Startup Report for Fort St. Vrain for the period August 23, 1979 through November 22, 1979, reviewed by the inspector, contained no relevant information on the initial approach to power tests since none were performed during this period of time.

6. Part 21 Report

On November 9, 1979, in letter P-79271, the licensee submitted to Region IV a Part 21 Report No. 50-267/79-01 regarding 1-1/2" X 36" long full threaded rods which did not meet the reduction area specification as required by ASTM A-193-B7. As a result, the material in warehouse stock was replaced by the manufacturer. Additionally, the materials used for the steam inlet

supply pipe flange bolting on circulators C-2102 and C-2103 have been removed and replaced. The replacement was accomplished utilizing PTR's 12-258 and 12-259. The replacement studs, 16 per circulator, were of material procured in accordance with ASTM A-193-B7.

During the removal of the defective material, it was noted that six nuts on circulator C-2102 and two on C-2103 were finger tight. It is suspected that the material may have yielded. To determine this, the licensee intends to conduct tests on the material removed. Additionally, several nuts installed on one of the other two circulators will be checked as confirmation that the loose nuts were related only to those placed on defective bolts.

7. Radiation Protection

The inspector reviewed the licensee's exposure control and high radiation area posting and control. Additionally, radiation protection instruments in use at the time were examined for operability and calibration. However, at the time of the review no RWP's were in use so selected RWP's from December 14 and December 15, 1979 were reviewed. These were:

RWP #	Date	Reason
2243	12/14/79	Replace Cover on HV-2301 and HV-2302; General cleanup of RWP area.
2244	12/14/79	Change out System 62 resin from cartridge.
2245	12/15/79	Change F 6201S

The following instruments and calibration records were reviewed:

Instrument & Number	Calibration Date	Calibration Due Date
Proportional Counter M3365	10/24/79	1/30/79
Eberline RM-14 - M3353	12/15/79	3/80
" " - M3351	12/15/79	3/80
" " - M3359	12/15/79	3/80
" " - M3360	12/15/79	3/80
" " - M3354	12/16/79	3/80
" " - M3352	12/15/79	3/80
" " - M3342	12/16/79	3/80
" RO-2 - M3314	12/4/79	1/80
Eberline Portal Monitor - M3340	10/1/79	
Eberline Beta Particle Monitor - M3317	Presently not calibrated (not required according to the manufacturer). However, a procedure for calibration has been developed and the instrument will be calibrated in 2/80 and then on a frequency of every three months.	

Calibration of radiation monitors for liquid effluents, gases, process monitors and area monitors were reviewed in conjunction with the following surveillance tests.

SR 5.4.9.A-1, Process Gamma Monitors Calibration, completed 8/31/79

SR 5.4.9.A-2, Process Beta Monitors Calibration, completed 9/11/79

SR 5.4.9.A-3, Area and Equipment Monitors Calibration, completed 8/27/79

SR 5.8.1e-A, Radioactive Gaseous Effluent Flow Recorders, Calibration, completed 9/10/79

SR 5.8.1cd-Q, Radioactive Gaseous Effluent System Calibration, completed 9/5/79

SR 5.8.2c-Q, Radioactive Liquid Effluent Activity Monitors Calibration, completed 9/5/79

No items of noncompliance or deviations were identified.

8. Maintenance

The inspector reviewed selected maintenance activities to determine that those activities met acceptable maintenance practices, the licensee's applicable administrative and maintenance procedures, and where applicable were in accordance with Technical Specifications. Additionally, the inspector observed portions of maintenance activities to verify that procedural requirements were met, personnel were qualified, QC hold points were provided, tagging procedures were appropriate and the items were not reportable as reportable occurrences.

The maintenance activities reviewed were:

PTR 5-805, Inspect Diesel Generator (DG) 1B - Control Cabinets and Generator End per PME-3
PTR-12-258
PTR 12-259

During observations of maintenance performed as a result of PTR 5-805, Inspect Diesel Generator (DG) 1B - Control Cabinets and Generator End per PME-3, it was determined that Work/Test Instructions did not indicate the data to be recorded on Attachment No. 1, Insulation Resistance Sheet Table, of PME-3. Moreover, the tables for data to be recorded were not used, all of the data listed was not taken, and only the 'Remarks' section was used to record the data.

Criterion V of Appendix B to 10 CFR 50 requires in part that, "Activities affecting quality . . . shall be accomplished in accordance with these instructions, procedures, or drawings." The licensee's approved QA Plan, Final Safety Analysis Section B.5(c) states in part, "the various aspects of plant operation will be defined and controlled by written procedures . . . ." Administrative Procedure (ADM) No. 12, Maintenance and Repair Procedures, Section 5.1.3(10)d, states that work/test instructions shall include the following "Acceptable criteria and data to be recorded/verified."

The failure to comply with these requirements as indicated above were discussed with the licensee who was informed that this was an apparent item of noncompliance for failure to follow procedures and was considered an infraction.

The inspector had no additional questions in this area.

9. Surveillance Activities

The inspector observed Technical Specification required surveillance test 5.4.1.2.1.d-M, Steam Pipe Rupture (Pipe Cavity) Test.

The inspector verified that test results were in conformance with Technical Specifications and procedure requirements and that they were reviewed by appropriate personnel.

The inspector verified that deficiencies identified during testing were properly resolved and reviewed by appropriate management personnel.

10. Calibration

The inspector reviewed the calibration of the instruments noted in paragraph 7 of this report and verified that calibration was in conformance with requirements.

No items of noncompliance or deviations were identified.

11. Training and Requalification Training

The purpose of this inspection was to evaluate the licensed operator and maintenance personnel training program and determine if the training program was in conformance with the regulatory requirements and requalification training program approved by NRC.

The inspector's review included the following points:

- The inspector reviewed records for nine licensed operators of which four were senior operators (SO), three were special refueling (SLO), and two were licensed operators.
- Annual requalification exams.
- Records of requalification lecture attendance.
- Records of on-the-job training, including reactivity manipulations.
- Annual operator evaluations.
- Reviewed three lecture lesson plans.
- Interviewed selected operators from the group of records reviewed.
- Reviewed requalification program for changes since last NRC review.
- Reviewed training records for selected maintenance personnel.

The inspector reviewed the 1979 annual requalification exams for SLO and RO's to determine if the subsequent training program lectures had been scheduled and conducted for areas where the operators had made a score of less than 70%.

No items of noncompliance or deviations were identified.

12. Reserve Shutdown System

The inspector reviewed surveillance procedures, operating procedures, records of tests and procedures performed, and inspected the reserve shutdown system to determine that the licensee conformed to Technical Specification, the FSAR and approved procedures.

The surveillance procedures were reviewed to determine whether the procedures:

- Require application of test pressure to the reserve shutdown hoppers in accordance with the Technical Specifications and the FSAR.
- Identify appropriate initial conditions.
- Include acceptance criteria related to performance of the actuating valves, integrity of the rupture disc, and performance of the orificed vent.

- Identify proper valve lineup to each hopper for returning the system to normal and require verification of the valve lineup.
- Require periodic calibration of the pressure indicators.
- Require testing a hopper and a rupture disc in accordance with requirements in the Technical Specifications and the FSAR.
- Specify appropriate handling requirements, test conditions, and acceptance criteria.
- Require inspection of the hopper after the rupture disc ruptures to determine whether all the balls were released from the hopper.
- Identify appropriate specifications for the replacement rupture disc and requirements for inspection of the replacement rupture disc prior to and following installation.

No items of noncompliance or deviations were identified.

13. Exit Interviews

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