



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 1000  
ARLINGTON, TEXAS 76011

50-267  
DOR  
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November 8, 1978

Docket No. 50-267

Public Service Company of Colorado  
ATTN: Mr. C. K. Millen  
Senior Vice President  
Post Office Box 840  
Denver, Colorado 80201

Gentlemen:

This refers to the inspection conducted by Blaine Murray of this office during October 16-19, 1978, of activities authorized by NRC Operating License No. DPR-34 and to the discussion of the inspection findings held by Mr. Murray with Mr. F. Mathie and other members of your staff at the conclusion of the inspection on October 19, 1978.

Areas examined during the inspection and our findings are discussed in the enclosed inspection report. Within these area, the inspection consisted of selective examination of procedures and representative records, interviews with personnel, and observations by the inspector.

Within the scope of this inspection, no items of noncompliance were disclosed.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you believe to be proprietary, it is necessary that you make a written application within 20 days to this office to withhold such information from public disclosure. Any such application must include a full statement of the reasons on the basis of which it is claimed that the information is proprietary, and should be prepared so that proprietary information identified in the application is contained in a separate part of the document. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

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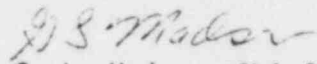
Public Service Company  
of Colorado

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November 8, 1978

Should you have any question concerning this letter, we will be pleased to discuss them with you.

Sincerely,

  
G. L. Madsen, Chief  
Reactor Operations and  
Nuclear Support Branch

Enclosure:  
IE Inspection Report No. 50-267/78-15

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

Report No. 50-267/78-15

License No. DPR-34

Licensee: Public Service Company  
of Colorado (PSCo.)

Docket No. 50-267

Facility: Ft. St. Vrain Nuclear Generating Station (FSV)

Location: Platteville, Colorado

Inspection Conducted: October 16-19, 1978

Inspector: Glen D. Brown & Murray 11/6/78  
Blaine Murray, Radiation Specialist Date

Approved by: Glen D. Brown 11/6/78  
Glen D. Brown, Chief, Fuel Facility and Date  
Material Safety Branch

Inspection Summary

Inspection on October 16-19, 1978 (Report No. 50-267/78-15)

Areas Inspected: Routine unannounced inspection of radwaste systems including liquid and gaseous radioactive effluent releases; records and reports of radioactive effluents; effluent control instrumentation; procedures for controlling the release of effluents; testing of air cleaning systems; reactor coolant quality; licensee audits of radiochemistry activities; radiochemistry organization; and quality control of analytical measurements. The inspection involved thirty-three (33) on-site hours by one (1) NRC inspector.

Results: No items of noncompliance or deviations were identified. An unresolved item is discussed in paragraph 8.

DETAILS

1. Persons Contacted (PSCo.)

- \*D. R. Alexander, Health Physics Supervisor
- \*H. L. Brey, QA Manager
- \*J. Gahm, Technical Services Supervisor
- \*H. W. Hillyard, Administrative Services Supervisor
- \*F. Mathie, Operations Superintendent
  - V. J. McGaffic, Radiochemist
  - T. E. Schleiger, Health Physicist
- \*C. R. Tracy, Superintendent of Operations QA
  - D. W. Warembourg, Nuclear Production Manager

\*Denotes those present during the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Item of noncompliance 50-267/78-11 (Failure to submit radiation exposure reports): The licensee's response to this item was reviewed and considered adequate to close the item.

(Open) Unresolved Item 50-267/78-11 (Evaluation of neutron spectrum): The licensee has not completed a neutron spectrum evaluation in order to determine if their present neutron monitoring system satisfies Reg. Guide 8.14.

(Closed) IE Bulletin 78-07: The licensee's August 11, 1978, response to IE Bulletin No. 78-07 was review. The licensee's response satisfies the matters discussed in the bulletin. This item is considered closed.

3. Scope of Inspection

The purpose of this inspection was to review the licensee's radwaste systems and radiochemistry QC programs for the period June 1, 1977 through October 1, 1978.

4. Radiochemistry Organization and Training

The inspector reviewed the training and qualification records for the radiochemistry staff. Particular attention was given to training provided for new radiochemists hired during the past year. It was noted that a training and review program has been established for the radiochemistry staff. The present staff consists of three radiochemists.

No items of noncompliance or deviations were identified.

5. Radioactive Effluent Releases

a. Liquid

The inspector examined records of liquid effluent releases to determine compliance with items 4.8.2 and 5.8.2 of the Technical Specification.

No items of noncompliance or deviations were identified.

b. Gaseous

The inspector examined records of gaseous effluent releases to determine compliance with items 4.8.1 and 5.8.1 of the Technical Specifications.

No items of noncompliance or deviations were noted.

6. Records and Reports of Radioactive Effluents

The inspector reviewed records and reports required by 10 CFR 50.36.(a)(2). The licensee's semi-annual reports conform to the format appearing in Reg. Guide 1.21.

No items of noncompliance or deviations were identified.

7. Effluent Control Instrumentation

The inspector examined calibrations, response tests, checks, and alarm set-point records for the various liquid and gaseous monitors to determine compliance with items 4.8.1, 4.8.2, 5.8.1, 5.8.2, 5.4.9, and 4.4.3 of the Technical Specifications. The effluent monitors were initially calibrated with known concentrations during 1973. Since 1973, calibrations have consisted of response testings the monitors with solid reference sources. It was noted that during routine response tests following the 1973 calibration, considerable adjustments have been necessary with certain monitors in order to bring instrument readings within prescribed acceptance limits. It was also noted that some hi-range alarm set-points were above the highest calibration reference point.

A licensee representative stated that a full range calibration, with known liquid and gas standards, is scheduled during the 1979 refueling outage.

No items of noncompliance or deviations were identified.



8. Procedures for Controlling the Release of Effluents

The inspector reviewed sampling, analyses, and discharge procedures. The following procedures were reviewed:

ADM-11, "Administrative Procedure for Use of Radioactive Waste Release Forms"

OP-09, "Administrative Policy for Use of Radioactive Waste Release Forms"

SOP-62, "Radioactive Liquid Waste and Radiation Protection"

SOP-63, "Radioactive Gas Waste"

HPP-17, "Determining Radioactive Liquid Release Rates"

HPP-18, "Determining Radioactive Gaseous Release Rates"

Liquid Release Permit

Gaseous Release Permit

The licensee's release permits indicate that the following items are verified as part of releases made from the various hold-up tanks:

- Compliance with Technical Specifications
- Total activity released
- Total volume released
- Duration of release
- Response test of effluent monitors
- Dilution flow rate
- Maximum allowable release rate
- Effluent monitor set-point
- Total activity released
- Authorization signatures

The licensee has changed the format for the gaseous and liquid release permits several times during the past year. It was noted that the information referenced in the written procedures does not always agree with the release permits. A licensee representative stated that procedures will be up-dated to reflect the changes made to the release permits.

Since early 1978, the licensee has made seven (7) liquid radwaste releases via the reactor building sump. The need to use the reactor building sump as part of the radwaste system occurred because high tritium concentrations have prevented certain releases to be made directly from the receiver or monitor tanks. When initial radio-chemistry analyses have indicated that Technical Specification limits would be exceeded, the tanks have been dumped to the reactor building sump and diluted with plant water. After the necessary dilution is achieved, the sump is released via the normal release pathway.

The inspector questioned the routine use of the sump as part of the radwaste system. The FSAR and Technical Specification 4.8.3 mentions that sump use is intended for non-radioactive liquids. Therefore, it appears that the sump is being used in a manner outside of the design objectives. It was also noted that procedures have not been developed to cover batch radioactive releases from the reactor building sump.

A licensee representative stated that a procedure will be written for sump radwaste batch releases. The inspector stated that the use of the sump as part of the radwaste system will be reviewed with the NRC Licensing Staff. This item is considered unresolved pending comments from the Licensing Staff. See paragraph 16.

9. Testing of Air-Cleaning Systems

The inspector examined the test results for the HEPA filters and charcoal absorbers to determine compliance with Technical Specification 5.5.3.

No items of noncompliance or deviations were identified.

10. Reactor Coolant Quality

The inspector examined analyses results of reactor coolant to determine compliance with Technical Specifications 4.2.8, 4.3.8, 5.2.11, 5.2.12, and 5.3.7.

No items of noncompliance or deviations were identified.

11. Sampling and Analyses Procedures

The inspector reviewed approximately twenty (20) sampling and analyses procedures regarding effluent and reactor coolant samples. The procedures were reviewed for content and proper approval.

No items of noncompliance or deviations were identified.

12. Radioactive Solid Waste

The inspector examined solid radioactive waste records. Such items as nuclide composition, handling, storage, and shipments were reviewed. The licensee has not made any off-site shipments since issuance of the OL in 1973. The licensee has several barrels of spent titanium sponge material in storage. The licensee stated that the amount of tritium contained in the titanium has not been determined. According to a

licensee representative, an evaluation will be performed in order to establish the tritium activity prior to any off-site shipment.

No items of noncompliance or deviations were identified.

13. Radiochemistry Quality Control

The inspector reviewed the licensee's radiochemistry QC program. The review included an examination of QC procedures, calibration, response tests, checks, and comparisons with off-site laboratories. The licensee's records indicated that an adequate QC program is maintained. It was noted that procedure covering the preparation of laboratory counting standards has not been written. The licensee stated that a counting standard preparation procedure will be developed.

No items of noncompliance or deviations were noted.

14. Audits

The inspector examined audits of radiochemistry activities performed by the licensee. The licensee's records indicated that audits were performed by the QA staff on the following dates:

October 17, 1977  
March 30, 1978  
April 6, 1978  
June 21, 1978

The audits reports showed that timely corrective actions were completed for deficiencies identified in the audits.

No items of noncompliance or deviations were noted.

15. Confirmatory Measurements

The analytical measurement comparisons will be made by the NRC reference laboratory and the licensee on the following split samples collected during this inspection:

- Liquid waste
- Gaseous waste
- Stack particulate filter
- Stack charcoal cartridge

The results of the measurement comparisons will appear in a later inspection report.



16. 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. An unresolved item disclosed during this inspection is discussed in paragraph 8.

17. Exit Interview

At the conclusion of the inspection on October 19, 1978, the inspection findings were discussed with the individuals denoted in paragraph 1. The inspector reviewed the scope of the inspection and the inspection findings.