

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-267/90-19 Operating License: DPR-34

Docket: 50-267

Licensee: Public Service Company of Colorado (PSC)
P.O. Box 840
Denver, Colorado 80201-0840

Facility Name: Fort St. Vrain Nuclear Generating Station (FSV)

Inspection At: FSV Site, Weld County, Platteville, Colorado

Inspection Conducted: October 15-19, 1990

Inspector:

Lorenzo Wilborn

Lorenzo Wilborn, Radiation Specialist
Radiological Protection and Emergency
Preparedness Section

11-16-90

Date

Approved:

Blaine Murray

Blaine Murray, Chief, Radiological Protection
and Emergency Preparedness Section

11/16/90

Date

Inspection Summary

Inspection Conducted October 15-19, 1990 (Report 50-267/90-19)

Areas Inspected: Special, reactive, announced inspection of radiological controls associated with the transfer of six spent fuel elements from Spent Fuel Shipping Container No. 2 to Fuel Storage Well No. 5.

Results: The inspector determined that the licensee's overall performance during the transfer of six spent fuel elements from a spent fuel shipping container to a fuel storage well was adequate. No significant problems were identified in the areas inspected. The licensee had developed and implemented a comprehensive fuel handling procedure work package with spaces for checks and signatures to reflect successful completion of each phase. The necessary management oversight and support were provided to ensure that activities were performed in a proper manner.

Within the areas inspected, no violations or deviations were identified.

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DETAILS

1. Persons Contacted

PSC

- *C. G. Fuller, Manager, Nuclear Production
- *F. J. Borst, Manager, Nuclear Training and Support
- *D. W. Evans, Manager, Operations and Maintenance
 - R. Gappa, Superintendent, Refueling Floor
- *J. M. Gramling, Supervisor, Nuclear Licensing - Operations
 - J. E. Halvorson, Special Services Licensed Operator (SSLO)
 - C. J. Holzworth, Quality Assurance (QA) Specialist
 - G. McTiernan, Senior Health Physics (HP) Technician
 - R. Rankin, Senior HP Technician
 - T. E. Schleiger, Superintendent, Chemistry and Radiation Protection
- *P. F. Tomlinson, Sr., Manager, QA
- *W. E. Woodard, Supervisor, HP

*Denotes individuals in attendance at the exit meeting on October 19, 1990.

2. Occupational Exposure, Shipping, and Transportation (83750)

a. Planning, Training, and Instruction

The inspector reviewed the planning, training, and instructions associated with the transfer of six spent fuel elements from Spent Fuel Shipping Container No. 2 to Fuel Storage Well No. 5. The inspector noted that the licensee had developed and implemented a Fuel Handling Procedure Work Package (FHPWP)-301-3, Issue 1, dated October 12, 1990. This package had been reviewed and approved by the Plant Operation Review Committee (PORC) and the station manager. The procedure included step-by-step action for each task performed in parallel with a flow chart, acceptance criteria, Technical Specifications limiting conditions for operation which must be complied with, references, precautions, and provisions to show successful completion of each task and, as applicable, quality control (QC) witnesses. This package was observed to be readily available on the refueling floor during the performance of activities. Continuity throughout the operation was well maintained in that the same individuals were present and responsible from start to finish.

Interviews and discussions with personnel involved in the transfer and observations of ongoing activities indicated that personnel were knowledgeable of and proficient in the tasks they performed. A

formal briefing/discussion was held each morning before commencing the scheduled activities. During the morning briefing/discussion, ideas for improvement were entertained and information relating to special instructions or requirements was freely exchanged.

No violations or deviations were identified.

b. Radiation Work Permit (RWP)

The inspector reviewed six special/specific RWPs used during the period covered by this inspection for controlling access to HP controlled areas: (1) Special RWP No. 11414, titled "Inspect HSF Overhead Crane, G-1605," issued for the period October 10-17, 1990; (2) Special RWP No. 11418, titled "To Allow Handling of Cask H-1501 while Placing in NFLP & Bolting on Supports," issued for the period October 15-22, 1990; (3) Special RWP No. 11420, titled "Removal of Cask H-1501-3 from Its Trailer in the Truck Bay," issued for the period October 16-23, 1990; (4) Special RWP No. 11421, titled "SFSC H-1501-3, Remove Cover & Inspect & Clean Seating Surface," issued for the period October 16-23, 1990; (5) Special RWP No. 11424, titled "Access to RFF during Fuel Block Movements," issued for the period October 17-24, 1990; and (6) Special RWP No. 11425, titled "Access to RFF HPCA during Fuel Block Moves," issued for the period October 17-24, 1990. The RWPs appeared to contain sufficient information for the specified activities including: survey results, protective clothing requirements, and general and specific instructions.

The individuals signing in on the above RWPs were observed carefully reading the RWPs and directing resulting questions to the senior HP technician prior to affixing a signature.

No violations or deviations were identified.

c. Management Oversight

The inspector observed the amount of time that managers and supervisors spent in briefings and on the reactor fuel floor observing ongoing activities. The inspector determined that management oversight appeared to be adequate. In addition, the refueling floor superintendent was continuously present and provided supervisory briefings, coordination, and onsite activities coverage.

No violations or deviations were identified.

d. Health Physics Coverage

The HP coverage was specified on the RWP, and the required coverage was generally exceeded. For example, when HP coverage was intermittently required on the RWP, the dedicated senior HP

technician provided continuous coverage and further assistance was immediately available when necessary. The senior HP technician providing coverage met frequently with the HP supervisor to brief him on the progress of ongoing activities. HP surveys appeared to be representative, timely, and consistent with existing conditions.

No violations or deviations were identified.

e. Personnel Monitoring

The inspector observed the personnel monitoring and whole body frisking and determined that each individual entering an HP controlled area wore a beta-gamma film badge and a self-reading pocket dosimeter. The inspector also observed that individuals performed a whole body frisk as they exited the HP controlled area. Additionally, individuals read their self-reading dosimeters and recorded the reading on the sign-up sheets attached to the respective RWP. An estimated 0.26 person-Rem had been projected by HP for the job, but the dosimeter readings recorded on the sign-up sheets indicated that the collective dose was less than 30 mRem.

No violations or deviations were identified.

f. Deviation and Irregularity Reports

The inspector reviewed three procedure deviation reports (FHP-90-059, FHP-90-060, and FHP-90-061) generated by the licensee. These deviation reports involved typographical error corrections and additional steps were generated as the result of observations by the licensee. The inspector determined that the licensee had taken proper action to resolve these reports.

The inspector reviewed HP Irregularity Report Nos. 90-12 and 90-13 generated by the licensee.

Report No. 90-12 involved the contamination of an electrician specialist. This individual was wearing full protective clothing and an open-faced hood and was assisting the performance of maintenance on the Overhead Crane G-1605 in an HP controlled area (RWP No. 11414) when he slipped and bumped the bridge of his nose on a contaminated I-beam. The electrician specialist immediately exited the area and whole body frisking detected the contamination. He remained in the frisking area and summoned someone to notify HP. The responding HP initiated decontamination procedures and successfully removed the contamination. The licensee estimated a skin dose of approximately 0.2 mRem.

Report No. 90-13 involved an NRC inspector detecting a hot particle on the big toe area underneath the left shoe while frisking upon exiting the reactor building on Level 7. HP was immediately informed and responded. The immediate area and the plan areas the inspector

had toured were surveyed with no significant contamination or hot particle activity found. The hot particle was collected and delivered to the radiochemistry laboratory for isotopic analysis. The total estimated exposure to the inspector's left foot was 0.6 mRem.

No violations or deviations were identified.

3. Exit Meeting

The inspector met with the licensee representatives denoted in paragraph 1 at the conclusion of the inspection on October 19, 1990, and summarized the scope and findings as presented in this report. The licensee did not identify as proprietary any of the materials provided to, or reviewed by, the inspector during the inspection.