

APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION

REGION IV

NRC Inspection Report: 50-267/85-15

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: May 21-24, 1985

Inspector: I. Barnes
I. Barnes, Reactor Inspector, Project Section A,
Reactor Project Branch 1

7/2/85
Date

Approved: J. P. Jaudon
J. P. Jaudon, Chief, Project Section A, Reactor
Project Branch 1

7/2/85
Date

R. E. Ireland
R. E. Ireland, Chief, Special Projects and
Engineering Section, Reactor Project Branch 1

7/5/85
Date

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Inspection Summary

Inspection Conducted May 21-24, 1985 (Report 50-267/85-15)

Areas Inspected: Routine, unannounced inspection of maintenance activities associated with the control rod drive refurbishment program. The inspection involved 27 inspector-hours onsite by one NRC inspector.

Results: Within the one area inspected, one violation was identified (failure to follow procedures, paragraph 2).

DETAILS

1. Persons Contacted

PSC

- *J. W. Gahm, Manager, Nuclear Production
- *R. L. Craun, Manager, Nuclear Site Engineering
- *W. L. Franek, Superintendent, Operations
- J. Jackson, Quality Assurance (QA)/Quality Control (QC) Supervisor
- *F. J. Novachek, Manager, Technical/Administrative Services
- *T. C. Prenger, QA Engineering Supervisor
- *L. W. Singleton, Manager, QA

Others

- *G. L. Plumlee, III, NRC Resident Inspector

*Denotes those present during the exit interview held on May 24, 1985.

The NRC inspector also contacted other licensee site engineering employees during the inspection.

2. Maintenance

- a. Drive Assembly Criteria: A comparison was made between the criteria being utilized for assembly of the control rod drives with respect to available information on original assembly criteria. This was accomplished by review of Section 3.8, "Control Rods and Drives Reserve Shutdown System," of the Updated Final Safety Analysis Report, Issue 2, and evaluation of technical requirements contained in bearing drawings (i.e., -222, 256, 257, 258, 259, 260 and 261) and assembly drawings SLR D 1201-100 and -200. The original GA methodology was ascertained from review of GA document GA 9807, 1977 Revision, "Installation, Operation, and Maintenance Manual for the Control and Orificing Assembly for the FSV Reactor." The noted requirements were then compared against the detailed drive assembly instructions contained in FSV Fuel Handling Procedure Work Packets (FHPWPs). The method used to evaluate individual bearing preload and shim requirements was observed to differ from the criteria contained in GA 9807. The differences were assessed by interview of site engineering personnel and observation of the techniques used for measurement of bearing dimensions. Use of micrometers and dial indicators with current calibration status was verified during this review. The inspector also verified that the standards were traceable to the National Bureau of Standards.

The NRC inspector additionally examined the results of a contractor comparison review of differences in requirements between FHPWPs and control rod drive and orifice assembly (CRDOA) drawings. Current assembly process control compliance was assessed by review of FHPWP-100-10.

Within this area of inspection, no violations or deviations were identified.

b. Procurement Control: The NRC inspector reviewed the following procurement related procedures:

- Administrative Procedure Q-4, Issue 6, Effective Date May 7, 1984, "Procurement Document Control"
- Administrative Procedure Q-7, Issue 6, Effective Date August 27, 1984, "Control of Procured Materials and Services"
- Procedure MRIM-1, Issue 4, Effective Date December 10, 1984, "General Receiving Inspection"

Purchase Order (PO) N5755 through Supplement 01 dated January 30, 1985, which pertained to cable assemblies, was selected for review as a result of the PSC decision to change cable material from Type 347 austenitic stainless steel to Inconel 625. The PO to GA Services required their performance of a fatigue test on a cable sample with the results to be supplied to PSC. Examination of vendor-furnished documentation for the cable assemblies showed that this information had not been furnished to PSC by GA as of this inspection. The NRC inspector was informed by QA personnel that the cable assemblies had been released by FSV receiving inspection based upon the PO being still open and the knowledge that the fatigue test had not been completed. The failure of receiving inspection to identify a hold condition in regard to the required certification is an apparent violation (50-267/8515-01).

The NRC inspector noted, during review of GA PO 035022 for the manufacture of the Inconel 625 wire, that the wire was required to be lubricated with molybdenum disulfide prior to the final draw. On ascertaining from site engineering personnel that the maximum service temperature experienced in the cable length was approximately 1700°F, the NRC inspector requested information concerning corrosion susceptibility of the cable wires to the molybdenum disulfide surface film. The NRC inspector was informed that this subject had been reviewed, but that the responsible engineer was not in office. This is considered an open item pending review of applicable information on the subject (50-267/8515-02).

The NRC inspector additionally noted during documentation review that the PO and the cable drawing required removal of drawing lubricants from the Inconel 625 wire prior to molybdenum disulfide application and final wire reduction. Review of a GA report for a source inspection at the wire manufacturer's facility showed; however, that the manufacturer had used a drawing compound after molybdenum disulfide application for final wire

reduction. This document, which was not contractually required by PSC, did not indicate any actions taken by GA as a result of the apparent violation of GA procurement requirements by the wire manufacturer. A GA limited analysis of the compound used, Apex SP2 soap, was present in the documentation and showed 0.26% by weight chlorides. A GA analysis of the molybdenum disulfide used by the wire manufacturer had also been provided to PSC and showed a reported 15 ppm fluorides, 16 ppm chlorides, and 145 ppm sulfates. A documented evaluation of the acceptability of the wire after use of the drawing compound for final reduction was not present in the submitted GA information. This is considered an open item pending review of such information (50-267/8515-03).

3. Exit Interview

An exit interview was conducted on May 24, 1985, at the FSV site with those personnel denoted in paragraph 1 of this report. The NRC inspector summarized the scope and findings of the inspection.