

APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-285/84-10

License: DPR-40

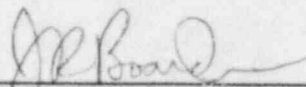
Docket: 50-285


Licensee: Omaha Public Power District (OPPD)
1623 Harney Street
Omaha, Nebraska 68102

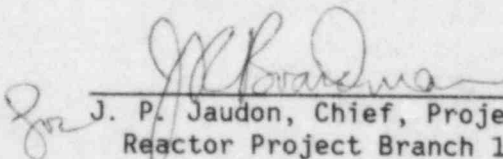
Facility Name: Fort Calhoun Station

Inspection At: Fort Calhoun Station, Blair, Nebraska

Inspection Conducted: April 30-May 4, 1984

Inspector:  5/24/84
J. R. Boardman, Reactor Inspector
Project Section A, Reactor Project Branch 1
Date

Approved:  5/25/84
W. D. Johnson, Chief, Project Section A
Reactor Project Branch 2
Date

 5/24/84
J. P. Jaudon, Chief, Project Section A
Reactor Project Branch 1
Date

Inspection Summary

Inspection Conducted April 30-May 4, 1984 (Report 50-285/84-10)

Areas Inspected: Routine, unannounced inspection of the annual review of the OPPD Quality Assurance Program and Fort Calhoun Station Hydrogen Monitors. The inspection involved 34 inspector-hours onsite by one NRC inspector.

Results: Within the two areas inspected, one violation was identified in one area (OPPD Quality Assurance Program).

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DETAILS

1. Persons Contacted

Principal Licensee Employees

- *W. C. Jones, Division Manager, Production Operations
- *W. G. Gates, Manager, Fort Calhoun Station
- *F. A. Thurtell, Division Manager, Quality Assurance (QA) and Regulatory Affairs
- M. R. Core, Supervisor, Maintenance
- A. W. Richard, Supervisor, Technical
- *M. C. Winter, Manager QA
- *R. L. Jaworski, Section Manager, Technical Services
- *J. J. Fisicaro, Supervisor, Nuclear Regulatory and Industry Affairs
- *K. J. Morris, Manager, Administrative Services
- *P. M. Surber, Section Manager, GSE
- *R. F. Mehaffey, Supervisor I&C and Electrical Technical Services

*Denotes attendance at the exit interview.

The NRC inspector also talked with, and interviewed, other licensee employees during the inspection.

2. Annual Inspection of Licensee's QA Program

a. The NRC inspector reviewed the licensee's procedures relating to the licensee's QA procedures (QAP). Since the last annual inspection, the OPPD Nuclear QA Manual (QAM) had been revised in scope. Previously the QAM and its QAP had been applicable for all of OPPD. As revised, the QAM contains QA department procedures (QADP) applicable only to the QA department. As a result, applicable departments were required to write their own procedures, or issue other instructions, to assure implementation of the OPPD QA program for their areas or responsibility.

b. The following licensee QADPs were reviewed:

- QADP-1, Rev 2, November 1983, Control of the QA Department Manual
- QADP-2, Rev 2, March 1984, QA Department Training
- QADP-3, Rev 1, July 1983, Training & Certification of Audit Personnel
- QADP-4, Rev 0, November 1983, Training & Certification of Inspectors
- QADP-5, Rev 1, July 1983, Internal Audit & QA Surveillance Program Scheduling
- QADP-6, Rev 1, July 1983, Conduct of Audits
- QADP-7, Rev 1, July 1983, Conduct of QA Surveillances
- QADP-8, Rev 1, November 1983, Conduct of QA Inspections
- QADP-10, Rev 1, March 1984, Review of Procurement Documents
- QADP-11, Rev 1, March 1984, Approval and Audit of Vendors
- QADP-12, Rev 1, March 1984, Material Acceptance & Receipt Inspection
- QADP-13, Rev 0, November 1983, Control of Nonconforming Items & Materials

QADP-14, Rev 1, July 1983, Deficiency Tracking and Trending
QADP-15, Rev 3, February 1984, Control of QA Department Documents & Records
QADP-17, Rev 0, November 1983, Control of Deficiencies & Corrective Actions
QADP-18, Rev 0, March 1984, Review of Design Documents

- c. The following Fort Calhoun Station, Unit 1, procedures were reviewed:

G-1, Rev 1, March 1, 1984, Standing Orders
G-3, Rev 10, January 31, 1984, Special Procedures
C-6, Rev 13, June 27, 1983, Housekeeping
G-7, Rev 7, August 16, 1983, Operating Manual
G-17, Rev 27, April 7, 1984, Maintenance Orders
G-17A, Rev 0, April 11, 1983, Electrical Equipment in a Harsh Environment
G-18, Rev 6, January 26, 1984, Nonconformity Control
G-21, Rev 13, November 28, 1983, Station Modification Control
G-22, Rev 8, April 11, 1984, Storage of Critical Quality Elements
G-23, Rev 17, February 28, 1984, Surveillance Test Program
G-24, Rev 13, April 7, 1984, Receipt Control of CQE Material
G-25, Rev 9, December 29, 1983, Stores Control
G-26, Rev 13, February 28, 1984, Maintenance of Quality Control Program
G-26A, Rev 4, April 16, 1984, Quality Control Program
G-30, Rev 13, June 30, 1983, Setpoint/Procedure Changes
G-56, Rev 2, March 28, 1984, Qualified Life Program (QLP)
C-3, Rev 13, April 11, 1984, Fort Calhoun Station QA Records

- d. Nuclear Purchasing Procedure NPP-1, Revision 1, dated April 2, 1984, "Nuclear Procurement Control," was reviewed.

- e. The NRC inspector, in his review of the procedures listed above, found a number of areas which needed review and clarification by the licensee. An example of this is procedure G-36, form FC-126, "Operating Manuals Review Documentation" review sheet. This sheet is used in the biannual review of station procedures. Form FC-126 contains 13 "review considerations" (attributes to be reviewed). Only 2 of the 13 attributes are applicable to administrative type procedures, such as were reviewed by the NRC inspector. The two applicable attributes are, "is the test/procedure in the prescribed format," and "are references/checklists in test/procedure current/complete." A biannual review of administrative procedures using this checklist provides little assurance that applicable procedures implement the licensee's QA program, or meet regulatory requirements and commitments. This area will remain an open item (8410-01) pending review by the NRC inspector during a subsequent inspection.

- f. The NRC inspector also found no Fort Calhoun Station, Unit 1, procedure to implement 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, since the conversion in November 1983 of the QAM to a QA department manual. The need for this procedure had been identified by the QA manager to upper management prior to the conversion of the QAM. The QA manager was aware that the procedure

was not issued and stated that QA was monitoring Fort Calhoun Station activities to assure no problems arose in the area of corrective action. Also, QA Surveillance Plan E/C-84-Z, "Procedures for Control of Deficiencies and Corrective Action Plan," approved April 2, 1984, identifies this problem. The licensee assured the NRC inspector that the procedure would be issued in the near future. This will be an open item (8410-02) pending review of the issued procedure by the NRC inspector during a subsequent inspection.

- g. Of more concern was the finding of lack of procedural control by OPPD of the designation of safety-related equipment and components. OPPD designates these as "CQE" (for critical quality element). As an example, Station Procedure G-26, Revision 13, dated February 28, 1984 (after cancellation of the QAM), "Maintenance Quality Control," Section 6.2, states, ". . . QC inspector will perform inspections, examinations, and tests on equipment and components designated CQE (Reference 2.4, Appendix C)." Reference 2.4 is the now cancelled QAM, which, when converted in November 1983, did not contain an Appendix C.

When asked by the NRC inspector for a CQE list, site QA personnel produced a mechanical list dated 1978, and an electrical list dated 1982. These were copies of lists obtained from (and used by) maintenance personnel. The lists were not identified as controlled documents.

The site technical supervisor stated that he used P&ID drawings for identification of CQE and showed the NRC inspector a 1980 letter supporting this use.

Since there was no Appendix C to the QAM, there was no way that station QC inspectors could comply with procedure G-26, Section 6.2 in determination of CQE to assure performance of required inspections, examinations, and tests on equipment and components designated CQE. In addition, no procedure specified or controlled CQE lists used by station personnel. Station personnel were using one CQE list which was 6 years old.

Failure to have procedures for activities affecting quality is a violation of 10 CFR Part 50, Appendix V. (8410-03)

3. Comsip-Delphi Post LOCA Containment Hydrogen Monitors

Because of problems experienced at another facility, the NRC inspector reviewed licensee documentation of qualification of installed hydrogen monitors' pump motors. The installed motors have different identification numbers from the motors used in the equipment qualification tests. The motor manufacturer (Reliance Electric) stated to the NRC inspector that the motors are identical. The NRC inspector did not review the documentation of equipment qualification for acceptability.

The NRC inspector also reviewed Reliance Instruction Manual B-3620-11, sent by Comsip-Delphi to OPPD with the hydrogen monitors, and OPPD Preventive Maintenance Procedure MP-H2-1-1, Revision 0, November 30, 1983, "Comsip, Inc.-Post LOCA Containment Hydrogen Monitoring System Preventive Maintenance to Maintain 79-01B Qualification."

Manual B-3620-11 is for commercial Reliance motors, not class IE motors as installed in the Fort Calhoun Station hydrogen monitors (per telecon with Reliance Electric on May 9, 1984). The correct manual is B-3645-1 or B-3645-2. A major difference is that class IE can only use Chevron SRI 2 grease; no other is qualified. Manual B-3620-11 allows two other greases.

OPPD procedure MP-H2-1-1 neither references nor contains the below listed requirements of Reliance Manual B-3620-11; this was the only manual available onsite, and to the licensee's knowledge, it was the correct manual. (Except for the limitation on qualified IE grease, the requirements in this manual are similar to the requirements in the correct manual according to Reliance Electric.)

Lubrication of motors in storage for greater than 6 months.
Periodicity of lubrication
Recommended lubricant volume for lubrication.
The lubrication procedure recommended by Reliance Electric.

The omission of the lubricant volume is a potential problem. Reliance indicated that many motor failures have occurred from over lubrication, particularly when the grease drain is clogged with hardened grease.

The lubrication periodicity requirement in procedure MP-H2-1-1 (5 years) is less conservative than that in Reliance Manual B-3620-11 (3 Years). Reliance Electric in a telecon with the NRC inspector stated that periodicity requirements cannot be arbitrarily changed, and that a LOCA near the end of the extended lubrication period, with Post-LOCA continuous motor operation in harsh environment, could possibly result in inadequate bearing lubrication.

This will remain an unresolved item (8410-04) pending further review by the NRC inspector during a subsequent inspection.

4. Unresolved Item

An unresolved item is a matter about which more information is required in order to determine whether it is acceptable, a violation, or a deviation. One new unresolved item is discussed in this report in paragraph 3.

5. Exit Interview

An exit interview was conducted on May 4, 1984, with personnel in paragraph 1 of this report. The NRC senior resident inspector also attended this exit interview. At this meeting, the scope of the inspection and the findings were summarized.