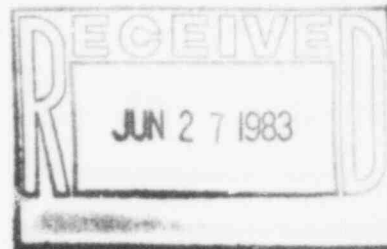


Omaha Public Power District
1623 Harney Omaha, Nebraska 68102
402/536-4000

June 24, 1983
LIC-83-142



Mr. J. T. Collins, Administrator
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

Reference: Docket No. 50-285

Dear Mr. Collins:

Inspection of Threaded Fasteners
in the Reactor Coolant Pressure
Boundary (IE Bulletin 82-02)

The subject bulletin required Omaha Public Power District to clean and inspect, per ASME Code Section XI, reactor coolant system pressure boundary threaded fasteners of closure connections when that closure is opened for inspection or maintenance. The scope of the items to be inspected include threaded fasteners (studs or bolts) in (1) steam generator and pressurizer manway closures, (2) valve bonnets and pump flange connections installed on lines having a nominal diameter of 6 inches or greater, and (3) control rod drive (CRD) flange and pressurizer heater connections that do not have seal welds to provide leak-tight integrity. This letter provides the District's response to Action Item 4 of this bulletin.

Sincerely,

A handwritten signature in cursive script, appearing to read "W. C. Jones".

W. C. Jones
Division Manager
Production Operations

WCJ/TLP:jmm

Attachment

cc: LeBoeuf, Lamb, Leiby & MacRae
1333 New Hampshire Avenue, N.W.
Washington, D.C. 20036

Mr. E. G. Tourigny, Project Manager
Mr. L. A. Yandell, Senior Resident
Inspector

1E11


///

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
Omaha Public Power District) Docket No. 50-285
(Fort Calhoun Station,)
Unit No. 1))

AFFIDAVIT

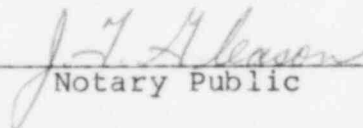
. being duly sworn, hereby deposes and says that he is Division Manager - Production Operations of Omaha Public Power District; that he is duly authorized to sign and file with the Nuclear Regulatory Commission the attached response to IE Bulletin 82-02; that he is familiar with the content thereof; and that the matters set forth therein are true and correct to the best of his knowledge, information and belief.



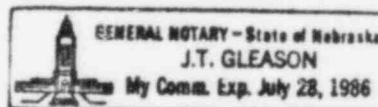
W. C. Jones
Division Manager
Production Operations

STATE OF NEBRASKA)
) ss
COUNTY OF DOUGLAS)

Subscribed and sworn to before me, a Notary Public in and for the State of Nebraska on this 24th day of June, 1983.



Notary Public



Attachment

RESPONSE TO IE BULLETIN 82-02
DEGRADATION OF THREADED FASTENERS
IN THE REACTOR COOLANT PRESSURE
BOUNDARY OF PWR PLANTS

Request

1. Where procedures do not exist, develop and implement maintenance procedures for threaded fastener practices. These procedures should include, but not limited to the following: (1) maintenance crew training of proper bolting/stud practices, tools application, specifications and requirements, (2) detensioning and retensioning practices (torque iteration), specified tolerances, and other controls for disassembly and reassembly of component closure/seal connections, (3) gasket installation and controls, and (4) retensioning methods and other measures to eliminate reactor coolant leakage during operations.

Quality assurance measures should also be established for proper selection, procurement, and application of fastener lubricants and injection sealant compounds to minimize fastener susceptibility to SCC environments.
2. Threaded fasteners of closure connections, identified in the scope of this bulletin, when opened for component inspection or maintenance shall be removed, cleaned, and inspected per IWA-2210 and IWA-2220 of ASME Code Section XI (1974 edition or later) before being reused.
3. Not applicable to this response.
4. A written report signed under oath or affirmation under provisions of Section 182a, Atomic Energy Act of 1954 as amended, shall be submitted to the Regional Administrator of the appropriate NRC Regional Office within 60 days following the completion of the outage during which Action Item 2 was performed. The report is to include:
 - a. A statement that Action Item 1 has been completed.
 - b. Identification of the specific connections examined as required by Action Item 2.

- c. The results of the examinations performed on the threaded fasteners as required by Action Item 2. If no degradation was observed for a particular connection, a statement to that effect, identification of the connection and, whether the fasteners were examined in place or removed is all that is required. If degradation was observed, the report should provide detailed information.

Response

The District has completed Action Item 1. Prior to performing Item 2 inspections, training was provided for personnel; however, the policy for documentation and certification of this training was not implemented until February 1, 1983. Results of Action Items 4.b. and 4.c. are as follows:

Reactor coolant primary boundary threaded fasteners opened for maintenance during the December 1982-April 1983 outage were inspected per IWA-2210 and IWA-2220 of ASME Code, Section XI. No evidence of major corrosion wastage was evidenced but conservative acceptance criteria lead to the replacement of 3 reactor coolant pump studs and 6 autoclave bolts. QC records document that the following components were inspected:

1. Pressurizer safety valves RC-141 and 142. All valve studs were magnetic particle and visually inspected. No evidence of corrosion was indicated.
2. HCV-348 located on a 12" safety injection line was dismantled for maintenance. All valve studs were liquid penetrant and visually inspected. No evidence of corrosion was indicated.
3. Both steam generators' primary manways were opened for inspection. Visual inspection shows all studs to have various amounts of pitting on exposed surfaces. The pitting is caused by moisture (rust). In the worst case, the pitting covered 70% of the entire exposed surface. Five studs required filing in the thread area to correct minor dings caused by dropping, etc. The visual inspection shows all damage to be very minor in nature. Seventeen studs were stuck in place. These studs were cleaned and visually inspected in place. The seventeen studs showed minor pitting, chips and dings. The seventeen studs were also liquid penetrant tested.

The sixty-three removed studs were subjected to magnetic particle inspection and showed no apparent defects. Cross sectional reduction is approximately 2 mils (as pitting) and can be seen in new studs.

4. Sixteen CEDM autoclaves were dismantled and the flexitallic gaskets replaced. Of the 256 total bolts (5") that seal the autoclaves, six were rejected during visual inspection. The remaining 250 were subjected to liquid penetrant testing and found to be acceptable. Any evidence of corrosion or thread damage was considered rejectionable.

5. Reactor coolant pumps RC-3B and RC-3C were dismantled for maintenance during the outage. The 32 closure studs were removed and inspected. Three studs were rejected during visual inspection. The remaining 29 were magnetic particle tested and found acceptable. The three rejected studs had visual evidence of minor (1/16-1/8 inch) material loss on the non-threaded portion and these studs were replaced.