

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
THE HARTFORD ELECTRIC LIGHT COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

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July 30, 1982

Docket No. 50-213
50-336
A02544

Mr. Ronald C. Haynes
Regional Administrator
Region 1
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

Reference: (1) IE Bulletin No. 82-02 dated June 2, 1982.
(2) W. G. Council letter to R. C. Haynes dated
July 28, 1982.

Gentlemen:

Haddam Neck Plant
Millstone Nuclear Power Station, Unit No. 2
Response to IE Bulletin No. 82-02

In reference (1), the NRC staff requested Connecticut Yankee Atomic Power Company (CYAPCO) and Northeast Nuclear Energy Company (NNECO) to perform certain actions with respect to the degradation of threaded fasteners in the Reactor Coolant Pressure Boundary (RCPB). As requested in Reference (1) and clarified in Reference (2), the response to Action Items 1, 2 and 4 will be submitted within 60 days following the completion of the outage during which Action Item 2 is performed. In response to Action Items 3 and 5 of Reference (1), CYAPCO and NNECO hereby provide the following information.

During the most recent plant operating cycle (Cycle XI), the Haddam Neck Plant has experienced visible leakage (moisture only) from the body to bonnet area of two valves (RC-MOV-501, Loop 4 TH stop valve and RC-MOV-537, Loop 2 TC stop valve). This leakage was noted during the 1981 (Cycle X-XI) refueling outage inspection of bolted closures. These valves were immediately cleaned and subsequently reinspected during a plant shutdown to hot standby on June 5, 1982, where evidence of leakage was again noted (moisture only). The body to bonnet gaskets will be inspected and replaced during the 1983 (Cycle XI-XII) refueling outage.

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The Haddam Neck Plant also experienced leakage from the body to bonnet joint on the Loop 2 TH stop valve (RC-MOV-526) during Cycle IX operations prior to the 1980 (Cycle IX-X) refueling outage. A temporary repair was effected at that time using a sealant material (Furmanite). The sealant material was removed and the gasket replaced during the 1980 refueling outage. Subsequent inspections have revealed no further leakage from the body to bonnet joint of this valve.

Other than the valves noted above, neither the Haddam Neck Plant nor Millstone Unit No. 2 have experienced any visible leakage (i.e., water vapor or liquid) from bolted closures of the RCPB. On occasion, small quantities of boric acid residue have been seen in the vicinity of bolted closures (manways, valve body to bonnet joints, valve packing gland areas). These have been thin film residues and not characteristic of long term significant leakage. No fastener corrosion has been seen. Where boric acid residue has been encountered, the valve or closure has been cleaned and followup inspections performed. Valves exhibiting boric acid residue in the packing gland area have been and will continue to be repacked, as necessary, when plant conditions permit. At Millstone Unit No. 2, prior to 1982, more substantial boric acid residue and some corrosion had been seen on the in-core instrumentation nozzle flange fasteners. These fasteners were carbon steel and the corrosion seen was general corrosion, typical of carbon steel in a boric acid environment. The leakage was attributed to the difficulty of proper fastener torquing caused by the poor accessibility of these fasteners. During the 1982 refueling outage, a modified instrumentation assembly was installed, which eliminates the need for disassembling the flanged joint. In addition, the flange fasteners were changed to type 453 stainless steel.

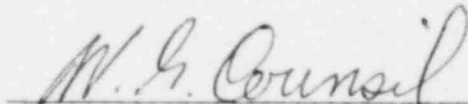
The lubricants and sealant materials used at the Haddam Neck Plant and Millstone Unit No. 2 are indicated in Attachment I. Attachment II indicates those components in which these lubricants and sealant materials are or have been used. No corrosive attack has been seen, which could be attributed to these lubricant and sealant materials.

Approximately forty-four (44) man hours were required in the conduct of the review and preparation of the report in response to Reference (1).

We trust you will find this information responsive to the Reference (1) requests.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY



W. G. Council
Senior Vice President

Attachments:

- I. Lubricants and Sealant Materials
- II. Lubricant and Sealant Material Usage

Response to IE Bulletin No. 82-02

Attachment I
Lubricants and Sealant Materials

Haddam Neck Plant

- A) Neolube No. 2
Dry film, anti-seize, conductive lubricant
Colloidal graphite in isopropyl alcohol
Extremely low halogen content

- B) Fel Pro N-5000
Nickel based lubricant
Chloride < 40 ppm
Fluoride < 19 ppm
Sulfur < 50 ppm

- C) Fel Pro N-1000 (No longer used due to copper content)
Copper based lubricant
Chloride < 50 ppm
Sulfur < 100 ppm

- D) Molykote
Specialty lubricant
Specific composition not available
Includes molybdenum disulfide

- E) Furmanite Sealant
Chloride < 100 ppm
Fluoride < 200 ppm
Sulfur < 200 ppm

Millstone Unit No. 2

- A) Pure Nickel Never Seize Special
Nickel based lubricant
Chloride < 200 ppm
Fluoride < 25 ppm
Sulfur < 300 ppm

Response to IE Bulletin No. 82-02

Attachment II
Lubricant and Sealant Material Usage

Haddam Neck Plant

<u>Component</u>	<u>Lubricant/Sealant</u>
<u>Residual Heat Removal System</u>	
RHR-MOV-780	Type B or C
RHR-MOV-781	Type B or C
RHR-MOV-803	Type B or C
RHR-MOV-804	Type B or C
<u>Reactor Coolant System</u>	
RC-MOV-546	Type B, C or D
RC-MOV-538	Type B, C or D
RC-MOV-526	Type B, C or D *"Type E"
RC-MOV-537	Type B, C or D
RC-MOV-512	Type B, C or D
RC-MOV-501	Type B, C or D
RC-MOV-513	Type B, C or D
RC-MOV-524	Type B, C or D
RC-MOV-577	Type B or C
RC-MOV-528	Type B or C
RC-MOV-515	Type B or C
RC-MOV-510	Type B or C
<u>Safety Injection System</u>	
SI-MOV-871A	Type B or C
SI-MOV-871B	Type B or C
<u>Reactor Vessel Stud</u>	Type A
<u>Steam Generator Manway Bolting</u>	Type B or C
<u>Pressurizer Manway Bolting</u>	Type B or C

*Furmanite was used to stop a bonnet seal leak and the bonnet gasket was repaired and the sealant material removed during the 1980 outage.

Millstone Unit No. 2

All fasteners in the RCPB are routinely lubricated with "Pure Nickel Never Seize Special" manufactured by Never Seize Compound Corp., 2910 South 18th Avenue, Broadview, IL 60153.