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August 2, 1982

Mr James G Keppler
Regional Administrator-III
U S Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Mr Keppler:

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
Docket No. 50-282 License No. DPR-42
Docket No. 50-306 License No. DPR-60
IE Bulletin No. 82-02

Attached is our report which provides the information requested
by Action Item 3 of IE Bulletin 82-02: Degradation of Threaded
Fasteners in the Reactor Coolant Pressure Boundary of PWR Plants.

Yours truly,

C E Larson
Director
Nuclear Generation

CEL/ak

cc: G Charnoff
C D Feierabend
Director, Office of Inspection and Enforcement
Division of Reactor Operations Inspection
Washington, DC 20555

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The following report provides the information requested by Action Item 3 of IE Bulletin 82-02: Degradation of Threaded Fasteners in the Reactor Coolant Pressure Boundary of PWR Plants.

Action Item 3a.

Identify those bolted closures of the RCPB that have experienced leakage, particularly those locations where leakage occurred during the most recent plant operating cycle. Describe the inspections made and corrective measures taken to eliminate the problem. If the leakage was attributed to gasket failure or its design, so indicate.

Response

Generally very few leakage problems have been experienced at Prairie Island. Routine inspections of accessible reactor coolant pressure boundary components and other in containment systems are performed, at regular intervals, at power to identify any leakage locations or other problems. These inspections provide early identification of leakage so corrective action can be planned and completed prior to leakage becoming excessive or causing bolted closure integrity concerns. Review of the maintenance records of the components which make up the reactor coolant pressure boundary has revealed four instances of bolted closure leakage.

1. SI-9-1 "Loop B Cold Leg Injection Line Check Valve". The valve is a 6" bolted bonnet swing check valve. Leakage occurred at the body to bonnet joint. Corrective action performed was to seal weld the joint. All studs were replaced with new. Occurrence date: October, 1974.
2. MV-32164 "RHR Suction from RCS Isolation Valve". The valve is an 8" bolted bonnet motor operated gate valve. Leakage occurred at the body to bonnet joint. The joint was seal welded. The studs were cleaned and re-used. Date of occurrence: April, 1977.
3. Pressurizer Manway. Leakage occurred due to a gasket leak. The gasket was replaced. The studs were cleaned and re-used.
4. SI-9-3 "RHR Injection to Reactor Vessel Check Valve". The valve is a 6" bolted bonnet swing check valve. Leakage occurred at the body to bonnet joint. The gasket was replaced. The studs were cleaned and re-used. Date of occurrence: September, 1981.

Action Item 3b.

Identify those closures and connections, if any, where fastener lubricants and injection sealant materials have been or are being used and report on plant experience with their application particularly any instances of SCC of fasteners. Include types and composition of materials used.

No injection sealant materials have been used on any reactor coolant pressure boundary bolted closures or connections at Prairie Island. Review of plant maintenance records indicate the following fastener lubricants have or are being used at Prairie Island.

- a. Never-Seez Regular Grade Anti Seize and Lubricating Compound
Manufacturer: Bostik Chemical Group
Broadview, Ill. 60153
Description: Copper and Graphite based paste lubricant.
- b. Neo-Lube Dry Film Conductive Lubricant
Manufacturer: Huron Industries, Inc.
Port Huron, Michigan
Description: Neo-lube #1 Colodial furnace graphite in alcohol
Neo-lube #2 Graphite in isopropanol (MIL-L-24131B)
- c. Molycote G-N Paste Lubricant
Manufacturer: Dow Corning Corporation
Midland, Michigan
Catalog No.: 88162
Description: Heavy duty lubricating paste containing a blend of molybdenum disulfide and white solid lubricants in mineral oil. It also contains corrosion and oxidation inhibitors.
- d. Molycote Z Lubricant Powder
Manufacturer: Dow Corning Corporation
Midland, Michigan
Catalog No.: 88050
Description: The lubricant is a powder type pure form of molybdenum disulfide designed to meet MIL-M-7866A (ASG).
- e. Fel-Pro N 5000
Manufacturer: Fel-Pro Incorporated
Skokie, Illinois
Description: Lubricant is a nickel-graphite based anti-seize compound in a paste form.
- f. Fel-Pro N 1000*
Manufacturer: Fel-Pro Incorporated
Skokie, Illinois
Description: Lubricant is a copper-graphite based compound in a paste form.
- g. Fel-Pro C5-A* Hi-Temp Thread Compound
Manufacturer: Fel-Pro Incorporated
Skokie, Illinois
Description: Lubricant is a copper-graphite based compound.

*No longer used at Prairie Island.

Review of current and past maintenance procedures and records provided the following reactor coolant pressure boundary bolted closures and connections where fastener lubricants have been used.

<u>Components (Material)</u>	<u>Lubricant Used</u>	<u>Dates (if applicable)</u>
Reactor Vessel Studs (SA-540 Gr. B-24)	Neolube Molycote G Molycote Z Fel-Pro N5000	Original - 5/74 5/74 - 11/76 11/76 - 4/82 4/82 - Present
Reactor Coolant Pump Seal Housings (ASME 193A Gr. B7)	Neolube	only lubricant ever used
Reactor Coolant Pump Main Flange Bolts (SA-540 Gr. B24 Class 4)	Fel-Pro	only lubricant ever used
Steam Generator Primary Manways (ASME 193A, Grade B7)	Fel-Pro Never-Seez Never-Seez or Fel-Pro N5000	Original - 1/77 1/77 - 7/81 7/81 - Present
Pressurizer Manway (ASME 193A, Grade B7)	Fel-Pro Never-Seez Never-Seez or Fel-Pro N5000	Original - 1/77 1/77 - 7/81 7/81 - Present
Valves (ASME 193A, Gr. B7)	Fel-Pro or Never- Seez	