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ARTHUR E. LUNDVALL, JR.  
VICE PRESIDENT  
SUPPLY

March 17, 1983

U. S. Nuclear Regulatory Commission  
Region I  
631 Park Avenue  
King of Prussia, PA 19406

ATTENTION: Mr. Ronald C. Haynes  
Regional Administrator

SUBJECT: Calvert Cliffs Nuclear Power Plant  
Unit No. 2, Docket No. 50-318  
Inspection of Threaded Fasteners in the Reactor Coolant Pressure  
Boundary of PWR Plants

- References:
- (a) IE Bulletin 82-02, "Degradation of Threaded Fasteners in the Reactor Coolant Pressure Boundary of PWR Plants".
  - (b) Letter to R. C. Haynes from A. E. Lundvall, Jr., dated July 30, 1982
  - (c) Letter to R. C. DeYoung from A. E. Lundvall, Jr., dated October 1, 1982

Gentlemen:

IE Bulletin 82-02 established requirements for implementation of Maintenance Procedures, Inspections and Reports of examination results concerning certain Reactor Coolant Pressure Boundary Threaded Fasteners. Threaded fasteners at Calvert Cliffs which were addressed in the Bulletin included those in (1) Pressurizer and Steam Generator Manway Closures, (2) Valve bonnets, and pump flange connections on lines six inches or greater nominal pipe size. Reference (c) stated our intent to implement the Regulatory Guide 1.65 exclusion allowance for reactor vessel closure studs contained in IE Bulletin 82-02. This letter's purpose is to complete Action Item 4 of the IE Bulletin 82-02 for those fasteners examined during Calvert Cliffs Unit 2 1982-83 refueling outage.

As required by Action Item 1 Calvert Cliffs Administrative and Maintenance Procedures have been reviewed and updated where necessary to insure training of proper bolting/stud practices, detensioning and retensioning practices and gasket installation and controls.

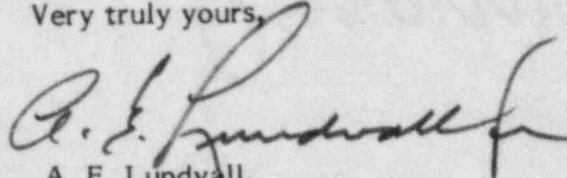
Action Item 2 of Reference (a) requires that whenever those connections identified in the scope of the Bulletin are opened for inspection or maintenance the threaded fasteners shall be removed (unless "sized" or interference fit), cleaned and inspected per

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IWA-2210 and IWA-2200 of ASME Code Section XI. The component connections examined per Action Item 2 for the Unit 2 Cycle 5 refueling outage included: 1) 21 and 22 steam generator primary manways; 2) four (4) safety injection check valve bearing covers (2-SI-215, 2-SI-225, 2-SI-235 and 2-SI-245). The visual and surface exams performed revealed that a number of steam generator studs were pitted severely enough to cause concern of thread galling upon reinstallation. (These studs were not reused). The safety injection check valve bearing cover studs showed no signs of degradation. Complete descriptions of the examinations performed and the results are included in Enclosure (1).

Should you have further questions regarding this report, please do not hesitate to contact us.

Very truly yours,



A. E. Lundvall,  
Vice President - Supply

AEL/KMH/LOW/sjb

Enclosures

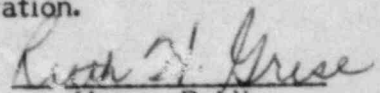
cc: J. A. Biddison, Esquire  
G. F. Trowbridge, Esquire  
D. H. Jaffe, NRC  
R. E. Architzel, NRC

STATE OF MARYLAND :  
: TO WIT:  
CITY OF BALTIMORE :

Author E. Lundvall, Jr., being duly sworn states that he is Vice President of the Baltimore Gas and Electric Company, a corporation of the State of Maryland; that he provides the foregoing response for the purposes therein set forth; that the statements made are true and correct to the best of his knowledge, information, and belief; and that he was authorized to provide the response on behalf of said Corporation.

WITNESS my Hand and Notarial Seal:

My Commission Expires



Notary Public  
July 1, 1986

ENCLOSURE (1)

RCPB THREADED FASTENER EXAMINATION

<u>Unit</u>	<u>Date</u>	<u>Component</u>
Unit 2	December 1982	21 Steam Generator Manways
Unit 2	December 1982	22 Steam Generator Manways

Technical Data

Stud Dimensions:	1 1/2" - 8 UN x 10 1/2"
Stud Material:	ASTM A-540 GR. B 24 CL. 3 Phosphate Coated
Lubricant:	Neolube
Gasket Material:	Flexitallic Type 304 SS and Asbestos, 200 PPM CI Maximum

Examination Procedures

NDE 5.704 Rev. 0	Visual Examination of Nuclear Reactor Components
NDE 5.104 Rev. 1	Magnetic Particle Examination of Ferromagnetic Material

Examination Summary

The 80 manway studs were removed for completion of the examinations. The visual and magnetic particle exams showed that 61 of the 80 studs had either indications of pitting or thread damage (incurred during removal). These 61 studs were not reused for fear they would cause thread galling upon reinstallation. No indications of erosion or cracking were found.



## RCPB THREADED FASTENER EXAMINATION

<u>Unit</u>	<u>Date</u>	<u>Component</u>
Unit 2	December 1982	2-SI-215; 12" Atwood & Morrill Swing Check Valve

### Technical Data

Bearing Cover Stud Dimensions:	7/8" - 9 UNC x 3" (Fully Threaded)
Bearing Cover Stud Material:	ASTM A-453 GR. 66
	Chrome Plated Threads
Lubricant:	Felpro N-5000
Bearing Cover Gasket Material:	Flexitallic Type 304 SS and Asbestos, 200 PPM CI Maximum

### Examination Procedures

NDE 5.201 Rev. 2	Water washable liquid penetrant examination of ferrous and nonferrous materials
NDE 5.701 Rev. 3	Visual examination of valves

### Examination Summary

The sixteen bearing cover studs were removed for the completion of the examinations. No indications of stud degradation were found.

## RCPB THREADED FASTENER EXAMINATION

<u>Unit</u>	<u>Date</u>	<u>Component</u>
Unit 2	December 1982	2-SI-225; 12" Atwood & Morrill Swing Check Valve

### Technical Data

Bearing Cover Stud Dimensions:	7/8" - 9 UNC x 3" (Fully Threaded)
Bearing Cover Stud Material:	ASTM A-453 GR. 66
	Chrome Plated Threads
Lubricant:	Felpro N-5000
Bearing Cover Gasket Material:	Flexitallic Type 304 SS and Asbestos, 200 PPM CI Maximum

### Examination Procedures

NDE 5.201 Rev. 2	Water washable liquid penetrant examination of ferrous and nonferrous materials
NDE 5.701 Rev. 3	Visual examination of valves

### Examination Summary

The sixteen bearing cover studs were removed for the completion of the examinations. No indications of stud degradation were found.

## RCPB THREADED FASTENER EXAMINATION

<u>Unit</u>	<u>Date</u>	<u>Component</u>
Unit 2	December 1982	2-SI-245; 12" Atwood & Morrill Swing Check Valve

### Technical Data

Bearing Cover Stud Dimensions:	7/8" - 9 UNC x 3" (Fully Threaded)
Bearing Cover Stud Material:	ASTM A-453 GR. 66
	Chrome Plated Threads
Lubricant:	Felpro N-5000
Bearing Cover Gasket Material:	Flexitallic Type 304 SS and Asbestos, 200 PPM CI Maximum

### Examination Procedures

NDE 5.201 Rev. 2	Water washable liquid penetrant examination of ferrous and nonferrous materials
NDE 5.701 Rev. 3	Visual examination of valves

### Examination Summary

The sixteen bearing cover studs were removed for the completion of the examinations. No indications of stud degradation were found.

## RCPB THREADED FASTENER EXAMINATION

<u>Unit</u>	<u>Date</u>	<u>Component</u>
Unit 2	December 1982	2-SI-235; 12" Atwood & Morrill Swing Check Valve

### Technical Data

Bearing Cover Stud Dimensions:	7/8" - 9 UNC x 3" (Fully Threaded)
Bearing Cover Stud Material:	ASTM A-453 GR. 66
	Chrome Plated Threads
Lubricant:	Felpro N-5000
Bearing Cover Gasket Material:	Flexitallic Type 304 SS and Asbestos, 200 PPM CI Maximum

### Examination Procedures

NDE 5.201 Rev. 2	Water washable liquid penetrant examination of ferrous and nonferrous materials
NDE 5.701 Rev. 3	Visual examination of valves

### Examination Summary

The sixteen bearing cover studs were removed for the completion of the examinations. No indications of stud degradation were found.