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ARTHUR E. LUNDVALL, JR.
VICE PRESIDENT
SUPPLY

March 30, 1984

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

ATTENTION: Mr. Thomas E. Murley
Regional Administrator

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit No. 1, Docket No. 50-317
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 Primary 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 1 1983 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.

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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 "seized" or interference fit), cleaned, and inspected per IWA-2210 and IWA-2200 of ASME Code Section XI. The component connections examined per Action Item 2 for the Unit 1 Cycle 7 refueling outage included: 1) #11 and #12 steam generator primary manways; 2) nine safety injection check valve bearing covers (1-SI-215, 1-SI-225, 1-SI-235, 1-SI-245, 1-SI-118, 1-SI-128, 1-SI-138, 1-SI-148, and 1-SI-227). The visual and surface examinations performed on the steam generator manway studs and 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).

It is our understanding that this transmittal completes the required written response requested under all actions items associated with IEB 82-02.

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

Very truly yours,

A. E. Lundvall Jr.

AEL/KMH/gla

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 :

Arthur 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: Minnie L. Robinson
Notary Public

My Commission Expires: July 1, 1986

bcc: J. A. Tiernan
R. M. Douglass
L. B. Russell
R. E. Denton
R. C. L. Olson
D. W. Latham
S. M. Davis
M. J. Miernicki
R. P. Sheranko
J. R. Lemons
K. M. Hoffman
K. M. Romney
File

ENCLOSURE (1)

REACTOR COOLANT PRESSURE BOUNDARY THREADED FASTENER EXAMINATION

UNIT	DATE	COMPONENT
Unit 1	October 1983	11 Steam Generator Manways
Unit 1	October 1983	12 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:	Felpro N-5000
Gasket Material:	Flexitallic Type 304 SS and Asbestos, 200 PPM Cl Maximum

EXAMINATION PROCEDURES

NDE 5.704	Rev. 0	Visual Examination of Nuclear Reactor Components
NDE 5.100	Rev. 5	Magnetic Particle Examination of Ferromagnetic Bolts or Studs

EXAMINATION SUMMARY

The 80 manway studs were removed for completion of the examinations. No indications of erosion or cracking were found.

ENCLOSURE (1)

REACTOR COOLANT PRESSURE BOUNDARY THREADED FASTENER EXAMINATION

UNIT	DATE	COMPONENT
Unit 1	November 1983	1-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 Cl Maximum

EXAMINATION PROCEDURES

NDE 5.201	Rev. 3	Water washable liquid penetrant examination of ferrous and nonferrous materials
NDE 5.701	Rev. 4	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.

ENCLOSURE (1)

REACTOR COOLANT PRESSURE BOUNDARY
THREADED FASTENER EXAMINATION

UNIT	DATE	COMPONENT
Unit 1	October 1983	1-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. 660 Chrome Plated Threads
Lubricant:	Felpro N-5000
Bearing Cover Gasket Material:	Flexitallic Type 304 SS and Asbestos, 200 PPM Cl Maximum

EXAMINATION PROCEDURES

NDE 5.201	Rev. 3	Water washable liquid penetrant examination of ferrous and nonferrous materials
NDE 5.701	Rev. 4	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.

ENCLOSURE (1)

REACTOR COOLANT PRESSURE BOUNDARY THREADED FASTENER EXAMINATION

UNIT	DATE	COMPONENT
Unit 1	November 1983	1-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 Cl Maximum

EXAMINATION PROCEDURES

NDE 5.201	Rev. 3	Water washable liquid penetrant examination of ferrous and nonferrous materials
NDE 5.701	Rev. 4	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.

ENCLOSURE (1)

REACTOR COOLANT PRESSURE BOUNDARY THREADED FASTENER EXAMINATION

UNIT	DATE	COMPONENT
Unit 1	October 1983	1-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 Cl Maximum

EXAMINATION PROCEDURES

NDE 5.201	Rev. 3	Water washable liquid penetrant examination of ferrous and nonferrous materials
NDE 5.701	Rev. 4	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.

ENCLOSURE (1)

REACTOR COOLANT PRESSURE BOUNDARY THREADED FASTENER EXAMINATION

UNIT	DATE	COMPONENT
Unit 1	November 1983	1-SI-227; 12" Velan Swing Check Valve

TECHNICAL DATA

Cover Stud Dimensions:	1 7/8"-8UN x 3 1/4"
Cover Stud Material:	ASTM A-193 GR.B7 Phosophaste Coated
Lubricant:	Felpro N-1000
Cover Gasket Material:	Flexitallic Type 316 SS and Asbestos, 200 PPM Cl maximum

EXAMINATION PROCEDURES

NDE 5.701	Rev. 4	Visual Examination of Valves
NDE 5.100	Rev. 5	Magnetic Particle Examination of Ferromagnetic Bolts or Studs

EXAMINATION SUMMARY

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

ENCLOSURE (1)

REACTOR COOLANT PRESSURE BOUNDARY
THREADED FASTENER EXAMINATION

UNIT	DATE	COMPONENT
Unit 1	November 1983	1-SI-118; 6" Velan Balanced Swing Check Valve

TECHNICAL DATA

Cover Stud Dimensions:	1 1/4"-8UNC x 4 3/4"
Cover Stud Material:	ASTM A-193 GR.B7 Phosophaste Coated
Lubricant:	Felpro N-1000
Cover Gasket Material:	Flexitallic Type 316 SS and Asbestos, 200 PPM Cl maximum
Balance Arm Packing Material:	John Crane 187-I; Inconel wire insert wrapped with asbestos yarn around a core of asbestos impregnated with graphite

EXAMINATION PROCEDURES

NDE 5.701	Rev. 4	Visual Examination of Valves
NDE 5.100	Rev. 5	Magnetic Particle Examination of Ferromagnetic Bolts or Studs

EXAMINATION SUMMARY

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

ENCLOSURE (1)

REACTOR COOLANT PRESSURE BOUNDARY THREADED FASTENER EXAMINATION

UNIT	DATE	COMPONENT
Unit 1	November 1983	1-SI-128; 6" Velan Balanced Swing Check Valve

TECHNICAL DATA

Cover Stud Dimensions:	1 1/4"-8UNC x 4 3/4"
Cover Stud Material:	ASTM A-193 GR.B7 Phosophaste Coated
Lubricant:	Felpro N-1000
Cover Gasket Material:	Flexitallic Type 316 SS and Asbestos, 200 PPM Cl maximum
Balance Arm Packing Material:	John Crane 187-I; Inconel wire insert wrapped with asbestos yarn around a core of asbestos impregnated with graphite

EXAMINATION PROCEDURES

NDE 5.701	Rev. 4	Visual Examination of Valves
NDE 5.100	Rev. 5	Magnetic Particle Examination of Ferromagnetic Bolts or Studs

EXAMINATION SUMMARY

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

ENCLOSURE (1)

REACTOR COOLANT PRESSURE BOUNDARY THREADED FASTENER EXAMINATION

UNIT	DATE	COMPONENT
Unit 1	October 1983	1-SI-138; 6" Velan Balanced Swing Check Valve

TECHNICAL DATA

Cover Stud Dimensions:	1 1/4"-8UNC x 4 3/4"
Cover Stud Material:	ASTM A-193 GR.B7 Phosophaste Coated
Lubricant:	Felpro N-1000
Cover Gasket Material:	Flexitallic Type 316 SS and Asbestos, 200 PPM Cl maximum
Balance Arm Packing Material:	John Crane 187-I; Inconel wire insert wrapped with asbestos yarn around a core of asbestos impregnated with graphite

EXAMINATION PROCEDURES

NDE 5.701	Rev. 4	Visual Examination of Valves
NDE 5.100	Rev. 5	Magnetic Particle Examination of Ferromagnetic Bolts or Studs

EXAMINATION SUMMARY

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

ENCLOSURE (1)

REACTOR COOLANT PRESSURE BOUNDARY THREADED FASTENER EXAMINATION

UNIT	DATE	COMPONENT
Unit 1	October 1983	1-SI-148; 6" Velan Balanced Swing Check Valve

TECHNICAL DATA

Cover Stud Dimensions:	1 1/4"-8UNC x 4 3/4"
Cover Stud Material:	ASTM A-193 GR.B7 Phosophaste Coated
Lubricant:	Felpro N-1000
Cover Gasket Material:	Flexitallic Type 316 SS and Asbestos, 200 PPM Cl maximum
Balance Arm Packing Material:	John Crane 187-I; Inconel wire insert wrapped with asbestos yarn around a core of asbestos impregnated with graphite

EXAMINATION PROCEDURES

NDE 5.701	Rev. 4	Visual Examination of Valves
NDE 5.100	Rev. 5	Magnetic Particle Examination of Ferromagnetic Bolts or Studs

EXAMINATION SUMMARY

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