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U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

Three Mile Island Nuclear Station, Unit 1 (TMI Unit 1)
Facility Operating License No. DPR-50
NRC Docket No. 50-289

Subject: TMI Unit 1 Sixty-Day Response to NRC Bulletin 2003-02, "Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity"

On August 21, 2003, the NRC issued NRC Bulletin 2003-02, "Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity." This bulletin requires the following information be submitted to the NRC within 60 days after plant restart following the next inspection of the reactor pressure vessel lower head penetrations:

> *"a summary of the inspections performed, the extent of the inspections, the methods used, a description of the as-found condition of the lower head, any findings of relevant indications of through-wall leakage, and a summary of the disposition of any findings of boric acid deposits and any corrective actions taken as a result of indications found."*

Pursuant to 10 CFR 50.54, "Conditions of licenses," paragraph (f), Attachment 1 to this letter provides the TMI Unit 1 60-day response. This response is due to the NRC by February 3, 2004.

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Should you have any questions or desire additional information regarding this letter, please contact David J. Distel at (610) 765-5517.

I declare under penalty of perjury that the foregoing is true and correct.

Respectfully,

Executed on 01-22-04

Michael P. Gallagher
Director, Licensing and Regulatory Affairs
AmerGen Energy Company, LLC

Enclosure: Attachment 1, TMI Unit 1 Sixty-Day Response to NRC Bulletin 2003-02

cc: H. J. Miller, Administrator, USNRC Region I
D. M. Kern, USNRC Senior Resident Inspector, TMI Unit 1
D. M. Skay, USNRC Senior Project Manager, TMI Unit 1
File No. 02048

ATTACHMENT 1

Three Mile Island Unit 1

Sixty-Day Response to NRC Bulletin 2003-02

"Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity"

Attachment 1

Three Mile Island Unit 1

Sixty Day Response to NRC Bulletin 2003-02

On August 21, 2003, the NRC issued NRC Bulletin 2003-02, "Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity." This bulletin requires the following information be submitted to the NRC within 60 days of plant restart following the next inspection of the reactor pressure vessel (RPV) lower head penetrations:

> *Within 60 days of plant restart following the next inspection of the RPV lower head penetrations, the subject PWR addressees should submit to the NRC a summary of the inspections performed, the extent of the inspections, the methods used, a description of the as-found condition of the lower head, any findings of relevant indications of through-wall leakage, and a summary of the disposition of any findings of boric acid deposits and any corrective actions taken as a result of indications found.*

Response

Summary of the Inspections Performed, Extent of the Inspections, and Methods Used

A remote visual inspection of the TMI Unit 1 RPV bottom mounted instrumentation (BMI) nozzles (52 total) and RPV lower head was performed during the TMI Unit 1 T1R15 refueling outage (Fall 2003). The inspection, performed by VT-2 qualified personnel, examined the full circumference around each BMI nozzle on the RPV lower head. The inspection was performed in accordance with procedure ER-AP-335-1012, "Visual Examination of PWR Reactor Vessel Head Penetrations." The inspection used remote camera equipment capable of resolving the appropriate detail (i.e., VT character height in accordance with 1992 ASME Boiler and Pressure Vessel Code Section XI, Table IWA-2210-1) at a qualification distance of fifteen (15) feet with the ROV crawler camera and twelve (12) feet with the pedestal camera. The actual distances viewed were considerably less than the qualification distance which gave extremely close views of the BMI nozzle to RPV lower head interface region, thereby ensuring any boric acid leakage would be easily identified.

Description of the As-Found Condition, Findings of Relevant Indications, and Summary of the Disposition of any Findings

The RPV lower head visual inspection identified no evidence of boric acid deposits from the BMI nozzle to RPV lower head interface region. There were boron traces on the bottom vessel surface adjacent to an insulation skirt access hole that would allow fuel transfer canal seal plate leakage in this area. These boron traces were thin semi-transparent deposits with only minor surface rusting along some traces. Transfer canal seal plate leakage had been documented in previous refueling outages. The transfer canal seal plate was replaced with a new permanent seal plate arrangement during the 2001 Refueling Outage (T1R14). The RPV lower head also had some minor surface corrosion in several

areas with no discernable metal loss. These findings were found to be acceptable as there was no indication of bottom mounted instrumentation (BMI) nozzle leakage, no other lower RPV boric acid leakage, and no RPV base metal wastage observed.

Corrective Actions Taken

There were no corrective actions required as a result of indications found as no evidence of RPV boric acid leakage was identified. The area of the RPV lower head that had minor boron staining was manually cleaned using wet cloths and scotch-brite pads. The manual cleaning removed some of the boron stain and a post cleaning video inspection of the area was performed.