AmerGen

A PECO Energy/British Energy Company

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5928-00-20083

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Dear Sir or Madam:

SUBJECT: THREE MILE ISLAND, UNIT 1 (TMI UNIT 1)
OPERATING LICENSE NO. DPR-50
DOCKET NO. 50-289
RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION REGARDING RELIEF FROM ASME BOILER & PRESSURE VESSEL CODE SECTION XI, SUBSECTIONS IWE AND IWL CONTAINMENT INSPECTION REQUIREMENTS

In a letter dated January 28, 2000, AmerGen Energy submitted requests for relief from the ASME Boiler & Pressure Vessel Code, Section XI with regard to the containment inspection requirements of Subsections IWE and IWL. Attached is our response to the NRC's questions that were faxed on February 15, 2000 as discussed in a conference call with the NRC on February 17, 2000.

Very truly yours,

John B. Cotton
Vice President, TMI Unit 1

MRK

Attachment

cc: Administrator, NRC Region I
TMI Senior NRC Resident Inspector
TMI-1 Senior NRC Project Manager
File No. 00032

A047

AmerGen Energy Response to NRC Request for Additional Information Regarding Relief from ASME Boiler & Pressure Vessel Code, Section XI, Subsections IWE and IWL, Containment Inspection Requirements

NRC Question No. 1 (Regarding Relief Request, RR-1):

What is the frequency (or schedule) for implementing Appendix J, Option B (Type B tests) as an alternative to the requirements of Table IWE-2500-1, E-D (VT-3 examinations on seals and gaskets of containment penetrations).

Response to Question No. 1:

The performance-based containment leakage test requirements of Option B of 10 CFR 50, Appendix J, were incorporated into TMI Unit 1 Technical Specifications with the issuance of License Amendment No. 201 on May 27, 1997. Those provisions were implemented in TMI Unit 1 Surveillance Procedure (SP) 1303-11.18, "Reactor Building Local Leak Rate Testing" which was next performed in September and October 1997. The TMI Unit 1 Containment Building Leakage Rate Test Program is documented in Topical Report No. 115, dated October 23, 1997. This includes the plant's approach to reduce the maximum extended test interval for Type B components (seals and gaskets) from 120 months to 60 months to match that used for Type C components (valves). With regard to the testing of penetrations and seals (except containment airlocks), the topical report states that: "Upon successful completion of two consecutive periodic As-Found Type B tests, the Type B test interval may be increased up to a maximum of 60 months." If not eligible for extended testing, the Type B components are on a nominal fuel cycle (approximately 24 month) test interval, except for containment airlocks and the Reactor Building (RB) purge valves, which have nominal 6-month and 3-month test intervals, respectively. For any of the Type B components, whenever a seal or gasket is replaced, the Local Leak Rate Test (LLRT) is performed as part of the post-maintenance testing.

In application of the Maintenance Rule, for any Type B or C test result in excess of administrative limits, SP 1303-11.18 and Administrative Procedure (AP) 1001J, "Technical Specification Surveillance Testing Program," require that a Corrective Action Program (CAP) action be generated specifically for determining the maintenance rule impact. To resolve the CAP, engineering would be assigned to 1) investigate the deficiency and make a determination whether it was a functional failure, and if so whether it was maintenance preventable, and 2) recommend actions to correct the problem and prevent recurrence.

NRC Question No. 2 (Regarding Relief Requests RR3 & RR4):

As an alternative to the requirements of Subsections IWE-2500(g) and IWE-2500(b), the licensee proposed to use the AmerGen Operational Quality Assurance (OQA) Plan to (1) inspect the reapplied paint or coatings on the interior surfaces of the containment liner, and (2) examine the condition of the containment liner base material prior to the application of new paint or coatings. The licensee should provide a brief description of this OQA plan in its relief request.

Response to Question No. 2:

The application of coatings at TMI Unit 1 is considered a special process. Section 6.3 of the OQA plan contains the requirements for special processes to ensure that these activities are accomplished under controlled conditions in accordance with applicable codes, standards, applications criteria, regulatory requirements and commitments. Additionally, Appendix C, Part 2 imposes Regulatory Guide 1.54, "Quality Assurance requirements for Protective Coatings Applied to Water Cooled Nuclear Power Plants," with the stated exceptions.

Visual inspections for IWE are performed in accordance with the NDE/ISI procedure, NDE-VIS-06T, "Visual Examination (VT-1/VT-3) for Subsection IWE class MC/CC Components." This procedure provides inspector certification requirements and the criteria for identification of degraded containment surfaces, including coating defects. The procedure requires that if degradation is found which exceeds the acceptance criteria, the condition is reported under the TMI corrective action system and additional ultrasonic wall thickness measurements would be directed by engineering to characterize the liner prior to recoating the degraded location.

Coating applications required due to IWE visual inspection results are performed in accordance with Maintenance Procedure 1440-Y-5, "Preparation and Painting of Ferrous Metal Surfaces Inside the Reactor building." This procedure meets the requirements of ANSI N101.4 and the requirements of Regulatory Guide 1.54 as described in the OQA Plan. This procedure requires inspection of the surfaces to be coated prior to and between coating applications by Quality Verification (QV) personnel.

NRC Question No. 3 (Regarding Relief Request RR-7):

The staff would like to know how the 50.55a(b)(2)(x)(B) requirements are met when the proposed alternative examination is performed.

Response to Question No. 3:

Visual, VT-3, inspections of the TMI Unit 1 concrete containment in accordance with Subsection IWL were performed by Precision Surveillance Corporation (PSC) certified visual inspectors. Qualification of the visual technique to justify deviating from the lighting and distance requirements of Section XI, Subsection IWL was performed by the PSC Visual Level III inspector and witnessed/approved by the Authorized Nuclear Insurance Inspector (ANII). The qualification demonstrated that the inspector could discriminate a .030" wide black line on a white and a gray placard at a measured distance in what was considered the worst lighting condition. A white and a gray placard were used to simulate the contrast expected from the range of concrete surfaces to be examined. The lines on the placard were derived from the inspection requirements of IWL-2310(b) and ACI 201.IR-68, "Guide for Making a Condition Survey of Concrete Structures." Different distances were qualified for unaided viewing or with the use of visual aids. Where it was necessary to deviate from the IWL requirement for being within 4 feet of the surface, the inspection was conducted within the qualified line of sight distance, using the same tools as necessary for lighting (flashlight) and vision (binoculars) as specified in the qualification.