



TMI-13-069  
April 17, 2013

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

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

Subject: Submittal of Inspection Plan for Reactor Internals

- References:
- 1) NUREG-1928, "Safety Evaluation Report Related to the License Renewal of Three Mile Island Nuclear Station, Unit 1," dated October 2009
  - 2) Letter from M. D. Jesse (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, "Submittal of Inspection Plan for Reactor Internals," dated April 16, 2012

In the Reference 2 letter, Exelon Generation Company, LLC (Exelon) submitted the inspection plan for the Three Mile Island (TMI), Unit 1 reactor vessel internals ("Inspection Plan for the Three Mile Island Unit 1 Reactor Vessel Internals," ANP-2952, Revision 1, March 2012). This submittal was submitted per License Renewal Commitment No. 36, Item 3 of NUREG-1928, Appendix A:

"The PWR Vessel Internals Program will commit to the following activities:

1. Participate in the industry programs for investigating and managing aging effects on reactor internals.
2. Evaluate and implement the results of the industry programs as applicable to the reactor internals.
3. Upon completion of these programs, but not less than 24 months before entering the period of extended operation, submit an inspection plan for reactor internals to the NRC for review and approval."

The submitted inspection plan was developed in accordance with MRP-227-A, "Materials Reliability Program: Pressurized Water Reactor Internals Inspection and Evaluation Guidelines," dated December 2011. The U.S. Nuclear Regulatory Commission (NRC) Safety Evaluation Report (SER) accepting MRP-227 for use as an Aging Management Program (AMP) for PWR Reactor Vessel Internals identified licensee specific actions to be addressed during its implementation. The TMI, Unit 1 inspection plan was complete; however, it was identified that changes may result during ongoing discussions between the Materials Reliability Program (MRP) and the NRC in resolving the final MRP-227-A inspection and evaluation methodologies. Three new commitments were made in Appendix D of the TMI, Unit 1 inspection plan to address these ongoing discussions.

TMI, Unit 1 has been participating in ongoing industry programs under the Pressurized Water Reactor Owners Group (PWROG) to address the commitments made as a part of the TMI, Unit 1 inspection plan. Accordingly, our response to the commitments contained in the Reference 2 letter is contained below.

Commitment:

1. Applicant/Licensee Action Item 2 (Table D-2 of 77-2952-001), based upon Section 4.2.2 of the NRC Safety Evaluation Report (SER), requires a licensee to identify which Reactor Vessel Internals (RVI) components are within the scope of license renewal. If a licensee identifies additional components within the scope of license renewal that are not currently included in MRP-227-A then the licensee shall propose necessary inspection requirements beyond the requirements of MRP-227-A. Exelon has identified that the RVI vent valve locking device should be further reviewed with MRP-227-A methodology to determine the impact on the RVI Aging Management Program (AMP) and the enclosed plan. TMI is currently working with the Pressurized Water Reactor Owners Group (PWROG) to address the action item. Exelon will submit an update of the PWROG progress in evaluating this item and a schedule for showing when Exelon will submit the results of an evaluation by April 19, 2013.

Response:

The PWROG proposes to accommodate the vent valve locking devices as an existing program within Table 4-7, "B&W plants Existing Programs components," of MRP-227. The vent valve locking devices shall be addressed by ASME Section XI Examination Category B-N-3, per BAW-2248-A. These inspections shall require a VT-3 examination of 100% of accessible surfaces of the vent valve locking devices during each 10-year Inservice Inspection (ISI) interval. TMI, Unit 1 will examine the vent valve locking devices under the ASME Section XI ISI program. This commitment is complete.

Commitment:

2. Applicant/Licensee Action Item 6 (Table D-2 of 77-2952-001), based upon Section 4.2.6 of the SER, requires a licensee to justify the acceptability of certain inaccessible components that Table 4-4 of MRP-227-A identifies as expansion components. The SER action requires that a licensee submit an analysis of the acceptability of these components for continued service or a schedule for replacement of the subject components with the NRC submittal documenting the intent to implement the requirements of MRP-227-A. TMI is currently working with the Pressurized Water Reactor Owners Group (PWROG) to address the action item. Exelon will submit an update of the PWROG progress in evaluating these components and a schedule for showing when Exelon will submit an evaluation for continued service or a schedule for replacement by April 19, 2013.

Response:

The analyses of the inaccessible components identified in Table 4-4 of MRP-227-A are being pursued as TMI, Unit 1 plant specific analyses. As the inaccessible components are defined as expansion components under MRP-227-A, their inspection (analysis) is only required if the primary component inspection does not meet MRP-227-A acceptance criteria contained in Table 5-1. TMI, Unit 1 will either submit a detailed analysis, a replacement schedule, or a justification for some other alternative process within one year of the initial inspection (Fall 2015) of the linked MRP-227-A primary component items, if the inspection results in indications beyond the threshold for expansion criteria presented in Table 5-1. This schedule is consistent with current NRC and Industry proposed schedules concerning topical report WCAP-17096-NP, Revision 2.

Commitment:

3. Applicant/Licensee Action Item 7 (Table D-2 of 77-2952-001), based upon Section 4.2.7 of the SER, requires that the licensee develop plant-specific analyses to demonstrate that there is not a loss of functionality of the Incore Monitoring Instrumentation (IMI) guide tube assembly spiders and Control Rod Guide Tube (CRGT) spacer castings due to loss of fracture toughness. TMI is currently working with the PWROG to address the action item. Exelon will submit an update of the PWROG progress in evaluating these components and a schedule for showing when Exelon will submit an evaluation for continued service or a schedule for replacement by April 19, 2013.

Response:

The analysis and evaluation of the Control Rod Guide Tube (CRGT) Spacer Castings is in progress with the PWROG, with an estimated completion date of December 31, 2013. The Incore Monitoring Instrumentation (IMI) Spider Castings evaluation will be pursued as a TMI, Unit 1 plant specific analysis and evaluation, separate from the CRGT Spacer Casting analyses being performed by the PWROG. TMI will submit the CRGT Spacer Castings and IMI Spider Castings evaluations to the NRC by October 30, 2014, which is approximately one year prior to the inspection outage (2015).

If you have any questions concerning this letter, please contact Tom Loomis at (610) 765-5510.

Respectfully,



David P. Helker  
Manager - Licensing  
Exelon Generation Company, LLC

Submittal of Inspection Plan for Reactor Internals  
April 17, 2013  
Page 4

Attachment: Summary of Commitments

cc: Regional Administrator, Region I, USNRC  
USNRC Senior Resident Inspector, TMI  
USNRC Project Manager, [TMI] USNRC

**Attachment 1**

**Summary of Commitments**

### Summary of Commitments

The following table identifies commitments made in this document. (Any other actions discussed in the submittal represent intended or planned actions. They are described to the NRC for the NRC's information and are not regulatory commitments.)

COMMITMENT	COMMITTED DATE OR "OUTAGE"	COMMITMENT TYPE	
		ONE-TIME ACTION (Yes/No)	Programmatic (Yes/No)
<p>The analyses of the inaccessible components identified in Table 4-4 of MRP-227-A are being pursued as TMI, Unit 1 plant specific analyses. As the inaccessible components are defined as expansion components under MRP-227-A, their inspection (analysis) is only required if the primary component inspection does not meet MRP-227-A acceptance criteria contained in Table 5-1. TMI, Unit 1 will either submit a detailed analysis, a replacement schedule, or a justification for some other alternative process within one year of the initial inspection (Fall 2015) of the linked MRP-227-A primary component items, if the inspection results in indications beyond the threshold for expansion criteria presented in Table 5-1. This schedule is consistent with current NRC and Industry proposed schedules concerning topical report WCAP-17096-NP, Revision 2.</p>	<p>December 15, 2016</p>	<p>No</p>	<p>Yes</p>

COMMITMENT	COMMITTED DATE OR "OUTAGE"	COMMITMENT TYPE	
		ONE-TIME ACTION (Yes/No)	Programmatic (Yes/No)
<p>The analysis and evaluation of the Control Rod Guide Tube (CRGT) Spacer Castings is in progress with the PWROG, with an estimated completion date of December 31, 2013. The Incore Monitoring Instrumentation (IMI) Spider Castings evaluation will be pursued as a TMI, Unit 1 plant specific analysis and evaluation, separate from the CRGT Spacer Casting analyses being performed by the PWROG. TMI will submit the CRGT Spacer Castings and IMI Spider Castings evaluations to the NRC by October 30, 2014, which is approximately one year prior to the inspection outage (2015).</p>	October 30, 2014	Yes	No