



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

December 20, 2010

Mr. Michael J. Pacilio  
President and Chief Nuclear Officer  
Exelon Nuclear  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: THREE MILE ISLAND NUCLEAR STATION, UNIT 1 - REQUEST FOR  
ADDITIONAL INFORMATION REGARDING FOURTH INSERVICE INSPECTION  
INTERVAL RELIEF REQUESTS I4R-02 AND I4R-04 (TAC NOS. ME4519 AND  
ME4521)

Dear Mr. Pacilio:

By letter dated August 10, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML102290162), Exelon Generation Company, LLC submitted a set of relief requests for Three Mile Island Nuclear Station, Unit 1 (TMI-1). The relief requests are all associated with the fourth Inservice Inspection (ISI) interval at TMI-1. The U.S. Nuclear Regulatory Commission (NRC) staff has been reviewing the submittal and has determined that additional information is needed to complete its review. This information request relates to Relief Requests I4R-02, "Request for Relief for Alternate Risk-Informed Selection and Examination Criteria for Examination Category B-F, B-J, C-F-1, and C-F-2 Pressure Retaining Piping Welds," and I4R-04, "Request for Relief for ISI Snubbers Included in the Technical Specifications Snubber Visual Examination and Functional Testing Program."

The NRC staff has been reviewing the response and has determined that additional information is needed to complete its review. The specific questions are found in the enclosed request for additional information (RAI). The questions were sent via electronic transmission on December 1, 2010, and on December 8, 2010, to Mr. Thomas Loomis, of your staff. The draft questions were sent to ensure that the questions were understandable, the regulatory basis for the questions was clear, and to determine if the information was previously docketed. The draft questions were discussed in a teleconference with your staff on December 14, 2010, and a minor edit was made to RAI number 1, regarding Relief Request I4R-02. It was agreed that a response to this RAI would be submitted by January 28, 2011.

Please contact me at 301-415-2833, if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Peter Bamford".

Peter Bamford, Project Manager  
Plant Licensing Branch I-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-289

Enclosure: As stated

cc: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION  
THREE MILE ISLAND NUCLEAR STATION, UNIT 1  
RELIEF REQUESTS ASSOCIATED WITH THE  
FOURTH INSERVICE INSPECTION INTERVAL  
RELIEF REQUESTS I4R-02 AND I4R-04  
DOCKET NO. 50-289

By letter dated August 10, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML102290162), Exelon Generation Company, LLC submitted a set of relief requests for Three Mile Island Nuclear Station, Unit 1 (TMI-1). The relief requests are all associated with the fourth Inservice Inspection (ISI) interval at TMI-1. The U.S. Nuclear Regulatory Commission (NRC) staff has been reviewing the submittal and has determined that additional information is needed to complete its review. This information request relates to Relief Requests I4R-02, "Request for Relief for Alternate Risk-Informed Selection and Examination Criteria for Examination Category B-F, B-J, C-F-1, and C-F-2 Pressure Retaining Piping Welds," and I4R-04, "Request for Relief for ISI Snubbers Included in the Technical Specifications Snubber Visual Examination and Functional Testing Program."

Relief Request I4R-02

1. The relief request includes the following paragraph:

The Risk Impact Assessment completed as part of the original baseline [Risk-Informed Inservice Inspection] RISI Program was an implementation/transition check on the initial impact of converting from a traditional [American Society of Mechanical Engineers] ASME Section XI program to the new RISI methodology. For the fourth interval ISI update, there is no transition occurring between two different methodologies, but rather, the currently approved RISI methodology and evaluation will be maintained for the new interval.

The NRC staff does not agree with the implication that, if there is no change in methodology, the change in risk assessment is not part of the living process. Furthermore, the submittal is requesting relief to implement a RISI program instead of an ASME program for the fourth interval, so there is a change from the methodology that would normally be used (i.e., without a relief request). Electrical Power Research Institute Topical Report 112657, Revision B-A, which is cited in the application as the evaluation methodology for the RISI program, requires an evaluation of the change in risk (core damage frequency (CDF) and large early release frequency (LERF)) arising from the proposed change in the ISI program. Please provide an estimate of the potential change in risk between the RISI program proposed for implementation in the fourth interval and the ASME Section XI requirements which existed prior to the implementation of the RISI program.

Enclosure

2. The relief request states:

These portions of the RISI Program have been and will continue to be reevaluated and revised as major revisions of the site Probabilistic Risk Assessment (PRA) occur and modifications to plant configuration are made. The Consequence Evaluation, Degradation Mechanism Assessment, Risk Ranking, Element Selection, and Risk Impact Assessment steps encompass the complete living program process applied under the TMI, Unit 1 RISI Program.

Please provide the date of the last PRA reevaluation and revision that is described above, and a brief description of the results of the reevaluations and revisions undertaken at that date. Specifically, please provide the baseline CDF and the baseline LERF for the most current PRA. In addition, please explain how any modifications to the plant since the date of the last reevaluation and revision may impact the RISI program.

3. Are the inspection locations in the RISI program that have been developed for the fourth 10-year interval the same locations as those in the third interval RISI program approved in the NRC staff's November 12, 2003, safety evaluation (ADAMS Accession No. ML032930264)? If not, please summarize the changes to the program and what caused those changes.
4. If there are changes in the inspection locations for the TMI-1 fourth 10-year interval RISI program, please provide information for the fourth interval program regarding: examinations/system/components/degradation mechanisms/class, etc. similar to that provided in Tables 2, 3 and 4 of the original submittal of the RISI program for the TMI-1 third 10-year ISI interval dated October 1, 2002 (ADAMS Accession No. ML022830211).

Relief Request I4R-04

1. TMI-1 Technical Specification (TS) 4.17.1(e)(2) provides for an optional functional testing of snubbers in accordance with TMI-1 TS Figure 4.17-1. Please verify that: (1) this plan is equivalent to the 37 or 55 testing sample plan of ASME/ANSI [American National Standards Institute] OM Code Part 4, 1987 Edition with OMa-1988 Addendum (OM-4); and (2) explain whether and how the requirement of additional sampling of at least one-half of the size of the initial sample lot as required by OM-4, Section 3.2.3.2(b), will be met while using TMI-1 TS Figure 4.17-1. If the TS requirements do not meet the OM-4 requirements, please explain how the proposed alternative provides an acceptable level of quality and safety.
2. The requested alternative and TMI-1 TS 4.17 do not address the requirements of OM-4, Section 2.3.4.3, "Examination Failure Mode Groups," and Section 3.2.4.2, "Test Failure Mode Groups," related to examination and functional testing of snubbers. Please explain how TMI-1 TS 4.17 meets these requirements or provides an acceptable level of quality and safety.
3. ASME, Section XI, 2004 Edition, Article IWF-5000, Subsections IWF-5200(c) and IWF-5300(c), clearly state that integral and non-integral attachments for snubbers (including lugs, bolting, pins, and clamps), shall be examined in accordance with the requirements of Subsection IWF. Please explain whether and how these requirements will be met. If

they will not be met, please explain how the proposed alternative provides an acceptable level of quality and safety.

4. TMI-1 TS 4.17.1(b), footnote "\*\*\*" states:

The inspection interval for each type of snubber shall not be lengthened more than one step at a time unless a generic problem has been identified and corrected; in that event the inspection interval may be lengthened one step the first time and two steps thereafter if no inoperable snubbers of that type are found.

OM-4, Section 2.3.2.3, "Subsequent Examination Schedule Adjustment," states that the time to subsequent examination shall not be lengthened more than one increment at a time. Please explain why the inspection intervals described in TMI-1 TS 4.17.1(b) are acceptable in lieu of the examination schedule requirement noted in OM-4, Section 2.3.2.3.

5. In TMI-1 TS 4.17.1(e), "Functional Tests", the footnote "\*" states:

The four 555,000 lb reactor coolant pump snubbers are not included. The functional test program for reactor coolant pump snubbers is implemented in accordance with the schedule and other requirements of the snubber testing program.

Please provide details on how the reactor coolant pump snubbers will be tested as compared to the OM-4 requirements.

December 20, 2010

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President and Chief Nuclear Officer  
Exelon Nuclear  
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Warrenville, IL 60555

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Please contact me at 301-415-2833, if you have any questions.

Sincerely,  
*/ra/*  
Peter Bamford, Project Manager  
Plant Licensing Branch I-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-289

Enclosure: As stated  
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ADAMS Accession Number: ML103400158

\*concurrence via email

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DATE	12/14/2010	12/14/10	11/26/2010	11/30/2010	12/09/2010	12/20/10

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