



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

February 28, 2011

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 RELIEF REQUEST RR-10-02,
WELD OVERLAY OF THE PRESSURIZER SPRAY NOZZLE TO SAFE-END
AND SAFE-END TO ELBOW DISSIMILAR METAL WELDS (TAC NO. ME4795)

Dear Mr. Pacilio:

By letter dated September 30, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML102740532), Exelon Generation Company, LLC (Exelon, the licensee) submitted a relief request proposing to perform a weld overlay of the pressurizer spray nozzle to safe-end and safe-end to elbow dissimilar metal welds.

The Nuclear Regulatory Commission staff has been reviewing the request and has determined that additional information is needed to complete its review. The specific information is found in the enclosed request for additional information (RAI). The RAI was sent via electronic transmission on February 3, 2011, to Mr. Thomas Loomis, of your staff. The draft RAI was sent to ensure that it was understandable, the regulatory basis was clear, and to determine if the information was previously docketed. The draft RAI was discussed in a teleconference with your staff on February 15, 2011. It was agreed that a response to item 1 in the enclosed RAI would be submitted by April 28, 2011, and a response to items 2-4 would be submitted by March 15, 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 w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

THREE MILE ISLAND NUCLEAR STATION, UNIT 1

RELIEF REQUEST CONCERNING THE WELD OVERLAY OF THE PRESSURIZER

SPRAY NOZZLE TO SAFE-END AND SAFE-END TO ELBOW DISSIMILAR METAL WELDS

RELIEF REQUEST RR-10-02

DOCKET NO. 50-289

By letter dated September 30, 2010 (Agencywide Documents Access and Management System Accession No. ML102740532), Exelon Generation Company, LLC (the licensee) submitted a relief request for Three Mile Island Nuclear Station, Unit 1 (TMI-1). TMI-1 is requesting relief to perform a weld overlay of the pressurizer spray nozzle to safe-end and safe-end to elbow dissimilar metal welds. 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.

1. Section 5 of relief request (RR)-10-02 (page 4, third paragraph) states that the overlay design is currently in development. Please submit the weld overlay design information, including analyses, to demonstrate that the weld overlay design will mitigate the potential for primary water stress-corrosion cracking in the Alloy 82/182 dissimilar metal welds.
2. In section 5 of RR-10-02 (page 4, fourth paragraph) the licensee states that weld preheat and heat input are monitored through the use of calibrated contact pyrometers or thermocouples. Please clarify exactly which instrument, contact pyrometer or thermocouples, will be used. If thermocouples will be used, please identify what steps will be taken to ensure that the temperature reading will be accurate and discuss whether the use of the thermocouples will satisfy subarticles IWA-4610(a) and IWA-4624.1(d) of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, 2004 edition.
3. On page 5 of RR-10-02, the licensee states that it intends to install one or more weld barrier layer(s) to prevent hot cracking in stainless steel materials similar to that installed during the 2007 weld overlays. The staff notes that some licensees have reported cracking in the weld overlay during and after the installation on Alloy 82/182 welds and stainless steel pipes. Please discuss any measures that will be taken to minimize potential cracking in addition to the barrier layer(s).
4. Section 6 of RR-10-02 states that the duration of the proposed alternative associated with the weld overlay is the remaining service life of the components, including future plant life extension. It does not identify any difference in the duration of the proposed alternative between the design of the overlay, and the aspects of the request that relate to subsequent inservice examinations. Examination techniques may be improved in the future beyond what is specified in the relief request. Also, emergent issues could impact what future examination requirements may be appropriate. Therefore, the staff requests

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that the application be changed or clarified such that the examination aspects of the proposed alternative apply only to the fourth 10-year inservice inspection interval. Alternatively, please justify why the proposed duration for future inservice examinations is acceptable.

February 28, 2011

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/ra/
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ADAMS Accession Number: ML110340246 * via email

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DATE	02/18/2011	02/23/2011	02/03/2011	02/28/2011

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