



TMI-15-092
August 25, 2015

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

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

Subject: Response to Request for Additional Information – License Amendment Request Involving Temporary Restoration of Borated Water Storage Tank Cleanup and Recirculation Operation

- References:
1. Letter from James Barstow (Exelon Generation Company, LLC) to U.S. NRC, License Amendment Request – "Temporary Restoration of Borated Water Storage Tank Cleanup and Recirculation Operation," dated July 23, 2015
 2. Letter from David P. Helker (Exelon Generation Company, LLC) to U.S. NRC, Supplement to License Amendment Request – "Temporary Restoration of Borated Water Storage Tank Cleanup and Recirculation Operation," dated July 28, 2015
 3. Electronic mail message from Robert Gladney, U.S. Nuclear Regulatory Commission, to David P. Helker, Exelon Generation Company, LLC, "Draft RAI (STSB) - TMI License Amendment Request Regarding the Borated Water Storage Tank (BWST)," dated August 17, 2015 (TAC No. MF6504) (Reference ADAMS Accession No. ML15230A533)

In the Reference 1 letter, Exelon Generation Company, LLC (Exelon), requested changes to the Technical Specifications (TS) of Renewed Facility Operating License No. DPR-50 for Three Mile Island Nuclear Station, Unit 1. The Reference 2 letter provided supplemental information. The proposed amendment would modify Technical Specification (TS) 3.3.1.1, Injection Systems, by the addition of two Notes to allow for the temporary operation of the Borated Water Storage Tank (BWST) connected to seismic Class II piping cleanup and recirculation paths to support activities associated with the TMI Fall 2015 Refueling Outage and Fuel Cycle 21 operation.

The NRC reviewed the license amendment request and identified the need for additional information in order to complete its evaluation of the amendment request. The draft request for additional information (RAI) was sent from the NRC to Exelon by electronic mail message on August 17, 2015 (Reference 3).

Attachment 1 provides the response to the draft RAI.

Attachment 2 contains revised marked-up TS Page 3-21 for this license amendment request. No other changes are being made to the material submitted in References 1 and 2.

Exelon has determined that the information provided in this response does not impact the conclusions of the No Significant Hazards Consideration or Environmental Consideration previously provided.

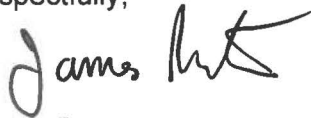
There are no regulatory commitments contained in this submittal.

In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), Exelon is notifying the Commonwealth of Pennsylvania of this response by transmitting a copy of this letter and its attachments to the designated State Official.

Should you have any questions concerning this letter, please contact Frank Mascitelli at (610) 765-5512.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 25th day of August 2015.

Respectfully,



James Barstow
Director - Licensing and Regulatory Affairs
Exelon Generation Company, LLC

Attachments: 1. Response to Request for Additional Information
2. Proposed Technical Specification Marked-Up Page 3-21 - Revised

cc: USNRC Region I, Regional Administrator
USNRC Project Manager, TMI, Unit 1
USNRC Senior Resident Inspector, TMI, Unit 1
Director, Bureau of Radiation Protection, PA Department of Environmental
Resources
Chairman, Board of County Commissioners, Dauphin County, PA
Chairman, Board of Supervisors, Londonderry Township, PA
R. R. Janati, Commonwealth of Pennsylvania

Attachment 1

Three Mile Island Nuclear Station, Unit 1

**License Amendment Request Involving
Temporary Restoration of Borated Water Storage Tank
Cleanup and Recirculation Operation**

Response to Request for Additional Information

By letter dated July 23, 2015, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15204A843), as supplemented by letter dated July 28, 2015, (ADAMS No. ML15209A960), Exelon Generation Company, LLC (Exelon) requested an amendment to Facility Operating License No. DPR-50 for Three Mile Island Nuclear Station, Unit 1. The proposed amendment would modify technical specification (TS) requirements to allow for the temporary connection of the Borated Water Storage Tank (BWST) to non-seismic piping for cleanup and recirculation to support activities associated with the TMI-1 Fall 2015 Refueling Outage and Fuel Cycle 21 operation.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed your application and, based upon this review, determined that further information is needed to complete our evaluation of the proposed change. The following request for additional information (RAI) is from the Technical Specifications Branch (STSB).

STSB-RAI-1

As part of the license amendment request (LAR), the licensee proposed the addition of the following two notes to Technical Specification (TS) 3.3.1.1(a):

1. *The BWST piping may be unisolated from seismic Class II Cleanup path piping for a total duration of not more than 720 hours prior to the scheduled start of the Fall 2015 Refueling Outage and for a total duration of not more than 1440 hours during the following Fuel Cycle 21 operation under administrative and design controls for filtration and/or demineralization of the tank contents.*
2. *The BWST piping may be unisolated from seismic Class II Recirculation path piping to perform weekly (and after each makeup) BWST boron concentration surveillance testing until the end of Fuel Cycle 21 operation.*

The proposed notes would allow the licensee to connect the BWST to seismic Class II piping when it is required to be operable in accordance with TSs through Fuel Cycle 21. The two circumstances when this physical configuration will be implemented include cleanup and surveillance operations. The first note provides a cumulative time the system will be maintained in a cleanup configuration, and it states that the cleanup operation will be performed under administrative and design controls. In contrast, the second note pertaining to surveillance testing does not provide a time constraint, and it does not identify the administrative and design controls as being required.

Requests for Additional Information

1. The LAR states that approximately 30 hours per week of surveillance testing will be performed, but a time constraint is not identified in the associated note [i.e., the second note that will be added to TS 3.3.1.1(a)]. Revise this note to include a time constraint (e.g., cumulative time or time required to perform the surveillance testing) or justify why a time limit is unnecessary.

Response:

Exelon has revised the proposed Note 2 to include a time constraint. The phrase "for not more than 30 hours per week" has been added to the Note. The revised Note 2 is shown in Attachment 2.

2. The LAR states that surveillance testing will be performed under administrative and design controls, but this language is not reflected in the associated note [i.e., the second note that will be added to TS 3.3.1.1(a)]. Revise this note to include the language that the surveillance testing configuration will be performed under administrative and design controls or justify why this language is unnecessary.

Response:

Exelon has revised the proposed Note 2 to include the requested language. The phrase "under administrative and design controls" has been added to the Note. The revised Note 2 is shown in Attachment 2.

Attachment 2

Three Mile Island Nuclear Station, Unit 1

Proposed Technical Specification Marked-Up Page 3-21 - Revised

NOTES:

1. The BWST piping may be unisolated from seismic Class II Cleanup path piping for a total duration of not more than 720 hours prior to the scheduled start of the Fall 2015 Refueling Outage and for a total duration of not more than 1440 hours during the following Fuel Cycle 21 operation under administrative and design controls for filtration and/or demineralization of the tank contents.
2. The BWST piping may be unisolated from seismic Class II Recirculation path piping for not more than 30 hours per week to perform weekly (and after each makeup) BWST boron concentration surveillance testing under administrative and design controls until the end of Fuel Cycle 21 operation.

3.3 EMERGENCY CORE COOLING, REACTOR BUILDING EMERGENCY COOLING AND REACTOR BUILDING SPRAY SYSTEMS

Applicability

Applies to the operating status of the emergency core cooling, reactor building emergency cooling, and reactor building spray systems.

Objective

To define the conditions necessary to assure immediate availability of the emergency core cooling, reactor building emergency cooling and reactor building spray systems.

Specification

3.3.1 The reactor shall not be made critical unless the following conditions are met:

3.3.1.1 Injection Systems

- a. The borated water storage tank (BWST) shall contain a minimum of 350,000 gallons of water having a minimum concentration of 2,500 ppm boron at a temperature not less than 40°F. If the boron concentration or water temperature is not within limits, restore the BWST to OPERABLE within 8 hrs. If the BWST volume is not within limits, restore the BWST to OPERABLE within one hour. Specification 3.0.1 applies.
- b. Two Makeup and Purification (MU)/High Pressure Injection (HPI) pumps are OPERABLE in the engineered safeguards mode powered from independent essential buses. Specification 3.0.1 applies.
- c. Two decay heat removal pumps are OPERABLE. Specification 3.0.1 applies.
- d. Two decay heat removal coolers and their cooling water supplies are OPERABLE. (See Specification 3.3.1.4) Specification 3.0.1 applies.
- e. Two BWST level instrument channels are OPERABLE.
- f. The two reactor building sump isolation valves (DH-V-6A/B) shall be remote-manually OPERABLE. Specification 3.0.1 applies.
- g. MU Tank (MUT) pressure and level shall be maintained within the Unrestricted Operating Region of Figure 3.3-1.
 - 1) With MUT conditions outside of the Unrestricted Operating Region of Figure 3.3-1, restore MUT pressure and level to within the Unrestricted Operating Region within 72 hrs. Specification 3.0.1 applies.
 - 2) Operation with MUT conditions within the Prohibited Region of Figure 3.3-1 is prohibited. Specification 3.0.1 applies.

3.3.1.2 Core Flooding System

- a. Two core flooding tanks (CFTs) each containing $940 \pm 30 \text{ ft}^3$ of borated water at $600 \pm 25 \text{ psig}$ shall be available. Specification 3.0.1 applies.