



**Michael P. Gallagher**  
Exelon Nuclear  
Vice President  
License Renewal and Decommissioning

200 Exelon Way  
Kennett Square, PA 19348

610 765 5958 Office  
610 765 5658 Fax  
[www.exeloncorp.com](http://www.exeloncorp.com)  
[michaelp.gallagher@exeloncorp.com](mailto:michaelp.gallagher@exeloncorp.com)

10 CFR 50.90  
10 CFR 50.54(q)

TM-18-081

August 13, 2018

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

Three Mile Island Nuclear Station, Unit 2  
Possession Only License No. DPR-73  
NRC Docket No. 50-320

**Subject:** Response to Request for Additional Information (RAI) and Supplemental Information Regarding License Amendment Request - Proposed Changes to the Three Mile Island Emergency Plan for Post-Shutdown and Permanently Defueled Condition

**Reference:**

- 1) Letter from Michael P. Gallagher (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – *"License Amendment Request - Proposed Changes to the Three Mile Island Emergency Plan for Post-Shutdown and Permanently Defueled Condition,"* dated March 19, 2018, TM-18-038 (ML18078A578)
- 2) U.S. Nuclear Regulatory Commission Electronic Mail Request to Paul Bonnett (Exelon Generation Company, LLC) – *"Draft - Request for Additional Information Regarding Decommissioning ERO Staffing Amendment Request,"* dated July 24, 2018
- 3) U.S. Nuclear Regulatory Commission Electronic Mail Request to Paul Bonnett (Exelon Generation Company, LLC) – *"Request for Additional Information Related to Amendment Regarding Decommissioning ERO Staffing Changes (L-208-LLA-0073),"* dated July 31, 2018 (ML18212A271)

By letter dated March 19, 2018 (Reference 1), Exelon Generation Company, LLC (Exelon) submitted a License Amendment Request (LAR) for changes to the emergency plan for the Three Mile Island Nuclear Station (TMI). The proposed amendment would revise the site emergency plan (SEP) to change the staffing for certain emergency response organization (ERO) positions for the post shutdown and permanently defueled condition.

TMI, Unit 2, has a possession only license and is currently maintained in accordance with the U. S. Nuclear Regulatory Commission (NRC) approved SAFSTOR condition (method in which a nuclear facility is placed and maintained in a condition that allows it to be safely stored and subsequently de-contaminated) known as Post-Defueling Monitored Storage. Exelon maintains the emergency planning responsibilities for TMI, Unit 2, which is owned by First Energy Corporation, through a service agreement.

Subsequently, in electronic mail request dated July 24, 2018 (Reference 2), the NRC issued a draft Request for Additional Information (RAI) to ensure that the questions are understandable, the regulatory basis is clear, there is no proprietary information contained in the RAI, and to determine if the information was previously docketed. In a teleconference between Exelon and NRC representatives held on July 25, 2018, Exelon informed the NRC that the questions were understandable and a clarification call with the NRC staff was not necessary. The NRC subsequently issued the formal RAI via electronic mail on July 31, 2018 (Reference 3) with a response due 30-days from the date of the Reference 3 electronic mail request.

Accordingly, Attachment 1 of this letter provides Exelon's response to the NRC's RAI. Exelon is providing information to supplement the LAR in Attachment 2 of this submittal. Attachment 2 provides the added Commitment regarding updating fuel handling procedures prior to implementing the Post Shutdown Emergency Plan. The page submitted in Attachment 2 of this letter supersedes in its entirety the corresponding Commitment page in Reference 1, Attachment 5.

Exelon has reviewed the information supporting a finding of No Significant Hazards Consideration and the Environmental Consideration provided to the NRC in Reference 1. The additional information provided in this submittal does not affect the previously stated bases in Reference 1 for concluding that the proposed license amendment does not involve a significant hazards consideration. In addition, the information provided in this submittal does not affect the bases for concluding that neither an environmental impact statement nor an environmental assessment needs to be prepared in connection with the proposed amendment.

The proposed changes are being submitted to the NRC for approval prior to implementation, as required under 10 CFR 50.54(q)(4).

If you have any questions concerning this submittal, please contact Paul Bonnett at (610) 765-5264.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 13<sup>th</sup> day of August 2018.

Respectfully,

A handwritten signature in black ink, reading "Michael P. Gallagher". The signature is fluid and cursive, with a long horizontal stroke at the end.

Michael P. Gallagher  
Vice President, License Renewal & Decommissioning  
Exelon Generation Company, LLC

U.S. Nuclear Regulatory Commission  
Response to Request for Additional Information  
and Supplemental Information to TMI License Amendment Request  
Docket Nos. 50-289 and 50-320  
August 13, 2018  
Page 3

Attachments: 1. Response to NRC's Request for Additional Information and Supplemental  
Information  
2. Revised Summary of Regulatory Commitments

cc: w/Attachments

NRC Regional Administrator, Region I  
NRC Senior Resident Inspector – Three Mile Island Nuclear Station – Unit 1  
NRC Project Manager, NRR – Three Mile Island Nuclear Station – Unit 1  
NRC Project Manager, NMSS/DUWP/RDB – Three Mile Island – Unit 2  
Director, Bureau of Radiation Protection - PA Department of Environmental Protection

**Attachment 1**

**Response to NRC's Request for Additional Information and Supplemental Information**

## **SUMMARY**

By letter dated March 19, 2018 (Reference 1), Exelon Generation Company, LLC (Exelon), submitted changes to the emergency plan for the Three Mile Island Nuclear Station (TMI) for U.S. Nuclear Regulatory Commission (NRC) review and prior approval, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.54(q). The proposed changes would revise the emergency plan to change the staffing for certain emergency response organization (ERO) positions, based on receipt by the NRC of certification under 10 CFR 50.82(a)(2) that the TMI, Unit 1, reactor has permanently ceased operations and permanently removed fuel from the reactor vessel. Upon docketing of these certifications, the 10 CFR Part 50 licensee for TMI Unit 1 will no longer authorize operation of the reactor or emplacement or retention of fuel into the reactor vessel.

TMI, Unit 2, has a possession only license and is currently maintained in accordance with the NRC approved SAFSTOR condition (method in which a nuclear facility is placed and maintained in a condition that allows it to be safely stored and subsequently de-contaminated) known as Post-Defueling Monitored Storage. Exelon maintains the emergency planning responsibilities for TMI, Unit 2, which is owned by First Energy Corporation, through a service agreement.

Subsequently, in electronic mail request dated July 24, 2018 (Reference 2), the NRC issued a draft Request for Additional Information (RAI) to ensure that the questions are understandable, the regulatory basis is clear, there is no proprietary information contained in the RAI, and to determine if the information was previously docketed. In a teleconference between Exelon and NRC representatives held on July 25, 2018, Exelon informed the NRC that the questions were understandable and a clarification call with the NRC staff was not necessary. The NRC subsequently issued the formal RAI via electronic mail on July 31, 2018 (Reference 3) with a response due 30-days from the date of the Reference 3 electronic mail request.

Accordingly, this attachment provides Exelon's response to the RAI questions contained in the Reference 3 letter. The specific questions are identified below followed by Exelon's response. Exelon is providing information to supplement the License Amendment Request (LAR) as contained in the Attachments 2 of this submittal. Attachment 2 provides the added Commitment regarding updating fuel handling procedures prior to implementing the Post Shutdown Emergency Plan (PSEP). The page submitted in Attachment 2 supersedes in its entirety the corresponding commitment page in Reference 1, Attachment 5.

## **RESPONSE TO RAI QUESTIONS**

### **TMI-RAI-1**

Section 5.2.4, "Major Functional Area: Radiological Accident Assessment and Support of Operational Accident Assessment, Item e. Major Task: Chemistry," of Attachment 1 (pages 25-26), states, in part:

Plant activities that could potentially cause mechanical damage (i.e., fuel moves in the SFP [spent fuel pool]) will require that the radiation monitor as listed in the gaseous effluent EALs [emergency action levels] be in service or that a Chemistry Technician be onsite, thereby alleviating a potential delay in sample analysis to determine EAL applicability. Applicable fuel handling procedures will be revised to incorporate this as a prerequisite prior to fuel handling activities.

Please provide clarification as to why an equivalent statement was not included in Attachment 5, "Summary of Regulatory Commitments," of the TMI license amendment request to capture this commitment.

### **Exelon Response to TMI-RAI-1**

The proposed change intended to remove the requirement for a chemistry technician to be on shift and to instead require that the chemistry sampling and analysis function be maintained as a collateral duty to someone on shift who has been qualified to perform this function. The removal of the chemistry technician position from on shift was deemed to be acceptable based on (1) there are no time sensitive sample requirements, and (2) that the chemistry sampling and analysis function could be performed by an individual trained and qualified in sampling and analysis.

With the requirement to maintain the chemistry sampling and analysis function on shift, Exelon is revising the statement referenced in TMI-RAI-1 to be as follows:

Plant activities that could potentially cause mechanical damage (i.e., fuel moves in the SFP) will require that the radiation monitor as listed in the gaseous effluent EALs be in service or that ~~a Chemistry Technician~~ **an individual qualified to perform the chemistry sampling and analysis function will** be onsite, thereby alleviating a potential delay in sample analysis to determine EAL applicability. Applicable fuel handling procedures will be revised to incorporate this as a prerequisite prior to fuel handling activities.

Exelon agrees that this constitutes a commitment. The new commitment will be as follows:

Applicable fuel handling procedures will be revised to require that the radiation monitors as listed in the gaseous effluent EALs will be in service or that an individual qualified to perform the chemistry sampling and analysis function will be onsite prior to and during fuel handling activities.

This will be completed prior to implementation of the PSEP. The page containing this commitment is provided in Attachment 2 and supersedes in its entirety the corresponding commitment page in Reference 1, Attachment 5.

### **TMI-RAI-2**

Section 5.2.11, "Major Functional Area: Public Information, Item c. Major Task: Media Monitoring and Rumor Control," of Attachment 1 (page 42), states in part:

The Media Monitoring Staff and Rumor Control Staff is listed in the TMI SEP [site emergency plan] as full augmentation positions that are ***filled on an as needed basis***.

However, in Section 5.3.6, "Joint Information Center (JIC)," of Attachment 1 (page 55), those positions are simply referred to as Non-Minimum Augmented Staff "proposed to be removed from the SEP and will be managed and controlled by EIPs [emergency plan implementing procedures]. The full augmented positions ***will still be assigned to ERO teams, be expected to maintain Fitness-for-Duty during assigned duty weeks and are required to respond to the EOF*** [emergency operations facility] ***at an Alert or higher classification***."

Please clarify which of the above highlighted parameters apply to the Media Monitoring Staff and Rumor Control Staff.

### **Exelon Response to TMI-RAI-2**

The description in Section 5.2.11 requires clarification. Under the TMI Emergency Plan, the Media Monitoring and Rumor Control (MM/RC) Staff are Non-Minimum Full Augmented Staff. Currently, the TMI Emergency Plan, Table 2-1 shows the MM/RC staff as Full Augmentation with a note (c), which states "Personnel numbers depend on the type and extent of the emergency." Exelon implements the task by assigning MM/RC staff to specific ERO teams, vice a pooled resource. As such, TMI's MM/RC personnel are assigned to ERO teams, are expected to maintain Fitness-for-Duty during assigned duty weeks and are required to respond to the EOF at an Alert or higher classification.

As indicated in the LAR, TMI proposes to relocate the description and expectations for these positions, as currently described in the Emergency Plan, to an implementing procedure. Consistent with the current position requirements, the implementing procedures will still identify that the MM/RC personnel will be assigned to ERO teams, expected to maintain Fitness-for-Duty during assigned duty weeks, and required to respond to the EOF at an Alert or higher classification. MM/RC personnel may be added on an as needed basis, depending on the extent of the Emergency condition. Any future changes to these positions as described in the EIPs will be assessed to ensure the effectiveness of the Emergency Plan is maintained.

### **TMI-RAI-3**

Section 5.3.5, "Emergency Operations Center (EOF)," of Attachment 1 (pages 52-54), lists the Regulatory Liaison and Dose Assessor positions as part of the current EOF ERO "Non-Minimum Augmented Staff." However, shortly thereafter the following statement is included:

As stated above the proposed change made the following minimum Staff positions ERO Non-Minimum Augmented Staff:

- Environmental Coordinator
- Regulatory Liaison
- Dose Assessor

The Environmental Coordinator position is included in Table 5.3 (page 54), "Emergency Response Organization EOF Minimum Staffing Positions" as being "Relocated to EPIP as Full Augmentation." The other two positions are not referenced as Minimum Staff in the table.

Please provide additional perspective on, what appears to be, contradictory statements.

### **Exelon Response to TMI-RAI-3**

The description in Section 5.3.5 was incorrect. The statement is revised as follows:

As stated above the proposed change made the following minimum Staff positions ERO Non-Minimum Augmented Staff:

- **EOF Director**
- Environmental Coordinator
- ~~Regulatory Liaison~~ **HPN Communicator**
- ~~Dose Assessor~~ **Logistics Manager**

This is consistent with Table 5.3 (page 54).

**References**

- 1) Letter from Michael P. Gallagher (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – "License Amendment Request - Proposed Changes to the Three Mile Island Emergency Plan for Post-Shutdown and Permanently Defueled Condition," dated March 19, 2018, TM-18-038 (ML18078A578)
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- 3) U.S. Nuclear Regulatory Commission Electronic Mail Request to Paul Bonnett (Exelon Generation Company, LLC) – "*Request for Additional Information Related to Amendment Regarding Decommissioning ERO Staffing Changes*," dated July 31, 2018 (ML18212A271)



**Attachment 2**  
**Revised Summary of Regulatory Commitments**  
*(Replaces Attachment 5 in Proposed LAR)*

**Summary of Regulatory 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)
TMI will perform a drill to confirm the ability of the post-shutdown ERO to perform the necessary functions of each emergency response facility and to utilize the post-shutdown procedures being developed depicting the revised assignment of duties. State and local response organizations will be offered the opportunity to participate, and the NRC and FEMA will be provided advance notice and the opportunity to observe drill activities. In addition, other training drills will be conducted to train post-shutdown station ERO members.	Prior to implementation of the Post-Shutdown Emergency Plan.	Yes	No
Applicable fuel handling procedures will be revised to require that the radiation monitors as listed in the gaseous effluent EALs will be in service or that an individual qualified to perform the chemistry sampling and analysis function will be onsite prior to and during fuel handling activities.	Prior to implementation of the Post-Shutdown Emergency Plan.	No	Yes