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July 10, 2015

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-001

Nine Mile Point Nuclear Station, Unit 2
Renewed Facility Operating License No. NPF-69
NRC Docket No. 50-410

Subject: Response to Request for Additional Information - "Application for Technical Specification Change Regarding Risk-Informed Justification for the Relocation of Specific Surveillance Frequency Requirements to a Licensee Controlled Program (Adoption of TSTF-425, Revision 3)."

- References:
1. Letter from J. Barstow (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, "Application for Technical Specification Change Regarding Risk-Informed Justification for the Relocation of Specific Surveillance Frequency Requirements to a Licensee Controlled Program (Adoption of TSTF-425, Revision 3)," dated November 19, 2014.
 2. Email from Brenda Mozafari (Licensing Project Manager, U.S. Nuclear Regulatory Commission) to Ronnie Reynolds and Enrique Villar (Exelon Generation Company, LLC) "Draft Request for additional information regarding TSTF-425, Rev. 3," dated June 16, 2015.

This letter responds to the U.S. Nuclear Regulatory Commission request for additional information (Reference 2) requesting Exelon Generation Company, LLC (Exelon) provide additional information regarding the License Amendment Request (LAR) to modify the Nine Mile Point Unit 2 (NMP2) Technical Specifications (TS) (Reference 1). The proposed amendment request would modify NMP2 TS by relocating specific surveillance frequencies

to a licensee-controlled program with the implementation of Nuclear Energy Institute (NEI) 04-10, "Risk-Informed Technical Specifications Initiative 5b, Risk-Informed Method for Control of Surveillance Frequencies."

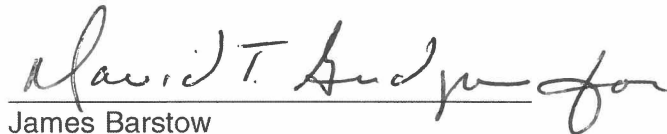
Attachment 1 to this letter contains the NRC's request for additional information immediately followed by Exelon's response.

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 response does not affect the bases for concluding that the proposed license amendment does not involve a significant hazards consideration. Furthermore, the additional information provided in this response 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.

There are no regulatory commitments contained in this letter.

If you should have any questions regarding this submittal, please contact Enrique Villar at 610-765-5736.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 10th day of July 2015.



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

Attachment 1: Response to Request for Additional Information

cc: USNRC Region I Regional Administrator
USNRC Senior Resident Inspector - NMP
USNRC Project Manager, NRR - NMP
A. L. Peterson, NYSEDA

w/attachments

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ATTACHMENT 1

**Response to Request for Additional Information to Support
Review of Nine Mile Point Nuclear Station, Unit 2**

**Adoption of Technical Specification Task Force-425
Relocation of Specific Surveillance Frequency Requirements
to a Licensee Controlled Program (TAC No. MF5364)**

- PRA RAI 1 In Attachment 2, Section 2.5 “References,” of the License Amendment Request (LAR), the licensee provides references that suggest the July 2009 peer review was performed using ASME RA-Sc-2007, “Addenda to ASME RA-S-2002 Standard for Probabilistic Risk Assessment [PRA] for Nuclear Power Plant Applications.” The staff would like to clarify that Regulatory Guide 1.200, Revision 2, “An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities” (ML090410014), provides clarification to ASME/ANS RA-Sa-2009 on providing a technically adequate PRA. Furthermore, consistent with the information provided in Regulatory Issue Summary (RIS) 2007-06 (ADAMS Accession No. ML070650428), “Regulatory Guide 1.200 Implementation,” the NRC staff will use Revision 2 of RG 1.200 (ADAMS Accession No. ML090410014) to assess technical adequacy of the PRA used to support risk-informed applications received after March 2010. If the licensee did not use ASME/ANS RA-Sa-2009, “Addenda to ASME/ANS RA-S-2008 Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications,” then they would need to perform a gap analysis for the differences in revisions and provide the applicable Facts and Observations (F&Os) of that gap analysis.
- a. Explain whether the peer review was performed to ASME/ANS RA-Sa-2009 as clarified by RG 1.200 Revision 2.

Exelon Response to PRA RAI 1

Yes. The Nine Mile Point Nuclear Station Unit 2 (NMP2) Peer Review Team used ASME/ANS RA-Sa-2009 as clarified by RG 1.200 Revision 2.

- PRA-RAI 2 The licensee stated that its PRA model update to meet Regulatory Guide (RG) 1.200 was completed and peer reviewed in July 2009. The licensee further stated that the peer review resulted in “18 findings which did not meeting Capability Category (CC) II and 34 suggestions that met CCII.” The licensee also provided Table 2-1 which lists six open findings that have yet to be resolved per the licensee’s update process. As discussed in RG 1.200, Revision 2, Regulatory Position 4.2, the licensee should provide discussion regarding the resolution of the peer review findings and observations that are applicable to the parts of the PRA required for the application.
- a. If the July 2009 peer review was performed using ASME/ANS RA-Sa-2009, then provide all the applicable findings and suggestions resulting from the 2009 peer review, their disposition, and the potential impact on the Risk-Informed Surveillance Test Interval (RI STI) application. If the peer review was not performed using ASME/ANS RA-Sa-2009, then provide the applicable findings and suggestions resulting from the gap analysis as mentioned in PRA RAI 1, their disposition, and the potential impact on the RI STI application.

Exelon Response to PRA RAI 2

NMP2 Probabilistic Risk Assessment (PRA) model periodic updated is being performed in 2015 per the Exelon Risk Management Training and Requirements Manuals and procedures. The resolutions of the Open Findings and Suggestions below describe actions performed during the 2015 periodic update and documented in the updated PRA notebooks per the Exelon PRA update process.

The following Table shows the applicable Findings and Suggestions from the Peer Review that are applicable to support a Risk Informed Surveillance Frequency Control Program at NMP2:

F&O	F&O Description	Finding/ Suggestion	Assoc. SR	Basis for Significance	Possible Resolution	NMP2 Action/Response	Comment
1-1	<p>Demands from causes other than surveillance tests were not included in the collection of plant-specific data.</p> <p>(This F&O originated from SR DA-C6)</p>	Finding	DA-C6 DA-C7	SR requires all types of demands be counted or estimated.	<p>Include demands from the four causes listed in the SR. Perhaps use MSPI estimates for MSPI components because that program includes all demands (except post maintenance test).</p>	<p>OPEN Insignificant Impact - Defer for consideration during next major update.</p> <p>It was looked at during unit 1 update and considered again during unit 2 update. It is a little conservative and not considered significant to estimate using surveillance procedures. Note that MSPI no longer counts actual events; they estimates the same way the PRA Group does.</p>	<p>URE 472: Demands from causes other than surveillance tests were not included in the collection of plant-specific data. (This F&O originated from SR DA-C6)</p> <p>URE 472 Resolution: Appendix C of the Data Notebook discusses the Plant-Specific Unavailability Assessment. It includes plant-specific demands on the basis of:</p> <ul style="list-style-type: none"> A) Surveillance Tests B) Maintenance Tests C) Operational Demands <p>URE 472 can be closed.</p>
2-5	<p>P. 2-7 of the DA Notebook states that a Bayesian analysis was not done when there are no plant-specific failures. This is unacceptable for Category II or Category III.</p> <p>The discussion justifying not performing such updates on p. 2-6 and 2-7 of the DA Notebook is misleading because of the very small failure probabilities involved in the example given.</p> <p>Based on NUREG/CR-6928 parameters for distributions with as few as 200 to 1000 demands, the posterior mean could drop by a factor of 2</p> <p>(This F&O originated from SR DA-D1)</p>	Finding	DA-D1	It is not acceptable to skip performing a Bayesian update when zero plant-specific failures are observed.	<p>Perform Bayesian update when data is available and zero plant-specific failures are observed, or, alternatively, show that it is unlikely to get the required number of demands to significantly change the failure probability for specific equipment showing zero failures.</p>	<p>CLOSED Section 2 of DA Notebook and Model were updated with Bayesian analysis for zero events down to failure rates on the order of 1E-3. The conservatism of no performing this update for lower failure rates is shown to be minor.</p>	<p>Bayesian updates for events with zero plant specific failures will be performed. This will continue to be performed going forward per Exelon Best Practices, Procedures and Test and Requirements Manuals. Specifically, Exelon Best Practice, BP-006, is used for PRA data analysis.</p>

F&O	F&O Description	Finding/ Suggestion	Assoc. SR	Basis for Significance	Possible Resolution	NMP2 Action/Response	Comment
2-6	<p>A critical test of the posterior that is suggested in this Supporting Requirement is:</p> <p>(c) examination of inconsistencies between the prior distribution and the plant-specific evidence to confirm that they are appropriate.</p> <p>There is at least one case in which data is inconsistent--MOV (lake) fails to open. There were 6 failures in 150 demands. The prior from NUREG/CR-6928 for MOV FTO/C has a mean of 1.07 E-3. The method from NUREG/CR-6823, Section 6.2.3.5 & 6.3.3.4 describe a method for consistency evaluation that suggests that greater than or equal to 2 failures would be inconsistent and that another prior should be used.</p> <p>There is no documentation of any NMP-2 analysis like this.</p> <p>(This F&O originated from SR DA-D4)</p>	Finding	DA-D4	<p><i>Consistency between the plant-specific data and the prior was not evaluated. A representative example of such an inconsistency is provided.</i></p>	<p><i>Perform recommended consistency analyses for all data.</i></p>	<p>CLOSED</p> <p>Section 2.7 of DA Notebook updated to include test of key distributions with documentation of methodology. A few distributions were identified as potentially inconsistent (prior versus posterior and plant data). As a result, the uncertainty in the prior distribution was increased to be more representative of plant data.</p>	<p>Exelon Best Practice BP-006 provides guidance for treatment of posterior Bayesian update results that are inconsistent with plant-specific performance.</p>
5-2	<p>Routine system alignments contributing to initiating event frequencies are not included.</p> <p>(This F&O originated from SR IE-A6)</p>	Finding	IE-A6	<p><i>Does not meet IE-A6 Cat II requirements.</i></p>	<p><i>Include routine system alignments in the calculation of initiating event frequencies, where applicable.</i></p>	<p>OPEN - Insignificant</p> <p>Wait for plant reliability model development. Routine alignments are already included in the average initiating event frequency development. In addition, the addition of support system initiating event fault trees to the model (see F&O 2-16 and 4-4) adds some important alignments for these systems. It would be a significant effort to add the type of factors that are typically reserved for EOOS risk management modeling such as 1/2 scram testing etc. This will have to wait until a plant reliability program is developed (e.g., scram risk).</p>	<p>URE 474: Routine system alignments contributing to initiating event frequencies are not included. (This F&O originated from SR IE-A6) Include routine system alignments in the calculation of initiating event frequencies, where applicable.</p> <p>Resolution for URE 474: SR IE-A6 Capability Category II states: <i>When performing the systematic evaluation required in IE-A5, INCLUDE initiating events resulting from multiple failures, if the equipment failures result from a common cause, and from routine</i></p>

F&O	F&O Description	Finding/ Suggestion	Assoc. SR	Basis for Significance	Possible Resolution	NMP2 Action/Response	Comment
							<p>system alignments.</p> <p>Section 2.5.2 of the Initiating Events Notebook discusses the routine system alignment for each special initiating event. The system fault trees developed for special initiating events include maintenance and alignment gates. The fault trees are used to obtain a system failure rate, which includes input from any maintenance and alignment gates in the system model. Table 3-10 lists system fault tree initiator values.</p> <p>Section 2.5.2.6 discusses multiple failures for each special initiating event due to the potential for common cause effects.</p> <p>Based on the requirements identified in SR IE-A6, the systematic evaluation performed considered routine system alignments, and common cause failures. The routine system alignments and common cause failures are included in the system fault trees developed, and discussion is provided in the Initiating Events Notebook. Therefore, the requirements of the F&O and URE 474 have been satisfied, and URE 474 can be closed.</p>

F&O	F&O Description	Finding/ Suggestion	Assoc. SR	Basis for Significance	Possible Resolution	NMP2 Action/Response	Comment
1-3	<p>The emergency diesel generator output circuit breaker is modeled separate from the emergency diesel generator in the PRA, while it is included in the emergency diesel generator boundary in NUREG/CR-6928 (which provides the prior). This results in over counting of circuit breaker failures, which is significant for the FTLR failure mode.</p> <p>(This F7O originated from SR DA-C1)</p>	Suggestion	DA-C1 SY-A8	<i>This is an isolated error associated with this SR and the result is conservative.</i>	<i>Eliminate the circuit breaker from the model, or change its failure probability to zero (to prevent double counting).</i>	CLOSED EDG output breaker basic event set to 0.0 in model. As a result documentation in several notebooks were updated (SY.00, SY.01 and DA Notebooks).	Treatment of the EDG output circuit breakers and the EDG component boundary is being maintained as stated.
2-4	<p>p. 2-7 of the DA Notebook states that a Bayesian analysis was not done when there are no plant-specific failures.</p> <p>An exception to this statement was found--Div I & Div II emergency diesel generator failure to start.</p> <p>(This F&O originated from SR DA-D1)</p>	Suggestion	DA-D1	<i>Error in documentation.</i>	<i>Please state correctly what was done with situations with zero plant-specific failures.</i>	CLOSED This error was corrected (also see F&O 2-5).	This is a documentation error. See resolution above for 2-5 regarding current and future treatment of zero failures.

PRA RAI 3 The LAR does not provide a discussion or description of any low-power or shutdown events. A qualitative analysis of shutdown events is acceptable, as presented in the NRC-endorsed document NEI 04-10, Revision 1. Step 10 of Section 4.0 of NEI 04-10, Revision 1, provides guidance on the initial assessment of Internal Events, External Events, and Shutdown Events. Describe how shutdown events will be assessed as part of the Nine Mile Point, Unit 2, Surveillance Frequency Control Program.

Exelon Response to PRA RAI 3

Changes to surveillance frequencies under the Surveillance Frequency Control Program will consider external, lower power and shutdown events in accordance with NEI 04-10, Revision 1, Section 4.0, Step 10.
