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U. S. Nuclear Regulatory Commission Attn: Document Control Desk Washington, DC 20555-0001

SUSQUEHANNA STEAM ELECTRIC STATION RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION ON TECHNICAL SPECIFICATION CHANGES TO ADOPT TRAVELER TSTF-425 PLA-7406

Docket Nos. 50-387 and 50-388

- References: 1. Letter PLA-7119, [Proposed Amendments to License NPF-14 and NPF-22] Adoption of Technical Specification Task Force Traveler TSTF-425, Revision 3, "Relocate Surveillance Frequencies to Licensee Control - Risk Informed Technical Task Force (RITSTF) Initiative 5," dated October 27, 2014 (Accession ML14317A052).
 - 2. Letter PLA-7334, "Response to Request for Additional Information on Technical Specification Changes to Adopt Traveler TSTF-425," dated July 2, 2015 (Accession ML15183A248).
 - 3. Letter PLA-7381, "Response to Request for Additional Information on Technical Specification Changes to Adopt Traveler TSTF-425," dated September 21, 2015 (Accession ML15265A347).
 - 4. NRC Summary of October 21, 2015, Meeting with Susquehanna Nuclear, LLC on the TSTF-425 License Amendment Request, dated October 29, 2015, (TAC Nos. MF5151 and MF5152), (Accession ML15295A202).

The purpose of this letter is for Susquehanna Nuclear, LLC to provide the requested additional information (RAI). By Reference 1, and as supplemented by additional information in References 2 and 3, Susquehanna Nuclear, LLC submitted a license amendment request (LAR) to modify Susquehanna Steam Electric Station, Units 1 and 2 (SSES) Technical Specifications (TS) by relocating specific surveillance frequencies to a licensee-controlled program. The program will implement Nuclear Energy Institute (NEI) 04-10, *"Risk-Informed Technical Specifications Initiative 5B, Risk-Informed Method for Control of Surveillance Frequencies,"* (Accession ML071360456). The changes adopt an NRC approved Technical Specification Task Force (TSTF) traveler, TSTF-425, Revision 3, (Accession ML080280275).

The NRC RAI is in the October 21 Public Meeting Summary, dated October 29, 2015, (Reference 4). Attachment 1 re-states both the issue and the RAI 10, and provides the SSES response.

Susquehanna Nuclear, LLC 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 by this submittal does not affect the bases for concluding that the proposed license amendment does not involve a significant hazards consideration. Furthermore, the additional information also 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 new regulatory commitments associated with this response.

If you have any questions or require additional information, please contact Mr. Jeffery N. Grisewood (570) 542-1330.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: AlmEMBER 11, 2015

Sincerely, J. A. Franke

Attachment 1: Response to Requested Additional Information

Copy: NRC Region I Mr. J. E. Greives, NRC Sr. Resident Inspector Mr. J. A. Whited, NRC Project Manager Mr. T. E. Hood, NRC Project Manager Mr. M. Shields, PA DEP/BRP

Attachment 1 to PLA-7406

Response to Requested Additional Information

Response to Requested Additional Information

By letter dated October 27, 2014,⁽¹⁾ and as supplemented by additional information in a letter dated July 2, 2015⁽²⁾ and September 21, 2015,⁽³⁾ Susquehanna Nuclear, LLC submitted a license amendment request (LAR) for the Susquehanna Steam Electric Station (SSES), Units 1 and 2. The proposed amendment would modify the SSES Technical Specifications by relocating specific 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."*⁽⁴⁾ The NRC requested additional information (RAI) is in the October 21 Public Meeting Summary, dated October 29, 2015.⁽⁵⁾ This Attachment restates both the issue and the RAI 10 below, and provides the SSES response.

ISSUE

[Supporting Requirement] SR HR-A3 describes a mechanism or process and clarifies it by the examples. The examples are not exhaustive. Common cause failure events may occur due to either single or multiple activities. An example of pre-initiator multiple actions which could result in a common failure is the use of an incorrect procedure, which may be used at different times. Therefore, pre-initiator multiple activity human failure events which could be a common mode failure, whether or not the activities occur in an outage, cannot be screened out considering SR HR-A3. This may be relevant to equipment which follows staggered testing.

<u>RAI 10</u>:

Based on the above, address how you will consider the potential for multiple actions which could be a common mode failure (such as the use of a procedure) consistent with SR HR-A3, for the probabilistic risk assessment (PRA) model.

Letter (PLA-7119), [Proposed Amendments to License NPF-14 and NPF-22] Adoption of Technical Specification Task Force Traveler TSTF-425, Revision 3, "Relocate Surveillance Frequencies to Licensee Control – Risk Informed Technical Specification Task Force (RITSTF) Initiative 5," dated October 27, 2014 (Accession ML14317A052).

⁽²⁾ Letter (PLA-7334), "Response to Request for Additional Information on Technical Specification Changes to Adopt Traveler TSTF-425," dated July 2, 2015 (Accession ML15183A248).

⁽³⁾ Letter (PLA-7381), "Response to Request for Additional Information on Technical Specification Changes to Adopt Traveler TSTF-425," dated September 21, 2015 (Accession ML15265A347).

 ⁽⁴⁾ Nuclear Energy Institute (NEI) 04-10, Revision 1, "Risk-Informed Technical Specifications Initiative 5B, Risk-Informed Method for Control of Surveillance Frequencies," dated April 30, 2007 (Accession ML071360456).

⁽⁵⁾ NRC Summary of October 21, 2015, Meeting with Susquehanna Nuclear LLC on the TSTF-425 License Amendment Request, dated October 29, 2015 (TAC Nos. MF5151 and MF5152), (Accession ML15295A202).

SSES Response to RAI 10:

Consistent with SR HR-A3, the Human Reliability Analysis (HRA) pre-initiator development process considers the potential for multiple actions which could be a common mode failure (such as the use of a procedure).

The Susquehanna HRA pre-initiator process includes the following attributes to identify possible pre-initiator actions where redundant or multiple diverse equipment can be affected by a single action or through a common failure with similar multiple actions:

- Perform a component/system review. System trains explicitly modeled in the PRA are potential candidates for pre-initiator (Human Error Probabilities) HEPs. For example, instruments/logic used for initiation and control of PRA components are considered for event generation, including multiple, separate instruments in different divisions that could be failed by a common cause.
- Review station procedures to identify potential pre-initiator events.
- Review operating experience to identify potential pre-initiator events.

Work practices, including procedures, that simultaneously affect equipment in different trains of a redundant system have been included in the development of Susquehanna HRA pre-initiator basic events. Any mechanism that simultaneously affects multiple equipment in either different trains of a redundant system or diverse system is not screened. Specifically, staggered testing is not used to screen common mode failures. This practice aligns with NUREG-1792,⁽⁶⁾ Sections 4.1.3.4, "Good Practice #4: Identify Actions Affecting Redundant and Multiple Diverse Equipment," and 4.2.3.2, "Good Practice #2: Do Not Screen Actions Affecting Redundant or Multiple Diverse Equipment."

As a result of this process, the Susquehanna PRA HRA pre-initiators include cross-train and cross-division common cause pre-initiators. For example, common cause preinitiators were developed for drywell pressure switches, Reactor Pressure Vessel (RPV) pressure switches, and reactor level switches. Examples of these common cause preinitiator basic events included in the Susquehanna PRA model are:

BASIC EVENT	BASIC EVENT DESCRIPTION	TRAINS/DIVISIONS
151PSE111N011	CCF MISCALIBRATION OF DW PRESSURE	Trains A and B
AB-H	SWITCHES PSE111N011A/B	Divisions I and II
151PSE111N011	CCF MISCALIBRATION OF DW PRESSURE	Trains A and D
AD-H	SWITCHES PSE111N011A/D	Divisions I and II

⁽⁶⁾ NUREG-1792, "Good Practices for Implementing Human Reliability Analysis (HRA)," Final Report, April 2005.

BASIC EVENT	BASIC EVENT DESCRIPTION	TRAINS/DIVISIONS
151PSE111N011	CCF MISCALIBRATION OF DW PRESSURE	Trains B and C
BC-H	SWITCHES PSE111N011B/C	Divisions I and II
151PSE111N011	CCF MISCALIBRATION OF DW PRESSURE	Trains C and D
CD-H	SWITCHES PSE111N011C/D	Divisions I and II
180-B211N021	CCF MISCALIBRATION OF RPV PRESSURE	Trains A and B
AB-H	SWITCHES PISB211N021A/B	Divisions I and II
180-B211N021	CCF MISCALIBRATION OF RPV PRESSURE	Trains A and D
AD-H	SWITCHES PISB211N021A/D	Divisions I and II
180-В211N021	CCF MISCALIBRATION OF RPV PRESSURE	Trains B and C
ВС-Н	SWITCHES PISB211N021B/C	Divisions I and II
180-B211N021	CCF MISCALIBRATION OF RPV PRESSURE	Trains C and D
CD-H	SWITCHES PISB211N021C/D	Divisions I and II
180-B211N031	COMMON MISCALIBRATION OF RX LVL	Trains A and B
AB-H	SWITCHES LISB211N031A/B	Divisions I and II
180-B211N031	COMMON MISCALIBRATION OF RX LVL	Trains A and D
AD-H	SWITCHES LISB211N031A/D	Divisions I and II
180-B211N031	COMMON MISCALIBRATION OF RX LVL	Trains B and C
BC-H	SWITCHES LISB211N031B/C	Divisions I and II
180-B211N031	COMMON MISCALIBRATION OF RX LVL	Trains C and D
CD-H	SWITCHES LISB211N031C/D	Divisions I and II
180-B211N042 AB-H	COMMON MISCALIBRATION OF RX LVL SWITCHES LISB211N042A/B (ADS divisional permissive)	Divisions I and II
183-PSE111N010	COMMON MISCAL OF DRYWELL PRS	Trains A and B
AB-H	SWITCHES PSE111N010A/B	Divisions I and II
183-PSE111N010	COMMON MISCAL OF DRYWELL PRS	Trains A and D
AD-H	SWITCHES PSE111N010A/D	Divisions I and II
183-PSE111N010	COMMON MISCAL OF DRYWELL PRS	Trains B and C
BC-H	SWITCHES PSE111N010B/C	Divisions I and II
183-PSE111N010	COMMON MISCAL OF DRYWELL PRS	Trains C and D
CD-H	SWITCHES PSE111N010C/D	Divisions I and II

Therefore, work practices, including procedures, that simultaneously affect equipment in different trains of a redundant system have been included in the development of Susquehanna HRA pre-initiator common cause basic events.