

From: Wall, Scott
Sent: Thursday, July 8, 2021 4:16 PM
To: Steinman, Rebecca L:(Exelon Nuclear)
Cc: Palutsis, Linda M:(Exelon Nuclear); Simpson, Patrick R.:(Exelon Nuclear); Purnell, Blake
Subject: Final RAI - Exelon Fleet LAR to Adopt TSTF-582 and TSTF-583-T (EPID Nos. L-2020-LLA-0253, and L-2020-LLA-0254)

Dear Mrs. Steinman,

By application dated November 18, 2020 (Agencywide Documents Access management System (ADAMS) Accession No. ML20324A090), Exelon Generation Company, LLC (Exelon, the licensee) submitted a license amendment request for Clinton Power Station, Unit No. 1; Dresden Nuclear Power Station, Units 2 and 3; LaSalle County Station, Units 1 and 2; and Quad Cities Nuclear Power Station, Units 1 and 2. The proposed amendments would revise the technical specifications (TSs) related to the reactor pressure vessel (RPV) water inventory control (WIC) for each facility based on Technical Specification Task Force (TSTF) Travelers TSTF-582, Revision 0, "RPV WIC Enhancements" (ADAMS Accession No. ML19240A260), and TSTF-583-T, Revision 0, "TSTF-582 Diesel Generator Variation" (ADAMS Accession No. ML20248H330). By letter dated August 13, 2020, the NRC approved TSTF-582, Revision 0, and provided the associated safety evaluation to the TSTF (ADAMS Package Accession No. ML20223A000).

The NRC staff has reviewed the submittals and determined that additional information is needed to complete its review. The specific questions are found in the enclosed request for additional information (RAI). During a telephone call on July 8, 2021, the Exelon staff indicated that a response to the RAIs would be provided by August 20, 2021.

If you have questions, please contact me at 301-415-2855 or via e-mail at Scott.Wall@nrc.gov.

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Docket Nos. 50-461, 50-237, 50-249, 50-373,50-374, 50-254, and 50-265

EPIDs: L-2020-LLA-0253, and L-2020-LLA-0254

Enclosure:
Request for Additional Information

cc: Listserv

REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST TO ADOPT TSTF-582 AND TSTF-583-T

CLINTON POWER STATION, UNIT NO. 1

DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3

LASALLE COUNTY STATION, UNITS 1 AND 2

QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2

DOCKET NOS. 50-461, 50-237, 50-249, 50-373, 50-374, 50-254, AND 50-265

INTRODUCTION

By application dated November 18, 2020 (Agencywide Documents Access and Management System (ADAMS) Package Accession No. ML20324A090), Exelon Generation Company, LLC (the licensee) submitted a license amendment request (LAR) for Clinton Power Station, Unit No. 1; Dresden Nuclear Power Station, Units 2 and 3 (Dresden); LaSalle County Station, Units 1 and 2 (LaSalle); and Quad Cities Nuclear Power Station, Units 1 and 2 (Quad Cities). The proposed amendments would revise the technical specifications (TSs) related to the reactor pressure vessel (RPV) water inventory control (WIC) for each facility based on Technical Specification Task Force (TSTF) Travelers TSTF-582, Revision 0, "RPV WIC Enhancements" (ADAMS Accession No. ML19240A260), and TSTF-583-T, Revision 0, "TSTF-582 Diesel Generator Variation" (ADAMS Accession No. ML20248H330). By letter dated August 13, 2020, the U.S. Nuclear Regulatory Commission (NRC) approved TSTF-582, Revision 0, and provided the associated safety evaluation to the TSTF (ADAMS Package Accession No. ML20223A000).

The NRC staff is reviewing the application and has determined that the following additional information is required in order to complete the review.

APPLICABLE REGULATION AND GUIDANCE

Paragraph 50.36(c)(3) of Title 10 of the Code of Federal Regulations (10 CFR) requires that TSs include surveillance requirements (SRs), which are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation (LCOs) will be met.

The LCO and associated SRs for alternating-current (AC) electrical power sources that are applicable when a unit is in Modes 1, 2, and 3 are specified in TS 3.8.1, "AC Sources – Operating." The LCOs and associated SRs for AC electrical power sources and electrical distributions systems that are applicable when a unit is in Modes 4 and 5 or during movement of recently irradiated fuel assemblies in the secondary containment are specified in TS 3.8.2, "AC Sources – Shutdown," and TS 3.8.8, "Distribution Systems – Shutdown," respectively.

Request Additional Information (RAI) 1 (Dresden)

Section 8.3.1.5.2, "System Arrangement," of the Dresden Updated Final Safety Analysis Report (UFSAR) states, in part, that diesel generator (DG) 2 provides power to the Division II emergency core cooling system (ECCS) equipment for Unit 2, and DG 3 provides power to

Division II ECCS equipment for Unit 3. DG 2/3 provides power to the Division I ECCS equipment for either Unit 2 or Unit 3.

Dresden LCO 3.8.1.d requires that the following AC electrical power source be operable when the unit is operating: “The opposite unit’s DG capable of supporting the equipment required to be OPERABLE by LCO 3.6.4.3, LCO 3.7.4 (Unit 3 only), and LCO 3.7.5 (Unit 3 only).” SR 3.8.1.21 is applicable to the opposite unit’s AC electrical power sources and it specifies, in part, the SRs necessary to meet LCO 3.8.1.d.

Dresden LCO 3.8.2.b requires that the following AC electrical power source be operable when the unit is shutdown: “One diesel generator (DG) capable of supplying one division of the onsite Class 1E AC electrical power distribution subsystem(s) required by LCO 3.8.8.” When a unit is shutdown, Dresden LCO 3.8.8 requires: “The necessary portions of the AC, DC [direct current], and the opposite unit’s Division 2 electrical power distribution subsystems shall be OPERABLE to support equipment required to be OPERABLE.” Dresden SR 3.8.2.1 specifies the SRs in TS 3.8.1 that are necessary to meet LCO 3.8.2.

The licensee proposed to revise Dresden SR 3.8.2.1 as shown in the table below. The proposed changes would make several SRs for AC sources required by TS 3.8.2 no longer applicable. The licensee also proposed to revise TS 3.3.8.1, “Loss of Power (LOP) Instrumentation,” such that LCO 3.3.8.1 would no longer be applicable “[w]hen the associated diesel generator is required to be OPERABLE by LCO 3.8.2, ‘AC Sources Shutdown.’” The LAR states that these changes are based on TSTF-582 and TSTF-583-T. However, these travelers and the NRC safety evaluation for TSTF-582 do not address shared AC sources at multi-unit sites. In addition, the LAR does not address the shared AC sources at Dresden. The LAR also proposes, without justification, to delete SRs currently required by SR 3.8.2.1 (e.g., Dresden SR 3.8.1.7) which are not included in the TSTF-582 or TSTF-583-T changes. The proposed changes would also make SR 3.8.2.1 inconsistent with SR 3.8.1.21.

Current SR 3.8.2.1	Proposed SR 3.8.2.1										
<p style="text-align: center;"><u>NOTE</u></p> <p>The following SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.10 through SR 3.8.1.12, and SR 3.8.1.14 through SR 3.8.1.18.</p> <p>-----</p> <p>For AC sources required to be OPERABLE the SRs of Specification 3.8.1, except SR 3.8.1.9, SR 3.8.1.13, SR 3.8.1.19, SR 3.8.1.20, and SR 3.8.1.21 are applicable.</p>	<p style="text-align: center;"><u>NOTE</u></p> <p>The following SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.10, SR 3.8.1.11, SR 3.8.1.15, and SR 3.8.1.17.</p> <p>-----</p> <p>The following SRs are applicable for AC sources required to be OPERABLE:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">SR 3.8.1.1</td> <td style="width: 50%;">SR 3.8.1.6</td> </tr> <tr> <td>SR 3.8.1.2</td> <td>SR 3.8.1.10</td> </tr> <tr> <td>SR 3.8.1.3</td> <td>SR 3.8.1.11</td> </tr> <tr> <td>SR 3.8.1.4</td> <td>SR 3.8.1.15</td> </tr> <tr> <td>SR 3.8.1.5</td> <td>SR 3.8.1.17</td> </tr> </table>	SR 3.8.1.1	SR 3.8.1.6	SR 3.8.1.2	SR 3.8.1.10	SR 3.8.1.3	SR 3.8.1.11	SR 3.8.1.4	SR 3.8.1.15	SR 3.8.1.5	SR 3.8.1.17
SR 3.8.1.1	SR 3.8.1.6										
SR 3.8.1.2	SR 3.8.1.10										
SR 3.8.1.3	SR 3.8.1.11										
SR 3.8.1.4	SR 3.8.1.15										
SR 3.8.1.5	SR 3.8.1.17										

Provide the following information for Dresden:

- A. For SR 3.8.2.1, identify the currently applicable SRs of TS 3.8.1 that are necessary to meet LCO 3.6.4.3, LCO 3.7.4, LCO 3.7.5, and LCO 3.8.8. The response should

discuss the following plant conditions: Unit 2 operating and Unit 3 shutdown, Unit 2 shutdown and Unit 3 operating, and both Units 2 and 3 shutdown.

- B. For each SR of TS 3.8.1 that would no longer be applicable to TS 3.8.2 under the proposed amendment, explain why the SR is not needed to support the opposite unit or to meet the requirements of LCO 3.8.2. The response should address the requirements in LCO 3.6.4.3, LCO 3.7.4, LCO 3.7.5, and LCO 3.8.8. The response should also identify and address any differences between the events considered in the NRC staff's safety evaluation for TSTF-582 and the Dresden design and licensing basis.
- C. Identify the changes to SR 3.8.1.21 that are needed to make it consistent with the proposed SR 3.8.2.1. Provide justification to support these changes.
- D. In conjunction with the information requested under A, B, and C above, justify the deletion of the following wording from the Applicability of LCO 3.3.8.1: "When the associated diesel generator is required to be OPERABLE by LCO 3.8.2, 'AC Sources Shutdown.'"

RAI 2 (LaSalle)

Section 8.3.1.1.2, "Unit Class 1E A-C Power System," of the LaSalle UFSAR states, in part, that the main components of the unit Class 1E AC power system for Unit 1 (or Unit 2) are three DGs, one of which is common to Unit 1 and Unit 2.

LaSalle LCO 3.8.1.c requires that the following AC electrical power source be operable when the unit is operating: "The opposite unit's Division 2 DG capable of supporting the associated equipment required to be OPERABLE by LCO 3.6.4.3, 'Standby Gas Treatment (SGT) System,' LCO 3.7.4, 'Control Room Area Filtration (CRAF) System,' and LCO 3.7.5, 'Control Room Area Ventilation Air Conditioning (AC) System.'" SR 3.8.1.21 is applicable to the opposite unit's AC electrical power sources and it specifies, in part, the SRs necessary to meet LCO 3.8.1.c.

LaSalle LCO 3.8.2 requires, in part, that the following AC electrical power sources be operable when the unit is shutdown:

- b. One diesel generator (DG) capable of supplying one division of the Division 1 or 2 onsite Class 1E AC electrical power distribution subsystem(s) required by LCO 3.8.8;
- ...
- d. One qualified circuit, which may be the same circuit in LCO 3.8.2.a. between the offsite transmission network and the opposite unit Division 2 onsite Class 1E AC electrical power distribution subsystem, or the opposite unit DG capable of supplying the opposite unit Division 2 onsite Class 1E AC electrical power distribution subsystem, when the opposite unit Division 2 onsite Class 1E AC electrical power distribution subsystem is required by LCO 3.8.8.

When a unit is shutdown, LaSalle LCO 3.8.8 requires: "The necessary portions of the Division 1, Division 2, and Division 3 AC and DC, and the opposite unit Division 2 AC and DC electrical power distribution subsystems shall be OPERABLE to support equipment required to be OPERABLE." LaSalle SR 3.8.2.1 specifies the SRs in TS 3.8.1 that are necessary to meet LCO 3.8.2.

The licensee proposed to revise LaSalle SR 3.8.2.1 as shown in the table below. The proposed changes would make several SRs for AC sources required by TS 3.8.2 no longer applicable.

The licensee also proposed to revise LaSalle TS 3.3.8.1, "Loss of Power (LOP) Instrumentation," such that LCO 3.3.8.1 would no longer be applicable "[w]hen the associated diesel generator (DG) is required to be OPERABLE by LCO 3.8.2, 'AC Sources Shutdown.'" The LAR states that these changes are based on TSTF-582 and TSTF-583-T. However, these travelers and the NRC safety evaluation for TSTF-582 do not address shared AC sources at multi-unit sites. In addition, the LAR does not address the shared AC sources at LaSalle. The LAR also proposes, without justification, to delete SRs currently required by SR 3.8.2.1 (e.g., LaSalle SR 3.8.1.21) which are not included in the TSTF-582 or TSTF-583-T changes. The proposed changes would also make SR 3.8.2.1 inconsistent with SR 3.8.1.21.

Current SR 3.8.2.1	Proposed SR 3.8.2.1										
<p style="text-align: center;"><u>NOTES</u></p> <p>1. The following SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.9 through SR 3.8.1.11, and SR 3.8.1.13 through SR 3.8.1.16, SR 3.8.1.18, and SR 3.8.1.19.</p> <p>2. SR 3.8.1.12 and SR 3.8.1.19 are not required to be met.</p> <p>-----</p> <p>For AC sources required to be OPERABLE, the SRs of Specification 3.8.1, except SR 3.8.1.8, SR 3.8.1.17, and SR 3.8.1.20, are applicable.</p>	<p style="text-align: center;"><u>NOTE</u></p> <p>The following SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.9, SR 3.8.1.10, SR 3.8.1.14, and SR 3.8.1.16.</p> <p>-----</p> <p>The following SRs are applicable for AC sources required to be OPERABLE:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">SR 3.8.1.1</td> <td style="width: 50%;">SR 3.8.1.6</td> </tr> <tr> <td>SR 3.8.1.2</td> <td>SR 3.8.1.9</td> </tr> <tr> <td>SR 3.8.1.3</td> <td>SR 3.8.1.10</td> </tr> <tr> <td>SR 3.8.1.4</td> <td>SR 3.8.1.14</td> </tr> <tr> <td>SR 3.8.1.5</td> <td>SR 3.8.1.16</td> </tr> </table>	SR 3.8.1.1	SR 3.8.1.6	SR 3.8.1.2	SR 3.8.1.9	SR 3.8.1.3	SR 3.8.1.10	SR 3.8.1.4	SR 3.8.1.14	SR 3.8.1.5	SR 3.8.1.16
SR 3.8.1.1	SR 3.8.1.6										
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SR 3.8.1.3	SR 3.8.1.10										
SR 3.8.1.4	SR 3.8.1.14										
SR 3.8.1.5	SR 3.8.1.16										

Provide the following information for LaSalle:

- A. For SR 3.8.2.1, identify the currently applicable SRs of TS 3.8.1 that are necessary to meet LCO 3.6.4.3, LCO 3.7.4, LCO 3.7.5, and LCO 3.8.8. The response should discuss the following plant conditions: Unit 1 operating and Unit 2 shutdown, Unit 1 shutdown and Unit 2 operating, and both Units 1 and 2 shutdown.
- B. For each SR of TS 3.8.1 that would no longer be applicable to TS 3.8.2 under the proposed amendment, explain why the SR is not needed to support the opposite unit or to meet the requirements of LCO 3.8.2. The response should address the requirements in LCO 3.6.4.3, LCO 3.7.4, LCO 3.7.5, and LCO 3.8.8. The response should also identify and address any differences between the events considered in the NRC staff's safety evaluation for TSTF-582 and the LaSalle design and licensing basis.
- C. Identify the changes to SR 3.8.1.21 that are needed to make it consistent with the proposed SR 3.8.2.1. Provide justification to support these changes.
- D. In conjunction with the information requested under A, B, and C above, justify the deletion of the following wording from the Applicability of LCO 3.3.8.1: "When the associated diesel generator (DG) is required to be OPERABLE by LCO 3.8.2, 'AC Sources Shutdown.'"

RAI 3 (Quad Cities)

Section 8.3.1.6, “Standby Emergency Diesel Generator System,” of the Quad Cities UFSAR states, in part, that the DG system provides emergency source of AC power in the event all normal offsite power becomes unavailable. The system consists of three DGs: 1, 2, and 1/2 (shared DG).

Quad Cities LCO 3.8.1.d requires that the following AC electrical power source be operable when the unit is operating: “The opposite unit’s DG capable of supporting the equipment required to be OPERABLE by LCO 3.6.4.3, LCO 3.7.4 (Unit 2 only), and LCO 3.7.5 (Unit 2 only).” SR 3.8.1.21 is applicable to the opposite unit’s AC electrical power sources and it specifies, in part, the SRs necessary to meet LCO 3.8.1.d.

Quad Cities LCO 3.8.2.b requires that the following AC electrical power source be operable when the unit is shutdown: “One diesel generator (DG) capable of supplying one division of the onsite Class 1E AC electrical power distribution subsystem(s) required by LCO 3.8.8.” When a unit is shutdown, Quad Cities LCO 3.8.8 requires: “The necessary portions of the AC, DC, and the opposite unit’s electrical power distribution subsystems shall be OPERABLE to support equipment required to be OPERABLE.” Quad Cities SR 3.8.2.1 specifies the SRs in TS 3.8.1 that are necessary to meet LCO 3.8.2.

The licensee proposed to revise Quad Cities SR 3.8.2.1 as shown in the table below. The proposed changes would make several SRs for AC sources required by TS 3.8.2 no longer applicable. The licensee also proposed to revise Quad Cities TS 3.3.8.1, “Loss of Power (LOP) Instrumentation,” such that LCO 3.3.8.1 would no longer be applicable “[w]hen the associated diesel generator is required to be OPERABLE by LCO 3.8.2, ‘AC Sources Shutdown.’” The LAR states that these changes are based on TSTF-582 and TSTF-583-T. However, these travelers and the NRC safety evaluation for TSTF-582 do not address shared AC sources at multi-unit sites. In addition, the LAR does not address the shared AC sources at Quad Cities. The LAR also proposes, without justification, to delete SRs currently required by SR 3.8.2.1 (e.g., Quad Cities SR 3.8.1.7) which are not included in the TSTF-582 or TSTF-583-T changes. The proposed changes would also make SR 3.8.2.1 inconsistent with SR 3.8.1.21.

Current SR 3.8.2.1	Proposed SR 3.8.2.1										
<p style="text-align: center;"><u>NOTE</u></p> <p>The following SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.10 through SR 3.8.1.12, and SR 3.8.1.14 through SR 3.8.1.19.</p> <p>-----</p> <p>For AC sources required to be OPERABLE the SRs of Specification 3.8.1, except SR 3.8.1.9, SR 3.8.1.13, SR 3.8.1.19, SR 3.8.1.20, and SR 3.8.1.21, are applicable.</p>	<p style="text-align: center;"><u>NOTE</u></p> <p>The following SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.10, SR 3.8.1.11, SR 3.8.1.15, and SR 3.8.1.17.</p> <p>-----</p> <p>The following SRs are applicable for AC sources required to be OPERABLE:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">SR 3.8.1.1</td> <td style="width: 50%;">SR 3.8.1.6</td> </tr> <tr> <td>SR 3.8.1.2</td> <td>SR 3.8.1.10</td> </tr> <tr> <td>SR 3.8.1.3</td> <td>SR 3.8.1.11</td> </tr> <tr> <td>SR 3.8.1.4</td> <td>SR 3.8.1.15</td> </tr> <tr> <td>SR 3.8.1.5</td> <td>SR 3.8.1.17</td> </tr> </table>	SR 3.8.1.1	SR 3.8.1.6	SR 3.8.1.2	SR 3.8.1.10	SR 3.8.1.3	SR 3.8.1.11	SR 3.8.1.4	SR 3.8.1.15	SR 3.8.1.5	SR 3.8.1.17
SR 3.8.1.1	SR 3.8.1.6										
SR 3.8.1.2	SR 3.8.1.10										
SR 3.8.1.3	SR 3.8.1.11										
SR 3.8.1.4	SR 3.8.1.15										
SR 3.8.1.5	SR 3.8.1.17										

Provide the following information for Quad Cities:

- A. For SR 3.8.2.1, identify the currently applicable SRs of TS 3.8.1 that are necessary to meet LCO 3.6.4.3, LCO 3.7.4, LCO 3.7.5, and LCO 3.8.8. The response should discuss the following plant conditions: Unit 1 operating and Unit 2 shutdown, Unit 1 shutdown and Unit 2 operating, and both Units 1 and 2 shutdown.
- B. For each SR of TS 3.8.1 that would no longer be applicable to TS 3.8.2 under the proposed amendment, explain why the SR is not needed to support the opposite unit or to meet the requirements of LCO 3.8.2. The response should address the requirements in LCO 3.6.4.3, LCO 3.7.4, LCO 3.7.5, and LCO 3.8.8. The response should also identify and address any differences between the events considered in the NRC staff's safety evaluation for TSTF-582 and the Quad Cities design and licensing basis.
- C. Identify the changes to SR 3.8.1.21 that are needed to make it consistent with the proposed SR 3.8.2.1. Provide justification to support these changes.
- D. In conjunction with the information requested under A, B, and C above, justify the deletion of the following wording from the Applicability of LCO 3.3.8.1: "When the associated diesel generator is required to be OPERABLE by LCO 3.8.2, 'AC Sources Shutdown.'"

RAI 4 (LaSalle)

LaSalle SR 3.5.2.6 currently requires the licensee to: "Operate the required ECCS injection/spray subsystem through the recirculation line for ≥ 10 minutes." Adoption of TSTF-582 should revise SR 3.5.2.6 by adding two notes and deleting "through the recirculation line." However, the markup of SR 3.5.2.6 in the LAR only adds the two notes.

Confirm that "through the recirculation line" is to be deleted from LaSalle SR 3.5.2.6 or provide justification for not making this change.

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