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10 CFR 50.90
10 CFR 50.91(a)(5)

June 21, 2018

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

Peach Bottom Atomic Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DPR-44 and DPR-56
NRC Docket Nos. 50-277 and 50-278

SUBJECT: Emergency License Amendment Request – One-Time Change Suspending Emergency Diesel Generator Surveillance Test Completion Requirements

Pursuant to 10 CFR 50.90, *"Application for amendment of license, construction permit, or early site permit,"* Exelon Generation Company, LLC (Exelon) is requesting approval for proposed changes to the Technical Specifications (TS), Appendix A of Renewed Facility Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3. The proposed changes are being requested on an emergency basis pursuant to 10 CFR 50.91(a)(5).

The proposed changes would modify TS Surveillance Requirements (SRs) for PBAPS, Units 2 and 3, associated with TS Section 3.8, "Electrical Power Systems." Specifically, the proposed changes revise TS SR 3.8.1.2, SR 3.8.1.3, SR 3.8.1.6, and SR 3.8.3.4 to suspend performing required monthly surveillance testing on the E-4 Emergency Diesel Generator (EDG).

On June 13, 2018, at 2205 hours, PBAPS, Units 2 and 3, entered a 14-day LCO due to an unplanned manual shutdown of the E-3 EDG. Due to the configuration and shared electrical distribution system at PBAPS, Units 2 and 3, entered TS 3.8.1, Condition B (i.e., one EDG inoperable). Maintenance activities continue in support of restoring the E-3 EDG to an operable status. The work is expected to be completed and the EDG returned to service by June 23, 2018, at 2300 hours (ET). Required surveillance testing of the E-4 EDG is scheduled to be completed by no later than June 25, 2018, at 1045 hours. This would include the allowed 25% grace per SR 3.0.2.

If the E-3 EDG is not restored to an operable status on June 23, 2018, at 2300 hours (ET) as currently planned and the extended restoration time exceeds June 25, 2018, at 1045 hours (ET), the E-4 EDG would exceed the monthly surveillance test frequency and would be declared inoperable. Testing the E-4 EDG during the time when the E-3 EDG is out-of-service would also require the E-4 to be declared inoperable during testing. With two (2) EDGs inoperable, both PBAPS units would be required to enter TS 3.8.1, Condition F, "Two or more EDGs inoperable." Condition F specifies that at least one EDG be restored to an operable status within 2 hours. In addition, TS 3.8.1, Condition G would apply if the Condition F Completion Time is not met and both PBAPS units would need to be placed in Mode 3, "Hot Shutdown," within 12 hours.

Consequently, the need for this proposed change was not expected and Exelon Generating Company, LLC (Exelon) is requesting the proposed changes to the TS SRs on an emergency one-time basis in order to suspend performing the required surveillance testing of E-4 EDG until such time that the work on the E-3 EDG is completed. A one-time, deterministic emergency license amendment is being requested to support suspension of the surveillance testing for the E-4 EDG. Specifically, Exelon is requesting that the following note be added to the affected TS SRs regarding the timeframe for suspending the surveillance testing for the E-4 EDG:

> *Until E-3 EDG is returned to OPERABLE status, not to exceed 2205 hours (ET) on June 27, 2018, performance of SR [XXXX] for E-4 EDG may be suspended. The past due surveillances will commence within 12 hours of restoration of the E-3 EDG operability.*

Surveillance testing of the E-4 EDG in support of satisfying SR 3.8.1.2, SR 3.8.1.3, SR 3.8.1.6, and SR 3.8.3.4 will commence within 12 hours of E-3 EDG restoration and operability determination. Requesting this emergency license amendment should preclude the need for requesting a Notice of Enforcement Discretion (NOED) should the E-3 EDG remain inoperable longer than expected for some other unforeseen reason.

If additional emergent issues preclude completion of the ongoing E-3 EDG maintenance work within the current 14-day completion time (i.e., by June 27, 2018, at 2205 hours (ET)), Exelon will evaluate the need to process and submit any appropriate additional licensing actions in a timely manner.

Exelon has concluded that the proposed changes present no significant hazards consideration under the standards set forth in 10 CFR 50.92, *"Issuance of amendments."*

The proposed changes have been reviewed by the PBAPS Plant Operations Review Committee in accordance with the requirements of the Exelon Quality Assurance Program.

There are no regulatory commitments contained in this submittal.

Attachment 1 provides the evaluation and justification of the proposed emergency TS changes per 10 CFR 50.91(a)(5). Attachment 2 provides a copy of the proposed TS page mark-ups for PBAPS, Units 2 and 3, and Attachment 3 provides a copy of the clean TS pages.

Exelon requests approval of this emergency license amendment by June 25, 2018, at 1045 hours (ET), in order to avoid a condition where there is a potential for two (2) inoperable EDGs; which could require the shutdown of both PBAPS units.

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

If you have any questions or require additional information, please contact Richard Gropp at (610) 765-5557.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 21st day of June 2018.

Respectfully,

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

Attachments:

1. Evaluation of Proposed Changes
2. Proposed Technical Specifications Markup Pages
3. Proposed Technical Specifications Clean Pages

cc: w/ Attachments
Regional Administrator – USNRC Region I
USNRC Senior Resident Inspector – Peach Bottom Atomic Power Station
USNRC Project Manager (NRR) – Peach Bottom Atomic Power Station
R. R. Janati – Commonwealth of Pennsylvania Bureau of Radiation Protection
S. T. Gray – State of Maryland

ATTACHMENT 1

Emergency License Amendment Request

Peach Bottom Atomic Power Station, Units 2 and 3

Docket Nos. 50-277 and 50-278

EVALUATION OF PROPOSED CHANGES

Subject: Emergency License Amendment Request – One-Time Change Suspending Emergency Diesel Generator Completion Surveillance Requirements

Peach Bottom Atomic Power Station, Units 2 and 3
Emergency License Amendment Request
Evaluation of Proposed Changes

1.0 SUMMARY DESCRIPTION

On June 13, 2018, at 2205 hours (ET), Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3, entered a 14-day Limiting Condition for Operation (LCO) due to an unplanned manual shutdown of the E-3 Emergency Diesel Generator (EDG) that occurred during monthly Technical Specifications (TS) surveillance testing due to abnormal conditions and the EDG was declared inoperable. Due to the configuration and shared electrical distribution system at PBAPS, Units 2 and 3, TS 3.8.1, Condition B (i.e., one EDG inoperable) was entered. Maintenance activities continue in support of restoring the E-3 EDG to an operable status. The work is expected to be completed and the E-3 EDG is planned to be returned to service by June 23, 2018, at 2300hours (ET). Monthly scheduled surveillance testing of the E-4 EDG is required to be completed by no later than June 25, 2018, at 1045 hours (ET). This would include the allowed 25% grace per SR 3.0.2.

As a result of the E-3 EDG inoperability, troubleshooting commenced and on June 14, 2018, station mechanical maintenance craft personnel were performing visual inspections of E3 EDG combustion air supply process flow path and discovered a missing pin in the turbocharger scavenging air inlet check valve. Further inspections downstream of the check valve discovered the remains of a pin and damage to the turbocharger inlet vanes leading edges. Metal fines from the pin interacting with the turbocharger were discovered in the inlet plenum, warranting further internal inspections.

Re-assembly of the E-3 EDG is currently in progress and the following project/evolution targets are scheduled as described below:

- Install exhaust manifold by June 21, 2018, at 1300 hours (ET).
- First engine run is scheduled for June 21, 2018, at 1830 hours (ET).
- Full break-in runs are scheduled.
- E-3 EDG operability is scheduled for June 23, 2018, at 2300 hours (ET).

An inspection of the other three EDGs' (i.e., E-1, E-2, and E-4) inlet air check valves determined that the pins are bound tightly and staked correctly and no other degraded conditions were identified. All three valves stroked smoothly and did not exhibit any of the same characteristics found on the E-3 EDG during troubleshooting. Based on the research performed as noted above and the inspections performed on June 14, 2018, it is concluded that no common cause failures exist for the remaining EDGs and they remain operable.

The table below provides a list of previous monthly surveillance tests of the E-4 EDG. All tests were completed satisfactorily.

Previous E-4 EDG Monthly Surveillances Completed Satisfactorily

W/O NBR	Credit Date	Start Time	Stop Time
4777809	05/17/2018	07:33	16:45
4764843	04/25/2018	06:43	18:00
4751530	03/24/2018	06:38	16:40
4740059	02/23/2018	18:15	02:30
4730861	01/24/2018	18:11	00:15
4718871	12/28/2017	01:05	06:00
4708881	11/28/2017	17:39	01:35
4695204	11/03/2017	11:50	09:05
4682028	10/04/2017	06:03	14:30
4676393	09/04/2017	18:20	03:30
4664212	08/08/2017	06:20	15:55
4652702	07/14/2017	05:35	05:35

The schedule for performing the next monthly surveillance test of the E-1 and E-2 EDGs are noted in the tables below. The performance of the monthly surveillance tests for these EDGs is not impacted by this emergency license amendment request.

Next E-1 EDG Monthly Scheduled Surveillance

Work Order	Due Date	Late Date
04792717	07/02/2018	07/09/2018

Next E-2 EDG Monthly Scheduled Surveillance

Work Order	Due Date	Late Date
04793723	07/04/2018	07/11/2018

If the E-3 EDG is not restored to an operable status on June 23, 2018, at 2200 hours (ET) as currently scheduled and the extended restoration time exceeds June 25, 2018, at 1045 hours (ET), the E-4 EDG would exceed the monthly surveillance test frequency (including the 25% grace) and would be declared inoperable. Testing the E-4 EDG during time when the E-3 EDG is out-of-service would also require the E-4 to be declared inoperable during testing. With two (2) inoperable EDGs, both PBAPS units would be required to enter TS 3.8.1, Condition F, "Two or more DGs inoperable." Condition F specifies that at least one EDG be restored to an operable status within 2 hours. In addition, TS Condition G would apply if the Condition F Completion Time is not met and both PBAPS units would need to be placed in Mode 3, "Hot Shutdown," within 12 hours.

Consequently, the need for this proposed change was not expected and Exelon Generating Company, LLC (Exelon) is requesting the proposed changes to the TS on a one-time emergency basis to suspend performing the required monthly surveillance testing of E-4 EDG until such time that the work on the E-3 EDG is completed. A one-time, deterministic emergency license amendment is being requested to support suspension of the surveillance testing for the E-4 EDG. Specifically, Exelon is requesting the following timeframe for the suspending the testing:

> *Until E-3 EDG is returned to OPERABLE status, not to exceed 2205 hours (ET) on June 27, 2018, performance of SR [XXXX] for E-4 EDG may be suspended. The past due surveillances will commence within 12 hours of restoration of the E-3 EDG operability.*

Surveillance testing of the E-4 EDG in support of satisfying SR 3.8.1.2, SR 3.8.1.3, SR 3.8.1.6, and SR 3.8.3.4 will commence within 12 hours of E-3 EDG restoration and operability. Requesting this emergency license amendment may preclude the need for requesting a Notice of Enforcement Discretion (NOED) should the E-3 EDG remain inoperable longer than expected for some other unforeseen reason.

2.0 DETAILED DESCRIPTION

2.1 System Design and Operation

The PBAPS Class 1E Electrical Power Distribution System AC sources consist of the offsite power sources (i.e., preferred and alternate power sources), and the onsite standby power sources (i.e., E-1, E-2, E-3, and E-4 EDGs). The design of the AC electrical power system provides independence and redundancy to ensure an available source of power to the Engineered Safety Feature (ESF) systems.

The Class 1E AC distribution system is divided into redundant load groups, so loss of any one group does not prevent the minimum safety functions from being performed. Each load group has connections to two qualified circuits that connect each unit to multiple offsite power supplies and an EDG for each unit.

The onsite standby power source for the four 4 kV emergency buses in each unit consists of four EDGs. The four EDGs provide onsite standby power for both Unit 2 and Unit 3. Each EDG provides standby power to two 4 kV emergency buses - one associated with Unit 2 and one associated with Unit 3. A EDG starts automatically on a Loss of Coolant Accident (LOCA) signal (i.e., low reactor water level signal or high drywell pressure signal) from either Unit 2 or Unit 3 or on an emergency bus degraded voltage or undervoltage signal. After the EDG has started, it automatically ties to its respective bus after offsite power is tripped as a consequence of emergency bus undervoltage or degraded voltage, independent of or coincident with a LOCA signal.

The EDGs also start and operate in the standby mode without tying to the emergency bus on a LOCA signal alone. Following the trip of offsite power, all loads are stripped from the emergency bus. When the EDG is tied to the emergency bus, loads are then sequentially connected to its respective emergency bus by individual timers associated with each auto-connected load following a permissive from a voltage relay monitoring each emergency bus.

In the event of a loss of both offsite power sources, the ESF electrical loads are automatically connected to the EDGs in sufficient time to provide for safe reactor shutdown of both units and to mitigate the consequences of a Design Basis Accident (DBA) such as a LOCA. Within 59 seconds after the initiating signal is received, all automatically connected loads needed to recover the unit or maintain it in a safe condition are returned to service. The failure of any one EDG does not impair safe shutdown because each EDG serves an independent, redundant 4 kV emergency bus for each unit. The remaining EDGs and emergency buses have sufficient capability to mitigate the consequences of a DBA, support the shutdown of the other unit, and maintain both units in a safe condition.

The 33 kV Conowingo Station Blackout (SBO) line, using a separate 33/13.8 kV transformer, can be used to supply the circuit normally supplied by startup and emergency Auxiliary Transformer No. 2. While not a qualified circuit, this alternate source is a direct tie to the Conowingo Hydro Station that provides a highly reliable source of power because: the line and transformers at both ends of the line are dedicated to the support of PBAPS; the SBO line is not subject to damage from adverse weather conditions; and the SBO line can be isolated from other parts of the grid when necessary to ensure its availability and stability to support PBAPS. The availability of this highly reliable source of offsite power permits an extension of the allowable out-of-service time for an EDG from 7 days to 14 days from the discovery of failure to meet applicable TS requirements. Therefore, when an EDG is inoperable, it is necessary to verify the availability of the Conowingo SBO line immediately and once per 12 hours thereafter. The Completion Time of "Immediately" reflects the fact that in order to ensure that the full 14-day completion time is available for completing preplanned maintenance of a EDG, prudent plant practice at PBAPS dictates that the availability of the Conowingo SBO line be verified prior to making an EDG inoperable for preplanned maintenance. The extended completion time for restoration of an inoperable EDG afforded by the availability of the Conowingo SBO line is intended to allow completion of an EDG overhaul.

2.2 Current Technical Specifications Requirements

The monthly (i.e., once per 31 days) surveillance testing requirement for the E-4 EDG is controlled via ST-0-052-204-2, "E4 Diesel Generator Slow Start and Full Load Test," and satisfies TS SR 3.8.1.2, SR 3.8.1.3, SR 3.8.1.6, and SR 3.8.3.4. Excerpts from the specific TS SRs are noted below.

Surveillance testing of the E-4 EDG includes tests required to be performed on a monthly frequency. These tests satisfy the following TS Surveillance Requirements (SR):

SR 3.8.1.2 Verify each DG starts from standby conditions and achieves steady state voltage $\geq$ 4160 V and $\leq$ 4400 V and frequency $\geq$ 58.8 Hz and $\leq$ 61.2 Hz.

SR 3.8.1.3 Verify each DG is synchronized and loaded and operates for $\geq$ 60 minutes at a load $\geq$ 2400 kW and $\leq$ 2800 kW.

SR 3.8.1.6 Verify the fuel oil transfer system operates to automatically transfer fuel oil from storage tank to the day tank.

SR 3.8.3.4 Verify each DG air start receiver pressure is $\geq$ 225 psig.

2.3 Reason for the Proposed Change / Basis for Emergency Circumstances

On June 13, 2018, at 2205 hours, PBAPS, Units 2 and 3, entered a 14-day LCO due to an unplanned manual shutdown of the E-3 EDG. Due to the configuration and shared electrical distribution system at PBAPS, Units 2 and 3, entered TS 3.8.1, Condition B (i.e., one EDG inoperable). Maintenance activities continue in support of restoring the E-3 EDG to an operable status. The work is expected to be completed and the EDG returned to service by June 23, 2018, at 2300 hours (ET). Required surveillance testing of the E-4 EDG is scheduled to be completed by no later than June 25, 2018, at 1045 hours. This would include the allowed 25% grace per SR 3.0.2.

If the E-3 EDG is not restored to an operable status on June 23, 2018, at 2300 hours (ET) as currently planned and the extended restoration time exceeds June 25, 2018, at 1045 hours (ET), the E-4 EDG would exceed the monthly surveillance test frequency and would be declared inoperable. Testing the E-4 EDG during time when the E-3 EDG is out-of-service would also require the E-4 to be declared inoperable during testing. With two (2) inoperable, both PBAPS units would be required to enter TS 3.8.1, Condition F, "Two or more EDGs inoperable." Condition F specifies that at least one EDG be restored to an operable status within 2 hours. In addition, TS 3.8.1, Condition G would apply if the Condition F Completion Time is not met and both PBAPS units would need to be placed in Mode 3, "Hot Shutdown," within 12 hours.

Performing surveillance or other activities on the E-4 EDG while the E-3 EDG is inoperable could jeopardize the reliability and availability of the E-4 EDG if needed. Exelon is requesting a timeframe for suspending the surveillance testing such that the E-3 EDG is not restored to operable status as currently scheduled and the E-4 EDG does not pass its surveillance and is declared inoperable, both PBAPS units would be required to enter TS 3.8.1, Condition F. Condition F specifies that at least one EDG be restored to operable status within 2 hours and if that is not accomplished, the requirements of Condition G would apply and both units would need to be in Mode 3 within 12 hours, which would result in unnecessary shutdown without a commensurate benefit in nuclear safety.

2.4 Cause Determination

The cause for emergency license amendment is that the E-3 EDG is currently inoperable while the E-4 EDG TS surveillance test is required to be conducted. The E-3 EDG is planned to be returned to service by June 23, 2018, at 2300 hours (ET). If further complications are experienced that cause delays in restoring the E-3 EDG to an operable status and the timing for performing the surveillance for the E-4 EDG overlap, the station could be forced into a situation requiring a dual-unit shutdown.

2.5 Description of the Proposed Changes

The proposed changes to the TS adds the following Note to TS SR 3.8.1.2, SR 3.8.1.3, SR 3.8.1.6, and SR 3.8.3.4:

---NOTE---

Until E-3 EDG is returned to OPERABLE status, not to exceed 2205 hours (ET) on June 27, 2018, performance of SR [XXXX] for E-4 EDG may be suspended. The past due surveillances will commence within 12 hours of restoration of the E-3 operability.

The specific changes to the Units 2 and 3 TSs are provided in the marked-up and clean TS pages provided in Attachments 2 and 3, respectively.

3.0 TECHNICAL EVALUATION

3.1 Deterministic Evaluation

EDG capacity is such that any three of the four diesels can supply all required loads for the safe shutdown of one unit and a design basis accident on the other unit without offsite power. Each of the four EDGs can supply one of the four separate Class 1E emergency buses. Each EDG is started automatically on a Loss of Offsite Power (LOOP) or LOCA. The EDG arrangement provides adequate capacity to supply the ESF loads for the DBA, assuming the failure of a single active component in the system.

Since the EDG TS can accommodate a single failure, the one-time suspension for completing the surveillance on the E-4 EDG has no impact on the system design basis. The Safety Analyses acceptance criteria as provided in the Updated Final Safety Analysis Report (UFSAR) are not impacted by this change and AC power sources credited in the accident analyses will remain the same.

To ensure that the single failure design criterion is met, LCOs are specified in the plant TS requiring all redundant components of the onsite power system to be operable. In the event that a EDG is inoperable in Modes 1, 2, and 3, existing TS requirements require verification of the operability of the offsite circuits on a more frequent basis. Since suspending the performance of the monthly TS surveillance test on the E-4 EDG does not change the design basis for the standby emergency power system (i.e., EDGs), the one-time change in the surveillance suspension is considered acceptable.

The proposed suspension of SR 3.8.1.2, SR 3.8.1.3, SR 3.8.1.6, and SR 3.8.3.4 testing requirements during E-3 EDG LCO the minimizes risk by maintaining defense-in-depth. Performance of these SRs would require the affected E-4 EDG to be declared inoperable during the surveillance testing. The E-1 and E-2 EDGs would

remain operable and there SR testing frequency interval completion times do not occur during the E-3 EDG LCO or during the period of time being requested in this one-time emergency license amendment request. In the event the E-3 EDG is not returned to service and remains inoperable, a second EDG made inoperable for testing requires both Unit 2 and Unit 3 to enter TS 3.8.1, Condition F. If one of the two inoperable EDGs is not restored to operable status within 2 hours, Condition G would be entered and both units would be required to be in Mode 3 within 12 hours. SR 3.8.1.2 verifies each DG starts from standby conditions and achieves steady state voltage $\geq$ 4160 V and $\leq$ 4400 V and frequency $\geq$ 58.8 Hz and $\leq$ 61.2 Hz. SR 3.8.1.3 verify each DG is synchronized and loaded and operates for $\geq$ 60 minutes at a load $\geq$ 2400 kW and $\leq$ 2800 kW. SR 3.8.1.6 verifies the fuel oil transfer system transfers fuel oil from the day fuel oil storage tank to the engine mounted tank. This SR is performed in conjunction with the EDG operation when fuel is consumed from the engine mounted tank. SR 3.8.3.4 verifies each EDG air start receiver pressure is $\geq$ 225 psig. This SR is also performed in conjunction with the EDG testing operation. This amendment requests that these SRs for the E-4 EDG be suspended on a one-time basis until such time that E-3 EDG is returned as specified in the proposed note.

3.2 Nuclear Risk Insights

This section provides Probabilistic Risk Assessment (PRA) information and documentation to support the one-time, deterministic emergency license amendment to suspend performing required surveillance testing on the E-4 EDG per TS 3.8.1 surveillance requirements. The risk of suspending the surveillance time has been considered and will be managed in accordance with the requirements of 10 CFR 50.65(a)(4) and Regulatory Guide 1.160, *Monitoring the Effectiveness of Maintenance at Nuclear Power Plants* (i.e., Reference 2). The change is based upon the defense-in-depth guidance of NUREG-0800, Branch Technical Position (BTP) 8-8, *Onsite (Emergency Diesel Generators) and Offsite Power Sources Allowed Outage Time Extensions* (i.e., Reference 3). Therefore, it is not a risk-informed request and a risk evaluation was not required. However, to provide additional information, Exelon is providing risk insights related to the proposed surveillance change.

The overall risk of suspending the surveillance for the E-4 EDG during the period of the E-3 EDG inoperability is minimal. The time period is short and historical routine performances of these surveillances have demonstrated good performance of the EDGs. There is no indication of degraded performance of the E-1, E-2, and E-4 EDGs. The proposed changes to suspend performing the SRs is based on the consideration of unit conditions and the recognition that the most probable result of any particular surveillance being performed is the verification of conformance with the requirements.

Compensatory actions that are outlined in Section 3.3 provide additional assurance that the risk of the surveillance extension will be minimized.

3.3 Compensatory Actions

The following compensatory measures will be implemented to support the proposed emergency license amendment request.

- The E-1, E-2, and E-4 EDGs shall be protected during the period of inoperability of the E-3 EDG.

- The E-1, E-2, and E-3 EDGs shall be protected from the time of restoration of the E-3 EDG until the E-4 EDG surveillance is satisfactorily performed.

- The Conowingo SBO line, station batteries, and battery chargers, shall be protected, as defense-in-depth, during the suspended EDG surveillance time authorized by the proposed emergency license amendment. In addition, access to the substations will be controlled.

- The "N+1" Flex Pump and Flex Generator will be pre-staged inside the site protected area to allow for more rapid deployment in the event of a LOOP with concurrent additional EDG failures. The use of the "N+1" equipment allows the required FLEX gear to be retained within the protected building, preserving them for an actual FLEX event. This will be controlled in accordance with exiting plant procedures.

- Component testing or maintenance of safety systems in the off-site power systems and important non-safety equipment in the off-site power systems which can increase the likelihood of a plant transient or LOOP, as determined by plant management, will be avoided during the during the suspended EDG surveillance time authorized by the proposed emergency license amendment.

- The following equipment shall be protected as defense-in-depth, during the suspended EDG surveillance time authorized by the proposed emergency license amendment:

    - RHR Pumps
    - CS Pumps
    - HPSW Pumps
    - All 4kV Bus Rooms
    - LPCI Swing Buses
    - A ESW Pump
    - B MCREV Fan
    - B Standby Gas Treatment Fan
    - 20D021(2) 125V DC Bus
    - 30D024 125V DC Bus
    - E124-R-C
    - E134-W-A

- E224-R-B
- E234-R-B
- E324-R-B
- E334-R-B
- E424-W-A
- E434-R-B

- Discretionary substation maintenance shall not be allowed during the suspended EDG surveillance time authorized by the proposed emergency licensed amendment.

- The High Pressure Coolant Injection (HPCI) pump, Reactor Core Isolation Cooling (RCIC) pump, and the Residual Heat Removal (RHR) pump associated with the operable EDGs will not be removed from service for elective maintenance activities during the suspended EDG surveillance time authorized by the proposed emergency license amendment.

- The system load dispatcher shall be contacted once per day to determine if any significant grid perturbations (i.e., high grid loading unable to withstand a single contingency of line or generation outage) are expected during the suspended EDG surveillance time authorized by the proposed emergency license amendment. If significant grid perturbations are expected, station managers will assess the conditions and determine the best course for the plant.

Additionally, during the suspended EDG surveillance time authorized by the proposed emergency license amendment, Operations shift crews will be briefed at the beginning of each shift regarding actions in response to a Loss of Offsite Power (LOOP) per applicable plant procedures. Also, all required Fire Risk Management Actions (RMAs) will be performed in accordance with site procedures that fulfill the requirements of 10 CFR 50.65(a)(4).

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

10 CFR 50.36(c)(2)(ii), stipulates that a TS LCO must be established for each item meeting one or more of the following criteria:

1. Installed instrumentation that is used to detect, and indicate in the Control Room, a significant abnormal degradation of the reactor coolant pressure boundary.
2. A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of, or presents a challenge to the integrity of a fission product barrier.
3. A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

4. A structure, system, or component which operating experience or PRA has shown to be significant to public health and safety.

The proposed changes do not modify any plant equipment that provides emergency power to the safety-related emergency buses. Evaluation of the proposed changes has determined that the reliability of AC electrical sources is not significantly affected by the proposed changes and that applicable regulations and requirements continue to be met.

As discussed in Appendix H to the PBAPS Updated Final Safety Analysis Report (UFSAR), during the construction/licensing process, both units were evaluated against the then-current AEC draft of the 27 General Design Criteria (GDC) issued in November 1965. A revised and expanded set of the 70 draft GDC was issued on July 11, 1967. Appendix H to the UFSAR contains an evaluation of the design basis of PBAPS against a set of the 70 draft GDC and it was concluded that PBAPS conforms to the intent of the draft GDC. Criterion 24 requires sufficient alternate sources of power to be provided to permit the required functioning of reactor protection systems. The onsite system is required to have sufficient independence, redundancy, and testability to perform its safety function, assuming a single failure. The offsite power system is required to be supplied by two physically independent circuits that are designed and located so as to minimize, to the extent practical, the likelihood of their simultaneous failure under operating and postulated accident and environmental conditions. The proposed changes do not affect PBAPS's compliance with the intent of the draft GDC.

10 CFR 50.63(a) of 10 CFR, *Loss of all alternating current power,* requires that each light water-cooled nuclear power plant licensed to operate be able to withstand for a specified duration and recover from a station blackout. The proposed changes do not affect PBAPS compliance with 10 CFR 50.63(a). NUREG-0800, Branch Technical Position (BTP) 8-8, *Onsite (Emergency Diesel Generators) and Offsite Power Sources Allowed Outage Time Extensions*, provides guidance to the NRC staff in reviewing amendment requests for licensees proposing a one-time or permanent TS change to extend an EDG Completion Times to beyond 72 hours. The BTP 8-8 emphasizes that more defense-in-depth is needed for SBO scenarios which are more likely to occur as compared to the likely occurrence of the large and medium size LOCA scenarios. The proposed amendment is consistent with the guidance of BTP 8-8.

Therefore, based on the considerations discussed above:

1. There is a reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner;
2. Such activities will be conducted in compliance with the Commission's regulations; and
3. Issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Exelon has determined that the proposed changes do not require any exemptions or relief from regulatory requirements, other than the TS, and do not affect conformance with the intent of any GDC differently than described in the Updated Final Safety Analysis Report.

4.2 Precedent

The proposed emergency license amendment was developed using relevant information from an approved change for Brunswick Steam Electric Plant, Units 2 and 2, dated November 26, 2107 (Reference 7). The Brunswick precedent involved a request to extend EDG TS allowed outage completion times along with suspending the performance of surveillances for three (3) EDGs while the a fourth EDG was inoperable.

Exelon's proposed license amendment request does not involve extending TS allowed outage completion times and only requests suspension for completion of one EDG TS surveillance (i.e., monthly surveillance for the E-4 EDG) until the end of the E-3 EDG 14-day LCO period.

4.3 No Significant Hazards Consideration

Exelon Generation Company, LLC (Exelon), is requesting that, on a one-time basis, suspension of Technical Specification (TS) Surveillance Requirement (SRs) 3.8.1.2, 3.8.1.3, 3.8.1.6, and 3.8.3.4 related to performing monthly testing of the E-4 Emergency Diesel Generator (EDG). The E-4 EDG surveillance testing will commence within 12 hours following restoration of the E-3 EDG to operable status. Exelon has evaluated whether a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, *Issuance of amendment*, as discussed below:

1. **Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?**

   Response: No

   The proposed license amendment provides a deterministic one-time change to suspend the monthly surveillance testing for the E-4 EDG following restoration of the E-3 EDG to operable status. These changes will have no effect on accident probabilities since the EDGs are not considered accident initiators. The proposed suspension of the E-4 EDG surveillance interval does not require any physical plant modifications. Since no individual precursors of an accident are affected, the proposed amendment does not increase the probability of a previously analyzed event.

   The consequences of an evaluated accident are determined by the operability of plant systems designed to mitigate those consequences. The EDGs are backup power to components that mitigate the consequences of accidents. The current TSs permit a single EDG to be inoperable for up to 14 days. The proposed changes would suspend the monthly surveillance testing for the E-4 EDG on a one-time basis, such that the testing would commence following restoration of the E-3 EDG. The proposed changes do not affect any of the assumptions used in deterministic safety analysis. Likewise, the suspension of SR 3.8.1.2, SR 3.8.1.3, SR 3.8.1.6, and 3.8.3.4 related to the E-4 EDG testing temporary basis has no impact on any of the assumptions used in deterministic safety analysis. Granting the proposed change will not adversely affect the consequences of an accident previously evaluated.

Therefore, the proposed amendments do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?**

Response: No

Creation of the possibility of a new or different kind of accident requires creating one or more new accident precursors. New accident precursors may be created by modifications of plant configuration, including changes in allowable modes of operation.

The proposed license amendment provides a deterministic one-time change to suspend the monthly surveillance testing of the E-4 EDG following restoration of the E-3 EDG to operable status. These proposed changes do not involve a modification or the physical configuration of the plant (i.e., no new equipment will be installed), create any new failure modes for existing equipment, or create any new limiting single failures. The plant equipment considered available when evaluating the proposed change remains unchanged. Suspending SR 3.8.1.2, SR 3.8.1.3, SR 3.8.1.6 and 3.8.3.4 related to the E-4 EDG testing on a temporary basis will permit completion of repair activities on the E-3 EDG should they be delayed without incurring transient risks associated with performing a dual-unit shutdown with the EDG unavailable.

Therefore, the proposed amendments do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. **Does the proposed change involve a significant reduction in a margin of safety?**

Response: No

The proposed license amendment provides a deterministic one-time change suspending the monthly surveillance testing of the E-4 EDG following restoration of the E-3 EDG to operable status. A deterministic evaluation of the proposed changes demonstrates there is sufficient margin to safety during the time period that the E-4 EDG surveillance testing is delayed. The overall risk of not performing SR 3.8.1.2, SR 3.8.1.3, SR 3.8.1.6, and SR 3.8.3.4 for the E-4 EDG is minimal and is consistent with defense-in-depth philosophy. The time period of the temporary suspension is short and historical routine performances of SR 3.8.1.2, SR 3.8.1.3, SR 3.8.1.6, and 3.8.3.4 have demonstrated good performance of the E-4 EDG. The E-1 and E-2 EDGs are not affected by the proposed changes and would remain operable along with the E-4 EDG during the suspended period that the E-3 EDG is inoperable. Suspending the SR 3.8.1.2, SR 3.8.1.3, and SR 3.8.1.6 is based on the consideration of unit conditions and the recognition that the most probable result of any particular surveillance being performed is the verification of conformance with the requirements.

Therefore, the proposed amendments do not result in a significant reduction in the margin of safety.

Based on the above, Exelon concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

4.4 Conclusion

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or a significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 REFERENCES

1. Nuclear Utility Management and Resource Council (NUMARC) 87-00, *Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors*, Revision 1, August 1991
2. Regulatory Guide 1.160, *Monitoring the Effectiveness of Maintenance at Nuclear Power Plants*, Revision 3, dated May 2012
3. NUREG-0800, Branch Technical Position (BTP) 8-8, *Onsite (Emergency Diesel Generators) and Offsite Power Sources Allowed Outage Time Extensions*, dated February 2012 (i.e., ADAMS Accession No. ML113640138)
4. Regulatory Guide 1.177, *An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications*, Revision 1, dated May 2011
5. Letter to NRC for Brunswick Steam Electric Plant, Units 1 and 2 - *Request for Emergency License Amendment - Technical Specification 3.8.1, AC Sources – Operating, One-Time Extension of Emergency Diesel Generator Completion Times and Suspension of Surveillance Requirements*, dated November 22, 2017 (ML17326B619)

6. Letter to NRC for Brunswick Steam Electric Plant, Units 1 and 2 - *Response to Request for Additional Information Regarding Request for Emergency License Amendment - Technical Specification 3.8.1, AC Sources – Operating, One-Time Extension of Emergency Diesel Generator Completion Times and Suspension of Surveillance Requirements*, dated November 24, 2017 (ML17328A682)
7. Letter from NRC to Brunswick Steam Electric Plant, Units 1 and 2 – Issuance of Amendments for Technical Specification 3.8.1, "AC [Alternating Current] Sources – Operating" One-Time Extension of Emergency Diesel Generator Completion Times and Suspension of Surveillance Requirements (Emergency Situation), dated November 26, 2017 (ML173280072)

ATTACHMENT 2

Peach Bottom Atomic Power Station, Units 2 and 3
Docket Nos. 50-277 and 50-278

Emergency License Amendment Request – One-Time Change Suspending Emergency Diesel Generator Completion Surveillance Requirements

Proposed Technical Specifications Markup Pages

Unit 2	Unit 3
3.8-7	3.8-7
3.8-8	3.8-8
3.8-9	3.8-9
3.8-27	3.8-27

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.8.1.2 ----------NOTES---------- 1. Performance of SR 3.8.1.7 satisfies this SR. 2. All DG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading. 3. A modified DG start involving idling and gradual acceleration to synchronous speed may be used for this SR as recommended by the manufacturer. When modified start procedures are not used, the time, voltage, and frequency tolerances of SR 3.8.1.7 must be met. 4. A single test at the specified Frequency will satisfy this Surveillance for both units. ---------- Verify each DG starts from standby conditions and achieves steady state voltage ≥ 4160 V and ≤ 4400 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.	In accordance with the Surveillance Frequency Control Program.

INSET 1

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.8.1.3	----------NOTES---------- 1. DG loadings may include gradual loading as recommended by the manufacturer. 2. Momentary transients outside the load range do not invalidate this test. 3. This Surveillance shall be conducted on only one DG at a time. 4. This SR shall be preceded by and immediately follow, without shutdown, a successful performance of SR 3.8.1.2 or SR 3.8.1.7. 5. A single test will satisfy this Surveillance for both units, with synchronization to the Unit 2 4 kV emergency bus for one periodic test and synchronization to the Unit 3 4 kV emergency bus during the next periodic test. However, if the test is not performed on Unit 3, then the test shall be performed synchronized to the Unit 2 4 kV emergency bus. ----------	
	Verify each DG is synchronized and loaded and operates for ≥ 60 minutes at a load ≥ 2400 kW and ≤ 2800 kW.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.4	Verify each day tank contains ≥ 250 gal of fuel oil.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.5	Check for and remove accumulated water from each day tank.	In accordance with the Surveillance Frequency Control Program.

INSERT 2

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.8.1.6 ----------NOTE---------- 1. Procedurally controlled manual actions for manually operating local hand valves and control switches associated with the DG fuel oil transfer system is limited to support transferring fuel between DGs, testing, and sampling activities. ---------- Verify the fuel oil transfer system operates to automatically transfer fuel oil from storage tank to the day tank.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.7 ----------NOTES---------- 1. All DG starts may be preceded by an engine prelube period. 2. A single test at the specified Frequency will satisfy this Surveillance for both units. ---------- Verify each DG starts from standby condition and achieves, in ≤ 10 seconds, voltage ≥ 4160 V and frequency ≥ 58.8 Hz, and after steady state conditions are reached, maintains voltage ≥ 4160 V and ≤ 4400 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.8 ----------NOTE---------- This Surveillance shall not be performed in MODE 1 or 2. However, credit may be taken for unplanned events that satisfy this SR. ---------- Verify automatic and manual transfer of the unit power supply from the normal offsite circuit to the alternate offsite circuit.	In accordance with the Surveillance Frequency Control Program.

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.3.1	Verify each fuel oil storage tank contains ≥ 33,000 gal of fuel.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.3.2	Verify lube oil inventory is ≥ a 7 day supply.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.3.3	Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.4	INSERT 4 Verify each DG air start receiver pressure is ≥ 225 psig.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.3.5	Check for and remove accumulated water from each fuel oil storage tank.	In accordance with the Surveillance Frequency Control Program.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.8.1.2 ----------NOTES---------- 1. Performance of SR 3.8.1.7 satisfies this SR. 2. All DG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading. 3. A modified DG start involving idling and gradual acceleration to synchronous speed may be used for this SR as recommended by the manufacturer. When modified start procedures are not used, the time, voltage, and frequency tolerances of SR 3.8.1.7 must be met. 4. A single test at the specified Frequency will satisfy this Surveillance for both units. ---------- Verify each DG starts from standby conditions and achieves steady state voltage ≥ 4160 V and ≤ 4400 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.	In accordance with the Surveillance Frequency Control Program.

INSERT 1 →

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.3	----------NOTES---------- 1. DG loadings may include gradual loading as recommended by the manufacturer. 2. Momentary transients outside the load range do not invalidate this test. 3. This Surveillance shall be conducted on only one DG at a time. 4. This SR shall be preceded by and immediately follow, without shutdown, a successful performance of SR 3.8.1.2 or SR 3.8.1.7. 5. A single test will satisfy this Surveillance for both units, with synchronization to the Unit 3 4 kV emergency bus for one periodic test and synchronization to the Unit 2 4 kV emergency bus during the next periodic test. However, if the test is not performed on Unit 2, then the test shall be performed synchronized to the Unit 3 4 kV emergency bus. ----------	
	Verify each DG is synchronized and loaded and operates for ≥ 60 minutes at a load ≥ 2400 kW and ≤ 2800 kW.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.4	Verify each day tank contains ≥ 250 gal of fuel oil.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.5	Check for and remove accumulated water from each day tank.	In accordance with the Surveillance Frequency Control Program.

INSERT 2 →

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.8.1.6 ----------NOTE---------- 1. Procedurally controlled manual actions for manually operating local hand valves and control switches associated with the DG fuel oil transfer system is limited to support transferring fuel between DGs, testing, and sampling activities. ---------- INSERT 3	
Verify the fuel oil transfer system operates to automatically transfer fuel oil from storage tank to the day tank.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.7 ----------NOTES---------- 1. All DG starts may be preceded by an engine prelube period. 2. A single test at the specified Frequency will satisfy this Surveillance for both units. ----------	
Verify each DG starts from standby condition and achieves, in ≤ 10 seconds, voltage ≥ 4160 V and frequency ≥ 58.8 Hz, and after steady state conditions are reached, maintains voltage ≥ 4160 V and ≤ 4400 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.8 ----------NOTE---------- This Surveillance shall not be performed in MODE 1 or 2. However, credit may be taken for unplanned events that satisfy this SR. ----------	
Verify automatic and manual transfer of the unit power supply from the normal offsite circuit to the alternate offsite circuit.	In accordance with the Surveillance Frequency Control Program.

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.8.3.1	Verify each fuel oil storage tank contains ≥ 33,000 gal of fuel.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.3.2	Verify lube oil inventory is ≥ a 7 day supply.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.3.3	Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.4	INSERT 4 Verify each DG air start receiver pressure is ≥ 225 psig.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.3.5	Check for and remove accumulated water from each fuel oil storage tank.	In accordance with the Surveillance Frequency Control Program.

TS MARKUP INSERTS (Applicable to Units 2 and 3)

INSERT 1

5. Until E-3 EDG is returned to OPERABLE status, not to exceed 2205 hours (ET) on June 27, 2018, performance of SR 3.8.1.2 for E-4 EDG may be suspended. The past due surveillance will commence within 12 hours of restoration of the E-3 EDG operability.

INSERT 2

6. Until E-3 EDG is returned to OPERABLE status, not to exceed 2205 hours (ET) on June 27, 2018, performance of SR 3.8.1.3 for E-4 EDG may be suspended. The past due surveillance will commence within 12 hours of restoration of the E-3 EDG operability.

INSERT 3

2. Until E-3 EDG is returned to OPERABLE status, not to exceed 2205 hours (ET) on June 27, 2018, performance of SR 3.8.1.6 for E-4 EDG may be suspended. The past due surveillance will commence within 12 hours of restoration of the E-3 EDG operability.

INSERT 4

----------NOTE----------
Until E-3 EDG is returned to OPERABLE status, not to exceed 2205 hours (ET) on June 27, 2018, performance of SR 3.8.3.4 for E-4 EDG may be suspended. The past due surveillance will commence within 12 hours of restoration of the E-3 EDG operability.

ATTACHMENT 3

Peach Bottom Atomic Power Station, Units 2 and 3
Docket Nos. 50-277 and 50-278

Emergency License Amendment Request – One-Time Change Suspending Emergency Diesel Generator Completion Surveillance Requirements

Proposed Technical Specifications Clean Pages

Unit 2	Unit 3
3.8-7	3.8-7
3.8-8	3.8-8
3.8-9	3.8-9
3.8-27	3.8-27

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.2	----------NOTES---------- 1. Performance of SR 3.8.1.7 satisfies this SR. 2. All DG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading. 3. A modified DG start involving idling and gradual acceleration to synchronous speed may be used for this SR as recommended by the manufacturer. When modified start procedures are not used, the time, voltage, and frequency tolerances of SR 3.8.1.7 must be met. 4. A single test at the specified Frequency will satisfy this Surveillance for both units. 5. Until E-3 EDG is returned to OPERABLE status, not to exceed 2205 hours (ET) on June 27, 2018, performance of SR 3.8.1.2 for E-4 EDG may be suspended. The past due surveillance will commence within 12 hours of restoration of the E-3 EDG operability. ---------- Verify each DG starts from standby conditions and achieves steady state voltage $\geq$ 4160 V and $\leq$ 4400 V and frequency $\geq$ 58.8 Hz and $\leq$ 61.2 Hz.	In accordance with the Surveillance Frequency Control Program.

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.3	----------NOTES---------- 1. DG loadings may include gradual loading as recommended by the manufacturer. 2. Momentary transients outside the load range do not invalidate this test. 3. This Surveillance shall be conducted on only one DG at a time. 4. This SR shall be preceded by and immediately follow, without shutdown, a successful performance of SR 3.8.1.2 or SR 3.8.1.7. 5. A single test will satisfy this Surveillance for both units, with synchronization to the Unit 2 4 kV emergency bus for one periodic test and synchronization to the Unit 3 4 kV emergency bus during the next periodic test. However, if the test is not performed on Unit 3, then the test shall be performed synchronized to the Unit 2 4 kV emergency bus. 6. Until E-3 EDG is returned to OPERABLE status, not to exceed 2205 hours (ET) on June 27, 2018, performance of SR 3.8.1.3 for E-4 EDG may be suspended. The past due surveillance will commence within 12 hours of restoration of the E-3 EDG operability. ---------- Verify each DG is synchronized and loaded and operates for ≥ 60 minutes at a load ≥ 2400 kW and ≤ 2800 kW.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.4	Verify each day tank contains ≥ 250 gal of fuel oil.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.5	Check for and remove accumulated water from each day tank.	In accordance with the Surveillance Frequency Control Program.

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.6	----------NOTES---------- 1. Procedurally controlled manual actions for manually operating local hand valves and control switches associated with the DG fuel oil transfer system is limited to support transferring fuel between DGs, testing, and sampling activities. 2. Until E-3 EDG is returned to OPERABLE status, not to exceed 2205 hours (ET) on June 27, 2018, performance of SR 3.8.1.6 for E-4 EDG may be suspended. The past due surveillance will commence within 12 hours of restoration of the E-3 EDG operability. ---------- Verify the fuel oil transfer system operates to automatically transfer fuel oil from storage tank to the day tank.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.7	----------NOTES---------- 1. All DG starts may be preceded by an engine prelube period. 2. A single test at the specified Frequency will satisfy this Surveillance for both units. ---------- Verify each DG starts from standby condition and achieves, in ≤ 10 seconds, voltage ≥ 4160 V and frequency ≥ 58.8 Hz, and after steady state conditions are reached, maintains voltage ≥ 4160 V and ≤ 4400 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.8	----------NOTE---------- This Surveillance shall not be performed in MODE 1 or 2. However, credit may be taken for unplanned events that satisfy this SR. ---------- Verify automatic and manual transfer of the unit power supply from the normal offsite circuit to the alternate offsite circuit.	In accordance with the Surveillance Frequency Control Program.

(continued)

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.8.3.1	Verify each fuel oil storage tank contains ≥ 33,000 gal of fuel.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.3.2	Verify lube oil inventory is ≥ a 7 day supply.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.3.3	Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.4	----------NOTE---------- Until E-3 EDG is returned to OPERABLE status, not to exceed 2205 hours (ET) on June 27, 2018, performance of SR 3.8.3.4 for E-4 EDG may be suspended. The past due surveillance will commence within 12 hours of restoration of the E-3 EDG operability. ---------- Verify each DG air start receiver pressure is ≥ 225 psig.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.3.5	Check for and remove accumulated water from each fuel oil storage tank.	In accordance with the Surveillance Frequency Control Program.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.2	----------NOTES---------- 1. Performance of SR 3.8.1.7 satisfies this SR. 2. All DG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading. 3. A modified DG start involving idling and gradual acceleration to synchronous speed may be used for this SR as recommended by the manufacturer. When modified start procedures are not used, the time, voltage, and frequency tolerances of SR 3.8.1.7 must be met. 4. A single test at the specified Frequency will satisfy this Surveillance for both units. 5. Until E-3 EDG is returned to OPERABLE status, not to exceed 2205 hours (ET) on June 27, 2018, performance of SR 3.8.1.2 for E-4 EDG may be suspended. The past due surveillance will commence within 12 hours of restoration of the E-3 EDG operability. ---------- Verify each DG starts from standby conditions and achieves steady state voltage $\geq$ 4160 V and $\leq$ 4400 V and frequency $\geq$ 58.8 Hz and $\leq$ 61.2 Hz.	In accordance with the Surveillance Frequency Control Program.

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.3	----------NOTES---------- 1. DG loadings may include gradual loading as recommended by the manufacturer. 2. Momentary transients outside the load range do not invalidate this test. 3. This Surveillance shall be conducted on only one DG at a time. 4. This SR shall be preceded by and immediately follow, without shutdown, a successful performance of SR 3.8.1.2 or SR 3.8.1.7. 5. A single test will satisfy this Surveillance for both units, with synchronization to the Unit 3 4 kV emergency bus for one periodic test and synchronization to the Unit 2 4 kV emergency bus during the next periodic test. However, if the test is not performed on Unit 2, then the test shall be performed synchronized to the Unit 3 4 kV emergency bus. 6. Until E-3 EDG is returned to OPERABLE status, not to exceed 2205 hours (ET) on June 27, 2018, performance of SR 3.8.1.3 for E-4 EDG may be suspended. The past due surveillance will commence within 12 hours of restoration of the E-3 EDG operability. ---------- Verify each DG is synchronized and loaded and operates for ≥ 60 minutes at a load ≥ 2400 kW and ≤ 2800 kW.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.4	Verify each day tank contains ≥ 250 gal of fuel oil.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.5	Check for and remove accumulated water from each day tank.	In accordance with the Surveillance Frequency Control Program.

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.6	----------NOTES---------- 1. Procedurally controlled manual actions for manually operating local hand valves and control switches associated with the DG fuel oil transfer system is limited to support transferring fuel between DGs, testing, and sampling activities. 2. Until E-3 EDG is returned to OPERABLE status, not to exceed 2205 hours (ET) on June 27, 2018, performance of SR 3.8.1.6 for E-4 EDG may be suspended. The past due surveillance will commence within 12 hours of restoration of the E-3 EDG operability. ---------- Verify the fuel oil transfer system operates to automatically transfer fuel oil from storage tank to the day tank.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.7	----------NOTES---------- 1. All DG starts may be preceded by an engine prelube period. 2. A single test at the specified Frequency will satisfy this Surveillance for both units. ---------- Verify each DG starts from standby condition and achieves, in ≤ 10 seconds, voltage ≥ 4160 V and frequency ≥ 58.8 Hz, and after steady state conditions are reached, maintains voltage ≥ 4160 V and ≤ 4400 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.1.8	----------NOTE---------- This Surveillance shall not be performed in MODE 1 or 2. However, credit may be taken for unplanned events that satisfy this SR. ---------- Verify automatic and manual transfer of the unit power supply from the normal offsite circuit to the alternate offsite circuit.	In accordance with the Surveillance Frequency Control Program.

(continued)

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.8.3.1	Verify each fuel oil storage tank contains ≥ 33,000 gal of fuel.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.3.2	Verify lube oil inventory is ≥ a 7 day supply.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.3.3	Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.4	----------NOTE---------- Until E-3 EDG is returned to OPERABLE status, not to exceed 2205 hours (ET) on June 27, 2018, performance of SR 3.8.3.4 for E-4 EDG may be suspended. The past due surveillance will commence within 12 hours of restoration of the E-3 EDG operability. ---------- Verify each DG air start receiver pressure is ≥ 225 psig.	In accordance with the Surveillance Frequency Control Program.
SR 3.8.3.5	Check for and remove accumulated water from each fuel oil storage tank.	In accordance with the Surveillance Frequency Control Program.