

RS-18-009

10 CFR 50.90

January 24, 2018

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

LaSalle County Station, Units 1 and 2  
Renewed Facility Operating License Nos. NPF-11 and NPF-18  
NRC Docket Nos. 50-373 and 50-374

Subject: License Amendment Request for Temporary Extensions to Technical  
Specifications Supporting Maintenance on Portions of the Core Standby Cooling  
System

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (EGC), requests an amendment to Renewed Facility Operating License Nos. NPF-11 and NPF-18 for LaSalle County Station (LSCS), Units 1 and 2, respectively.

The proposed changes modify Technical Specifications (TSs) 3.7.2, "Diesel Generator Cooling Water (DGCW) System;" 3.8.1, "AC Sources-Operating;" and the associated TS Bases. The proposed changes allow an extended period to install isolation valves to support replacing degraded Core Standby Cooling System piping.

Attachment 1 provides an evaluation of the proposed change. Attachment 2 provides supporting figures for the evaluation. Attachment 3 provides the existing TS pages marked up to show the proposed changes. Attachment 4 provides the existing TS Bases pages marked up to show the proposed changes. The proposed Bases changes are provided for information only.

EGC requests approval of the proposed license amendment by January 24, 2019 in advance of LSCS Refueling Outage L2R17. Once approved, the amendment shall be implemented within 30 days.

The proposed changes have been reviewed and approved by the LSCS Plant Operations Review Committee in accordance with the requirements of the EGC Quality Assurance Program.

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

There are no regulatory commitments contained within this letter. Should you have any questions concerning this letter, please contact Ryan Sprengel at (630) 657-2814.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 24<sup>th</sup> day of January 2018.

Respectfully,

A handwritten signature in black ink, appearing to read 'D. M. Gullott', followed by a horizontal line.

David M. Gullott  
Manager – Licensing  
Exelon Generation Company, LLC

Attachments:

1. Evaluation of Proposed Changes
2. Supporting Figures
3. Proposed Technical Specification Changes for LaSalle County Station, Units 1 and 2
4. Proposed Technical Specification Bases Changes for LaSalle County Station, Units 1 and 2

cc: NRC Regional Administrator, Region III, USNRC  
NRC Senior Resident Inspector – LaSalle County Station  
Illinois Emergency Management Agency – Division of Nuclear Safety

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**Evaluation of Proposed Changes**

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# **ATTACHMENT 1**

## **Evaluation of Proposed Changes**

### **License Amendment Request for Temporary Extensions to Technical Specifications Supporting Maintenance on Portions of the Core Standby Cooling System**

#### **1.0 SUMMARY DESCRIPTION**

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (EGC), requests an amendment to Renewed Facility Operating License Nos. NPF-11 and NPF-18 for LaSalle County Station (LSCS), Units 1 and 2, respectively.

The proposed changes modify Technical Specifications (TSs) 3.7.2, "Diesel Generator Cooling Water (DGCW) System;" 3.8.1, "AC Sources-Operating;" and the associated TS Bases. The proposed changes allow an extended period to install isolation valves to support replacing degraded Core Standby Cooling System (CSCS) piping.

#### **2.0 DETAILED DESCRIPTION**

The proposed changes modify TS 3.7.2 to include a 7 day Completion Time (CT) when one or more required DGCW subsystem(s) are inoperable. The proposed changes to TS 3.8.1 include a 7 day CT when a Division 2 Diesel Generator (DG) and the required opposite unit Division 2 DG are inoperable. The proposed changes will only be used during four refueling outages, two for Unit 1 prior to July 1, 2024, and two for Unit 2 prior to July 1, 2023. The current planned schedule, subject to change, is L2R17 (2019), L1R18 (2020), L2R18 (2021), and L1R19 (2022). The TS 3.8.1 changes would only be applicable for Division 2 work and would only be used during two refueling outages, one for Unit 1 prior to July 1, 2024, and one for Unit 2 prior to July 1, 2023. The current planned schedule for the Division 2 work, subject to change, is L2R17 (2019) and L1R19 (2022).

#### **2.1 SYSTEM DESIGN AND OPERATION**

The function of the Core Standby Cooling System (CSCS) is to circulate lake water from the ultimate heat sink for cooling of the Residual Heat Removal (RHR) heat exchangers, DG coolers, CSCS cubicle area cooling coils, RHR pump seal coolers, and Low-Pressure Core Spray (LPCS) pump motor cooling coils. This system also provides a source of emergency makeup water for fuel pool cooling and provides containment flooding water for post-accident recovery. CSCS is equivalent in purpose to the essential service water cooling systems at other stations.

The CSCS for each unit consists of three independent piping subsystems corresponding to the three essential electrical power supply divisions for each unit. All pumps and strainers are located in the basements of the buildings within watertight cubicles to provide separation between divisions and flood protection. Outdoor CSCS piping is buried to provide tornado and missile protection.

CSCS subsystems take a suction from the service water tunnel located in the basement of the Lake Screen House. The service water tunnel is kept full by six inlet lines which connect to the circulating water pump forebays.

Division 1 of each unit includes two RHR service water (RHRSW) pumps which supply cooling water to the Division 1 RHR heat exchanger and RHR pump seal cooler. The fuel pool emergency makeup pump in Division 1 of each unit supplies a source of emergency makeup

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water to the spent fuel pool. Also included in Division 1 of Unit 1 is a DGCW pump which supplies cooling water to the Division 1 DG, Unit 1 and 2 LPCS pump motor coolers, and Units 1 and 2 Division 1 CSCS area coolers. Electrical power for operation of these pumps is supplied from Division 1 essential power.

Two RHRSW pumps are also provided in Division 2 of each unit to supply cooling water to the Division 2 RHR heat exchanger and the two Division 2 RHR pump seal coolers. The DGCW pump in Division 2 of each unit supplies cooling water to the Division 2 DG and to the Division 2 CSCS area cooler. The Division 2 fuel pool emergency makeup pump provides a redundant source of emergency makeup water to the spent fuel pool and provides a source of containment flooding water to the RHR system for post-accident recovery. Electrical power for these pumps is supplied from Division 2 essential power.

Both the High Pressure Core Spray (HPCS) DG and the Division 3 CSCS area cooler are supplied with cooling water by the Division 3 HPCS DGCW pump. Electrical power for this pump is supplied from Division 3 essential power.

Each of the six CSCS divisions across the two units is configured with a separate suction pipe from the service water tunnel. The CSCS discharge pipes are combined into a common discharge for identical divisions of both Units 1 and 2. The discharge pipe outlets at the CSCS cooling pond are located above the normal cooling lake level.

Redundancy is provided by designing the CSCS system as multiple independent subsystems. Separation between subsystems assures that no single failure can affect more than one subsystem. Therefore, assuming a single failure in any subsystem including the subsystem shared between units, two subsystems in each unit will remain unaffected. These two subsystems can supply the minimum required cooling water for safe shutdown of a unit or mitigate the consequences of an accident.

Each Engineered Safety Features (ESF) Division has a DG that serves as an independent onsite power source in the event of the simultaneous occurrence of a total Loss of Offsite Power (LOOP) and a loss of the unit auxiliary power system. The DGs have ample capacity to supply all power required for the safe shutdown of both units in the event of a total loss of offsite power, a Loss of Coolant Accident (LOCA) on one unit concurrent with the shutdown of a unit without a LOCA, or a concurrent shutdown of both units without LOCAs.

The RHR system has three functional modes, each of which contributes towards satisfying the design basis of the system.

The different modes of RHR operation include:

- Shutdown Cooling Reactor Pressure Vessel Head Spray
- Low Pressure Coolant Injection (LPCI) Mode
- Containment Cooling Mode (Suppression Pool Cooling and Containment Spray)

The LPCS system's primary function is to provide low pressure core spray to mitigate the effects of an intermediate and large break LOCAs.

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## **2.2 CURRENT TECHNICAL SPECIFICATIONS REQUIREMENTS**

The current TS LCO 3.7.2 requires that three DGCW subsystems; and the opposite unit Division 2 DGCW subsystem be operable in Modes 1, 2, and 3. Condition A currently requires that with one or more DGCW subsystems inoperable, immediately declare the supported component(s) inoperable.

The current TS LCO 3.8.1 requires two qualified circuits, three DGs, and the required opposite unit DG be operable in Modes 1, 2, and 3. Condition B currently allows one Division 2 DG or the required opposite unit Division 2 DG to be inoperable with a CT of 14 days. Condition C currently allows both units' Division 2 DGs to be inoperable with a CT of 72 hours. Condition F currently allows both units' Division 2 DGs to be inoperable with a CT of 2 hours.

## **2.3 DESCRIPTION OF THE PROPOSED CHANGE**

The proposed change adds two notes to TS 3.7.2 Condition A stating that the Condition is not applicable to Division 1 or 2, respectively, during the installation of CSCS isolation valves during Unit 1 refueling outages prior to July 1, 2024, and during Unit 2 refueling outages prior to July 1, 2023. For Unit 1, the two uses, once for Division 1 and once for Division 2, would occur during Refueling Outages 18, 19, or 20. For Unit 2, the two uses, once for Division 1 and once for Division 2, would occur during Refueling Outages 17, 18, or 19. Either Division 1 or Division 2 CSCS isolation valve installation will be performed on the outage unit during a single refueling outage and the note may not be used in subsequent outages for the same unit and division. Two new Conditions are added to TS 3.7.2 to facilitate the requested CT. The first new Condition addresses the inoperability of one or more DGCW subsystems with a CT of 7 days (for Division 1 and 2 CSCS isolation valve installations). This proposed CT of 7 days will only be applicable during two Unit 1 Refueling Outages prior to July 1, 2024, and two Unit 2 Refueling Outages prior to July 1, 2023. The applicability is described in two notes to the proposed TS 3.7.2 Condition B. The second new Condition added to TS 3.7.2, Condition C, is to address if the Required Action and associated CT previously discussed is not met. The proposed Required Action and CT is to be in Mode 3 and Mode 4, in 12 and 36 hours, respectively.

The two notes added to TS 3.7.2 Condition A and the proposed Condition B restrict the applicability and use of the extended CT requested to install CSCS isolation valves. The period of applicability is only during the refueling outages prior to identified cutoff dates, to be used once for each division on each unit (four times in total), and is during the periods when the DGCW is inoperable due to use of a nonconforming line stop. The two notes added to TS 3.7.2 Condition A and proposed Condition B are not intended for use when any DGCW subsystem is inoperable for any other reason. This intent and direction is included in the associated TS Bases for the proposed Condition B (Attachment 4).

In accordance with TS LCO 3.0.1 the components supported by inoperable DGCW subsystems will be declared inoperable; however, the CTs of the LCO Required Actions of the supported systems are not of sufficient duration to allow completion of the work evolution. TS LCO 3.0.6 requires entry into the supported system Conditions and Required Actions pursuant to TS LCO 3.0.2 when the support system's Required Actions direct the supported system to be declared inoperable. By adding the proposed 7 day CT for one or more inoperable DGCW subsystems,

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the allowances of TS LCO 3.0.6 can be utilized to defer entry into the supported system Conditions and Required Actions and the duration of the inoperability will be controlled by the support system LCO Actions. The proposed Condition B and C added to TS 3.7.2 supplements the CT by adding an end state for the proposed Required Action CTs.

The proposed change adds a note to TS 3.8.1 Condition C stating that the respective Conditions are not applicable to the Division 2 DGs during the installation of CSCS isolation valves during a Unit 1 refueling outage prior to July 1, 2024, and during a Unit 2 refueling outage prior to July 1, 2023. For Unit 1, the use would occur during Refueling Outages 18, 19, or 20. For Unit 2 use would occur during Refueling Outages 17, 18, or 19. The proposed change adds a note to TS 3.8.1 Condition F stating that the respective Conditions are not applicable during the installation of CSCS isolation valves during a refueling outage for each unit prior to the cutoff dates. A new Condition is added to TS 3.8.1 to facilitate the requested CT. The new proposed Condition G addresses the inoperability of both units' Division 2 DGs with a CT of 7 days (for Division 2 CSCS isolation valve installations). This proposed CT of 7 days will only be applicable during a single Unit 1 Refueling Outage prior to July 1, 2024, and a single Unit 2 Refueling Outage prior to July 1, 2023. The applicability is described in a note to the proposed TS 3.7.2 Condition G. The current Conditions G and H, and corresponding Required Actions, are proposed to be re-numbered as H and I, respectively.

The two notes added to TS 3.8.1 Conditions C and F, and proposed new Condition G restrict the applicability and use of the extended CT requested to install CSCS isolation valves. The period of applicability is only during the refueling outages prior to identified cutoff dates, to be used one-time for each unit, and is during the periods when the Division 2 DGs are inoperable due to use of a nonconforming line stop. The two notes added to TS 3.8.1 Conditions C and F, and proposed new Condition G are not intended for use when both Division 2 DGs are inoperable for any other reason. This intent and direction is included in the associated TS Bases for TS 3.8.1 Conditions C and F, and proposed new Condition G.

Describing each change:

- The existing Condition A for TS 3.7.2 is modified by notes which state:
  1. Not applicable to Division 1 during installation of the Division 1 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023 while the outage unit is in MODE 4,5, or defueled.
  2. Not applicable to Division 2 during installation of the Division 2 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023, while the outage unit is in MODE 4,5, or defueled.
- A new Condition B for TS 3.7.2 is added. The Condition states "One or more DGCW subsystems inoperable." The new Condition B is modified by notes which state:
  1. Only applicable to Division 1 during installation of the Division 1 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023, while the outage unit is in MODE 4,5, or defueled.

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2. Only applicable to Division 2 during installation of the Division 2 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023, while the outage unit is in MODE 4,5, or defueled.

Required Action B.1 requires restoring DGCW subsystem to Operable status with a 7 day CT.

- A new Condition C for TS 3.7.2 is added. The Condition states "Required Action and associated Completion Time of Condition B not met." Required Action C.1 requires being in Mode 3 within 12 hours. Required Action C.2 requires being in Mode 4 within 36 hours. The two Required Actions are linked with the logical connector "AND."
- The existing Condition C for TS 3.8.1 is modified by a note which states:
  1. Not applicable to the Division 2 DG and the opposite unit Division 2 DG during installation of the Division 2 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023, while the outage unit is in MODE 4,5, or defueled.
- The existing Condition F for TS 3.8.1 is modified by a note which states:
  1. Not applicable during installation of the Division 2 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023, while the outage unit is in MODE 4,5, or defueled.
- A new Condition G for TS 3.8.1 is added. The Condition states "Division 2 DG and the required opposite unit Division 2 DG inoperable." The new Condition G is modified by a note which states:
  1. Only applicable during installation of the Division 2 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023, while the outage unit is in MODE 4,5, or defueled.Required Action G.1 requires restoring required Division 2 DG to Operable status with a 7 day CT.
- The current Condition G is modified to Condition H. The corresponding Required Action G.1 is modified to H.1.
- The current Condition H is modified to Condition I. The corresponding Required Action H.1 is modified to I.1.

The proposed changes to the TS are shown in the mark-up pages (Attachment 3). In addition, an informational copy of the associated TS Bases pages with marked-up changes is provided (Attachment 4).



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#### **2.4 REASON FOR THE PROPOSED CHANGE**

The portion of DGCW return piping to be replaced is directly connected to the lake and below normal cooling lake level, replacement will require isolation. Isolation will be accomplished by hot tapping, installing temporary line stops (stopples), and then installing new isolation valves. The replacement of DGCW piping is a prudent and proactive action to enhance the reliability of the Unit 1 and Unit 2 CSCS.

Based on historical data and best work planning estimates, completing installation of new isolation valves for a Division of CSCS cannot be assured with the existing CTs for applicable TS. The requested CTs of 7 days will allow sufficient time to complete the installation of new isolation valves. After installing and testing the isolation valves, the pressure boundary will be conforming and Operability will be restored, after which the DGCW return piping replacement will continue upstream of the new isolation valves.

#### **3.0 TECHNICAL EVALUATION**

The CSCS is classified as Code Class 3 and is subject to American Society of Mechanical Engineers (ASME) Boiler & Pressure Vessel (B&PV) Code Section III, Class 3 requirements. However, the line stops (stopples) that will be utilized to provide isolation until the new isolation valves are installed are non-Code, see Attachment 2 Figures 5 and 6. During the time the non-Code line stops are used to provide isolation, the affected DGCW subsystem along with the connected RHRSW subsystem will be declared inoperable, see Attachment 2 Figures 1 through 4. The operating unit's subsystems will also be declared inoperable due to common discharge lines within each division. Although inoperable, the use of non-Code line stops is intended to maintain availability of the affected CSCS subsystem, including the Emergency Core Cooling System (ECCS) and DG systems supported in both units. Attachment 2 Figures 1 through 4 are simplified sketches identifying which lines and components will be inoperable and available. The portions of the hot tap hardware permanently attached to the piping will meet Code requirements. The portion of the DGCW return piping which will be replaced will be inoperable and unavailable until replacement and testing is completed, the lines to be replaced and the connected Cooler(s) are shown in Attachment 2 Figures 1 through 4.

The non-Code line stops being used to isolate the system during the specified refueling outages are being designed to the same or greater pressure rating and seismic requirements as the CSCS piping. Attachment 2 Figure 5 shows a representative image of a branch line stop (stopple), planned for use on Unit 2 Division 1. Attachment 2 Figure 6 shows a representative image of a through wall line stop (stopple), planned for use on Unit 1 Division 1, Unit 1 Division 2, and Unit 2 Division 2. The figures in Attachment 2 represent the anticipated line stop placements, if the preferred through wall line stop becomes impractical, a branch line stop may be used.

The planned maintenance will result in the inoperability of:

- The DGCW subsystem, and will require entry into TS 3.7.2 Condition A.
- DGs, and will require entry into TS 3.8.1 Condition B, Condition C and Condition F, as applicable, due to the inoperability of both units' Division DGs. Only one divisional DG per unit will be inoperable at any time.
- The RHRSW subsystem and will require entry into TS 3.7.1 Condition A.

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- RHRSW supported Suppression Pool cooling and pool spray systems and will require entry into TS 3.6.2.3 Condition A and TS 3.6.2.4 Condition A.
- DGCW supported ECCS systems and will require entry into TS 3.5.1 Condition A and Condition B.
- DGCW supported Reactor Core Isolation Cooling system (RCIC) and will require entry into TS 3.5.3 Condition A (Division 1 only).

The planned maintenance will be performed during scheduled refueling outages. The current CTs for TS 3.7.1 Condition A and TS 3.8.1 Condition B are sufficient to permit the planned work.

Because the affected DGCW and RHRSW subsystems of CSCS will remain available there is no impact on the LSCS risk profile.

#### **3.1 DEFENSE-IN-DEPTH**

During the individual CSCS work windows, the at-power unit is considered to have adequate defense-in-depth. Although the use of non-Code line stops will require that the DGCW and RHRSW subsystems of CSCS be considered inoperable, they will remain available. The CSCS defense-in-depth can be illustrated by a review of the affected subsystems and the systems/equipment available to fulfill safety functions (refer to Table 1). As can be seen from this review, only one division of DGs and ECCS subsystems per unit will be affected. Even though inoperable, they will remain available. Only the area cooler serviced by the line being replaced will be inoperable and unavailable. Table 2 identifies the supported systems impacted during work affecting each division. As shown, a maximum of two ECCS systems per operating unit will be inoperable at any time.

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Table 1 – Defense-in-Depth Assessment of Planned CSCS Maintenance

Outage	Planned Work	Affected Subsystems (Inoperable/Available)	System/Equipment Remaining (Operable)
Unit 1, Division 1	Install new isolation valve in line 1DG23B-6" adjacent to line 1RH83BA-24".	U-0, Div-1 DGCW U-0, Div-1 DG 0DG01A U-1, Div-1 RHRSW  U-0, Div-1 DGCW U-0, Div-1 DG 0DG01A U-2, Div-1 RHRSW	U-1, Div-2 DGCW U-1, Div-2 DG 1DG01A U-1, Div-2 RHRSW  U-2, Div-2 DGCW U-2, Div-2 DG 2DG01A U-2, Div-2 RHRSW
Unit 1, Division 2	Install new isolation valve in line 1DG06A-4" adjacent to line 1RH83BB-24".	U-1, Div-2 DGCW U-1, Div-2 DG 1DG01A U-1, Div-2 RHRSW  U-2, Div-2 DGCW U-2, Div-2 DG 2DG01A U-2, Div-2 RHRSW	U-0, Div-1 DGCW U-0, Div-1 DG 0DG01A U-1, Div-1 RHRSW  U-0, Div-1 DGCW U-0, Div-1 DG 0DG01A U-2, Div-1 RHRSW
Unit 2, Division 1	Install new isolation valve in line 2DG23B-6" adjacent to line 2RH83BA-24".	U-0, Div-1 DGCW U-0, Div-1 DG 0DG01A U-2, Div-1 RHRSW  U-0, Div-1 DGCW U-0, Div-1 DG 0DG01A U-1, Div-1 RHRSW	U-2, Div-2 DGCW U-2, Div-2 DG 2DG01A U-2, Div-2 RHRSW  U-1, Div-2 DGCW U-1, Div-2 DG 1DG01A U-1, Div-2 RHRSW
Unit 2, Division 2	Install new isolation valve in line 2DG06A-4" adjacent to line 2RH83BB-24".	U-2, Div-2 DGCW U-2, Div-2 DG 2DG01A U-2, Div-2 RHRSW  U-1, Div-2 DGCW U-1, Div-2 DG 1DG01A U-1, Div-2 RHRSW	U-0, Div-1 DGCW U-0, Div-1 DG 0DG01A U-2, Div-1 RHRSW  U-0, Div-1 DGCW U-0, Div-1 DG 0DG01A U-1, Div-1 RHRSW

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Table 2 –Supported Systems

Work Affecting	Subsystem	Provides Cooling Water to	Supported Systems
Division 1	DGCW	Unit 1&2, Division 1 - Common DG - LPCS Motor Cooler - ECCS Room Coolers	Unit 1&2, Division 1 - A-LPCI - LPCS - RCIC
	RHRSW	Unit 1&2, Division 1 - A-RHR Heat Exchanger - A-RHR Pump Seal Cooler	Unit 1&2, Division 1 - A-LPCI - A-Suppression Pool Cooling - A-Suppression Pool Spray
Division 2	DGCW	Unit 1&2, Division 2 - DG (1A and 2A) - ECCS Room Coolers	Unit 1&2, Division 2 - B-LPCI - C-LPCI
	RHRSW	Unit 1&2, Division 2 - B-RHR Heat Exchanger - B-RHR Pump Seal Cooler - C-RHR Pump Seal Cooler	Unit 1&2, Division 2 - B-LPCI - C-LPCI - B-Suppression Pool Cooling - B-Suppression Pool Spray

### 3.2 CONFIGURATION RISK MANAGEMENT PROGRAM

In addition to this review of the plant capability, LSCS has a disciplined Configuration Risk Management Program (CRMP) (Reference 1) that plans the work windows and manages emerging conditions such that defense-in-depth is maintained. The CRMP dictates the urgency for resolution of plant conditions resulting in reduced defense-in-depth and identifies the systems to be protected and prioritized for return to service.

The LSCS CRMP includes a protective equipment program to minimize risk to both the online and outage unit. This program administers and controls (restricts) access to and work performed on protected equipment. Access to other equipment considered important to managing overall plant risk will also be controlled. The equipment having access restrictions associated with the planned CPCS maintenance work would typically consist of:

- Switchyard
- Division 1 and Division 2 Switchgear for online unit
- Division 1 and Division 2 Switchgear for outage unit
- Division 1 and Division 2 DG for Both units
- Division 3 Switchgear for operating unit
- Division 3 DG for operating unit
- Division 1 and 2 RHR for operating unit
- LPCS for operating unit
- RCIC for operating unit
- HPCS for operating unit
- Division 1, 2 and 3 CPCS for operating unit
- Unaffected portions of Division 1 and 2 CPCS for the outage unit
- Control Room and Auxiliary Equipment Room Ventilation (VC/VE) – Both trains
- Standby Gas Treatment System (VG) – Both trains

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In addition:

- Grid operator is contacted for any potential grid instabilities.
- Weather is monitored for conditions that could threaten offsite power reliability.
- Testing on restricted access equipment is suspended in accordance with the Protected Equipment Program.

### 3.3 DIESEL GENERATOR IMPACT

The DGCW subsystem provides cooling water to the supported Division 1 or 2 DGs. The work being performed on a specific DGCW subsystem will necessitate the DGCW subsystem being declared inoperable because non-Code line stops will be utilized to provide isolation until new Code isolation valves have been installed and tested. The DGCW subsystems will remain available and fully capable of providing cooling water to the supported DGs.

The planned maintenance will not affect how the DGs are operated or controlled, and will not affect DG loading.

NRC Branch Technical Position (BTP) 8-8 (Reference 2) establishes the Staff's position on requests by Licensee's for Allowed Outage Time (AOT) extensions to perform online maintenance. This BTP is not applicable to this License Amendment Request (LAR) due to the following:

- a) The BTP addresses AOT extensions necessary to perform maintenance on Emergency Diesel Generators (EDGs) and offsite power sources where such maintenance would result in an EDG or offsite power source being inoperable and unavailable. The planned maintenance is not for an EDG or offsite power source. Though it will result in EDGs being declared inoperable they will remain available and fully capable of supplying their design electrical loads. There will be no additional loads included in the EDG electrical loading. The EDG control circuitry and automatic start logic will not be changed. All EDG support systems will remain available for EDG operation. No additional operator action will be required for operation of the EDGs.
- b) The planned maintenance will result in DGCW subsystems being declared inoperable. A total of four DGCW subsystems will be affected, only one DGCW subsystem will be worked on at a time. Because each unit's Division 1 DGCW subsystem shares a common discharge line, work on one unit will affect the other. The same is true for Division 2. Although the affected DGCW subsystems will be declared inoperable, they will remain available and fully capable of providing cooling water to their respective EDGs. Cooling water and its flow path through the EDGs will remain available. The reason for declaring a DGCW subsystem and its associated EDG inoperable is that non-Code line stops will be utilized to provide isolation on a separate branch of the DGCW subsystem. DGCW is subject to the requirements of the ASME B&PV Code Section III. The use of non-Code line stops results in Code requirements not being met. Until new Code isolation valves have been installed and tested, they cannot be credited; hence the non-Code line stop will be relied upon for isolation.

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- c) Since the DGCW subsystems, EDGs, and offsite power sources will remain available and fully capable of performing their design functions (except for the portion of the DGCW return piping which will be replaced on the outage unit), the LaSalle PRA is not affected and hence was not revised.

#### 4.0 REGULATORY EVALUATION

##### 4.1 APPLICABLE REGULATORY REQUIREMENTS/CRITERIA

The following NRC requirements and guidance documents are applicable to the proposed change.

The regulations at Title 10 of the Code of Federal Regulations (10 CFR) Part 50.36 "Technical specifications," establish the requirements related to the content of the TSS. Section 50.36(c)(2)(ii) states:

Limiting conditions for operation. Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met.

The regulatory requirements in 10 CFR 50.36 are not specific regarding the actions to be followed when TS requirements are not met other than a plant shut down. The proposed change provides an extended CT in the Technical Specifications to be followed when the Limiting Condition for Operation is not met. Therefore, the proposed change is consistent with the requirements of 10 CFR 50.36.

Appendix A of 10 CFR 50 provides General Design Criteria (GDC) for nuclear power plants. Plant-specific design criteria are described in the plant's Updated Final Safety Analysis Report (UFSAR). Criterion 17 states:

*Criterion 17—Electric power systems.* An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

The onsite electric power supplies, including the batteries, and the onsite electric distribution system, shall have sufficient independence, redundancy, and testability to perform their safety functions assuming a single failure.

Electric power from the transmission network to the onsite electric distribution system shall be supplied by two physically independent circuits (not necessarily on separate rights of way) designed and located so as to minimize to the extent practical the

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likelihood of their simultaneous failure under operating and postulated accident and environmental conditions. A switchyard common to both circuits is acceptable. Each of these circuits shall be designed to be available in sufficient time following a loss of all onsite alternating current power supplies and the other offsite electric power circuit, to assure that specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded. One of these circuits shall be designed to be available within a few seconds following a loss-of-coolant accident to assure that core cooling, containment integrity, and other vital safety functions are maintained.

Provisions shall be included to minimize the probability of losing electric power from any of the remaining supplies as a result of, or coincident with, the loss of power generated by the nuclear power unit, the loss of power from the transmission network, or the loss of power from the onsite electric power supplies.

Appendix A of 10 CFR 50 provides GDC for nuclear power plants. Plant-specific design criteria are described in the plant's UFSAR. Criterion 35 states:

*Criterion 35—Emergency core cooling.* A system to provide abundant emergency core cooling shall be provided. The system safety function shall be to transfer heat from the reactor core following any loss of reactor coolant at a rate such that (1) fuel and clad damage that could interfere with continued effective core cooling is prevented and (2) clad metal-water reaction is limited to negligible amounts.

Suitable redundancy in components and features, and suitable interconnections, leak detection, isolation, and containment capabilities shall be provided to assure that for onsite electric power system operation (assuming offsite power is not available) and for offsite electric power system operation (assuming onsite power is not available) the system safety function can be accomplished, assuming a single failure.

Appendix A of 10 CFR 50 provides General Design Criteria (GDC) for nuclear power plants. Plant-specific design criteria are described in the plant's UFSAR. Criterion 44 states:

*Criterion 44—Cooling water.* A system to transfer heat from structures, systems, and components important to safety, to an ultimate heat sink shall be provided. The system safety function shall be to transfer the combined heat load of these structures, systems, and components under normal operating and accident conditions.

Suitable redundancy in components and features, and suitable interconnections, leak detection, and isolation capabilities shall be provided to assure that for onsite electric power system operation (assuming offsite power is not available) and for offsite electric power system operation (assuming onsite power is not available) the system safety function can be accomplished, assuming a single failure.

Branch Technical Position 8-8 provides guidance from a deterministic perspective for license amendment requests for Allowed Outage Time (AOT) extensions for Emergency DGs and offsite power sources. BTP 8-8 states:

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The Electrical Engineering Branch (EEB) staff evaluates AOT extension requests for onsite or offsite power sources to allow on-line maintenance on EDGs that would normally be performed during refueling outages or maintenance of offsite power source(s) such as a transformer or bus. The on-line maintenance can help reduce the risk for loss of power during plant refueling outages when refueling activities are conducted. The staff evaluates the licensee's request for AOT extension from deterministic as well as PRA perspectives.

The proposed changes have no effect on the design of the CSCS and DGs. The proposed change is to extend CTs for systems which will remain available during the specified refueling outage periods.

BTP 8-8 presents guidance related to Onsite Power Sources (EDGs). The proposed changes restrict the use of the extended CTs to specified refueling outage periods when the Division 2 DGs will be declared inoperable due to the non-Code line stops resulting in the Division 2 DGCW systems on both units being declared inoperable. In the periods of applicability, the Division 2 DGCW systems and the Division 2 DGs on both units will be available and capable of performing the design functions. No maintenance will be performed on the Division 2 DGs during the periods of applicability.

The proposed change does not affect plant compliance with these regulations or guidance and will ensure that the lowest functional capabilities or performance levels of equipment required for safe operation are met.

#### **4.2 PRECEDENT**

The NRC has previously approved similar changes for:

- LaSalle County Station in Amendment 180 for Unit 1 and Amendment 167 for Unit 2, both issued on 1/29/07.
- LaSalle County Station in Amendment 175 for Unit 1 and Amendment 161 for Unit 2, both issued on 2/23/06.
- The Braidwood Station in Amendment No. 130 and Byron Station in Amendment No. 136, both issued on 3/18/2004.

This previous LaSalle work was more extensive than the current work scope. Specifically:

- The previous scope impacted more components.
- The previous scope resulted in times where the RHRSW subsystems and DGCW to the affected diesel generator were inoperable and unavailable. The current scope results in the DGCW and RHRSW subsystems being inoperable, but available (except for the portion of DGCW being replaced in the outage unit).
- The previous scope required installation of temporary DGCW jumpers to ensure the availability of the Division 2 diesel generators; the current scope does not.

#### **4.3 NO SIGNIFICANT HAZARDS DETERMINATION**

EGC requests a proposed change to the TSs for LaSalle County Station, Unit Nos. 1 and 2. The proposed changes modify TS 3.7.2 to include a 7 day CT when one or more required DGCW subsystem(s) are inoperable. The proposed changes to TS 3.8.1 include a 7 day CT



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when a Division 2 DG and the required opposite unit Division 2 DG are inoperable. The proposed changes will only be used during four refueling outages, two for Unit 1 prior to July 1, 2024, and two for Unit 2 prior to July 1, 2023. The current planned schedule, subject to change, is L2R17 (2019), L1R18 (2020), L2R18 (2021), and L1R19 (2022). The TS 3.8.1 changes would only be applicable for Division 2 work and would only be used during two refueling outages, one for Unit 1 prior to July 1, 2024, and one for Unit 2 prior to July 1, 2023. The current planned schedule for the Division 2 work, subject to change, is L2R17 (2019) and L1R19 (2022).

EGC has evaluated whether or not 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 amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The previously analyzed accidents are initiated by the failure of plant structures, systems, or components. The proposed change does not have a detrimental impact on the integrity of any plant structure, system, or component that initiates an analyzed event. No active or passive failure mechanisms that could lead to an accident are affected. Non-Code line stops required to provide isolation will maintain the availability of the online unit's CSCS. The non-Code line stops being used to isolate the system during the specified refueling outages are being designed to the same or greater pressure rating and seismic requirements as the CSCS piping.

Redundancy is provided by designing the CSCS as multiple independent subsystems. Divisional separation between subsystems assures that no single failure can affect more than one division's subsystem. Therefore, assuming a single failure in any division's subsystem including the subsystem shared between units, two other divisional subsystems in each unit will remain unaffected. This ensures adequate redundancy to supply the minimum required cooling water for safe shutdown of the operating unit or mitigate the consequences of an accident.

The proposed limited use of increased CT's of the operating unit's CSCS maintains the design basis assumptions. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

Response: No

The proposed change involves the temporary installation of new equipment (mechanical line stops) that will be designed and installed to the same or greater pressure rating and seismic design as the CSCS piping. The currently installed equipment will not be

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operated in a new or different manner. No new or different system interactions are created and no new processes are introduced. The proposed changes will not introduce any new failure mechanisms, malfunctions, or accident initiators not already considered in the design and licensing bases.

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

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

Response: No

The proposed change does not alter any existing setpoints at which protective actions are initiated and no new setpoints or protective actions are introduced. The design and operation of the CSCS remains unchanged. The proposed change provides a limited period to restore inoperable DGCW subsystems and Division 2 DGs instead of interrupting plant operations, possibly requiring an orderly plant shutdown of the operating unit. The potential to avoid a plant transient in conjunction with maintaining availability of the DGCW subsystems and Division 2 DGs offsets any risk associated with the limited CT. The proposed change does not impact a design basis, limiting safety system setting, or safety limit specified in TSs.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, EGC concludes that the proposed changes do not involve a significant hazards consideration as set for in 10 CFR 50.92(c), "Issuance of Amendment."

#### 4.4 CONCLUSIONS

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

The proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). The proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or 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. Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

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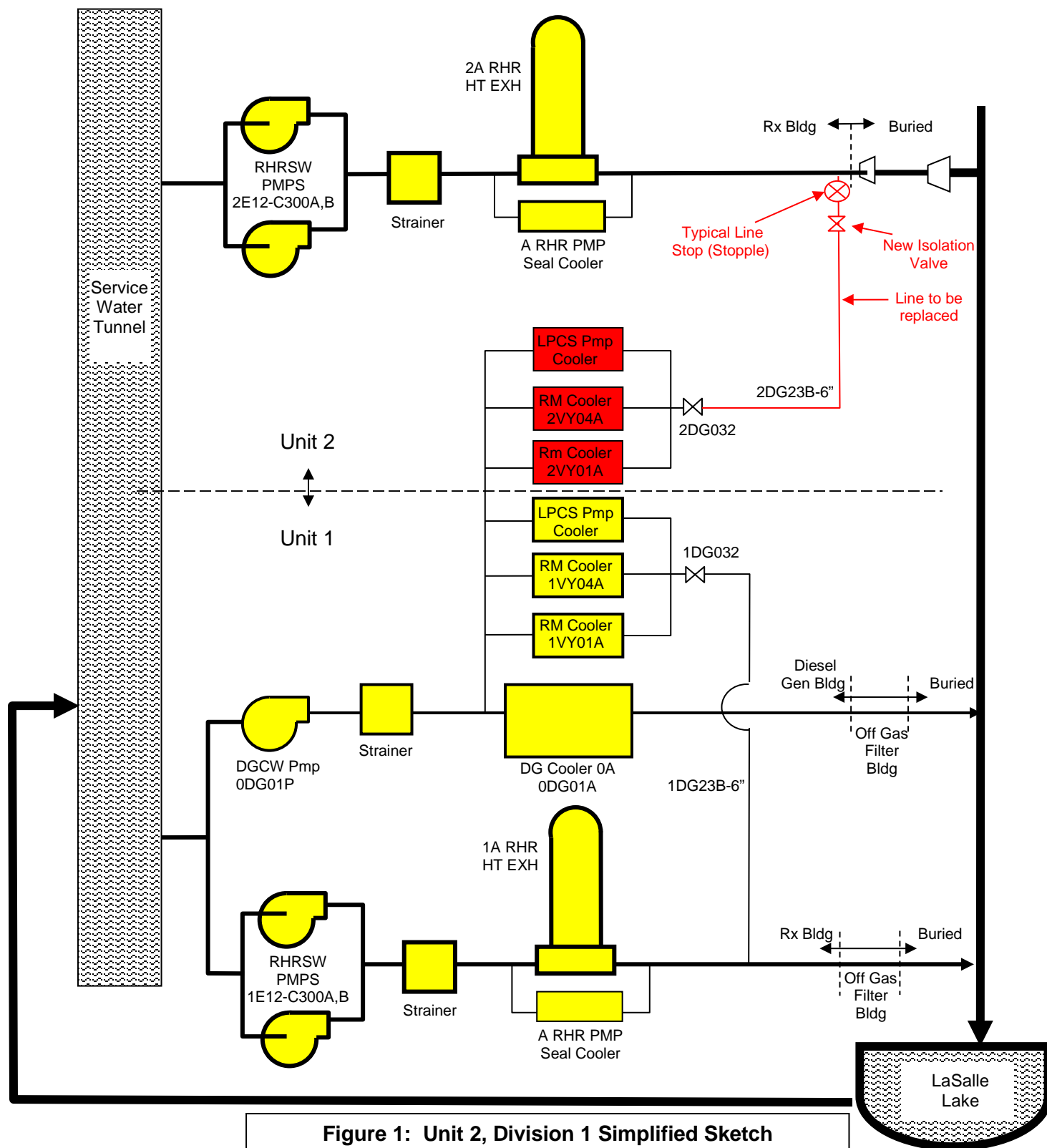
6.0 REFERENCES

1. LSCS Technical Requirements Manual (TRM), Section 5.0e, "Configuration Risk Management Program (CRMP)"
2. NRC Branch Technical Position 8-8, "Onsite (Emergency Diesel Generators) and Offsite Power Sources Allowed Outage Time Extensions," February 2002

**ATTACHMENT 2**  
**Supporting Figures**

## ATTACHMENT 2 Supporting Figures

### License Amendment Request for Temporary Extensions to Technical Specifications Supporting Maintenance on Portions of the Core Standby Cooling System



**Figure 1: Unit 2, Division 1 Simplified Sketch**

**Notes**

The Division 1 DGCW subsystem of CSCS is common to both Unit 1 & Unit 2

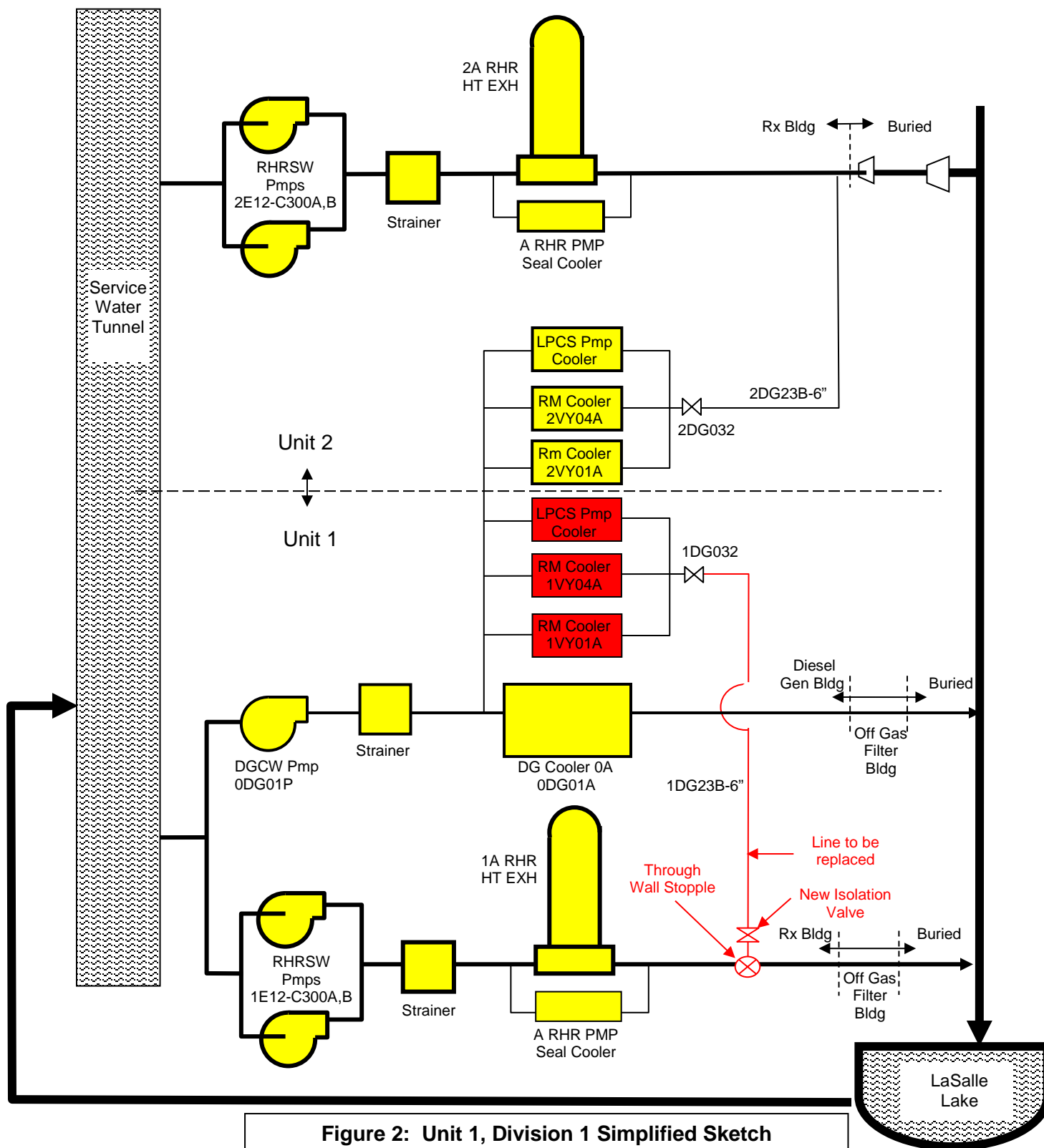
Not all components are shown

Yellow, Inoperable/Available

Red, Inoperable/Unavailable

## ATTACHMENT 2 Supporting Figures

### License Amendment Request for Temporary Extensions to Technical Specifications Supporting Maintenance on Portions of the Core Standby Cooling System



**Figure 2: Unit 1, Division 1 Simplified Sketch**

**Notes**

The Division 1 DGCW subsystem of CSCS is common to both Unit 1 & Unit 2

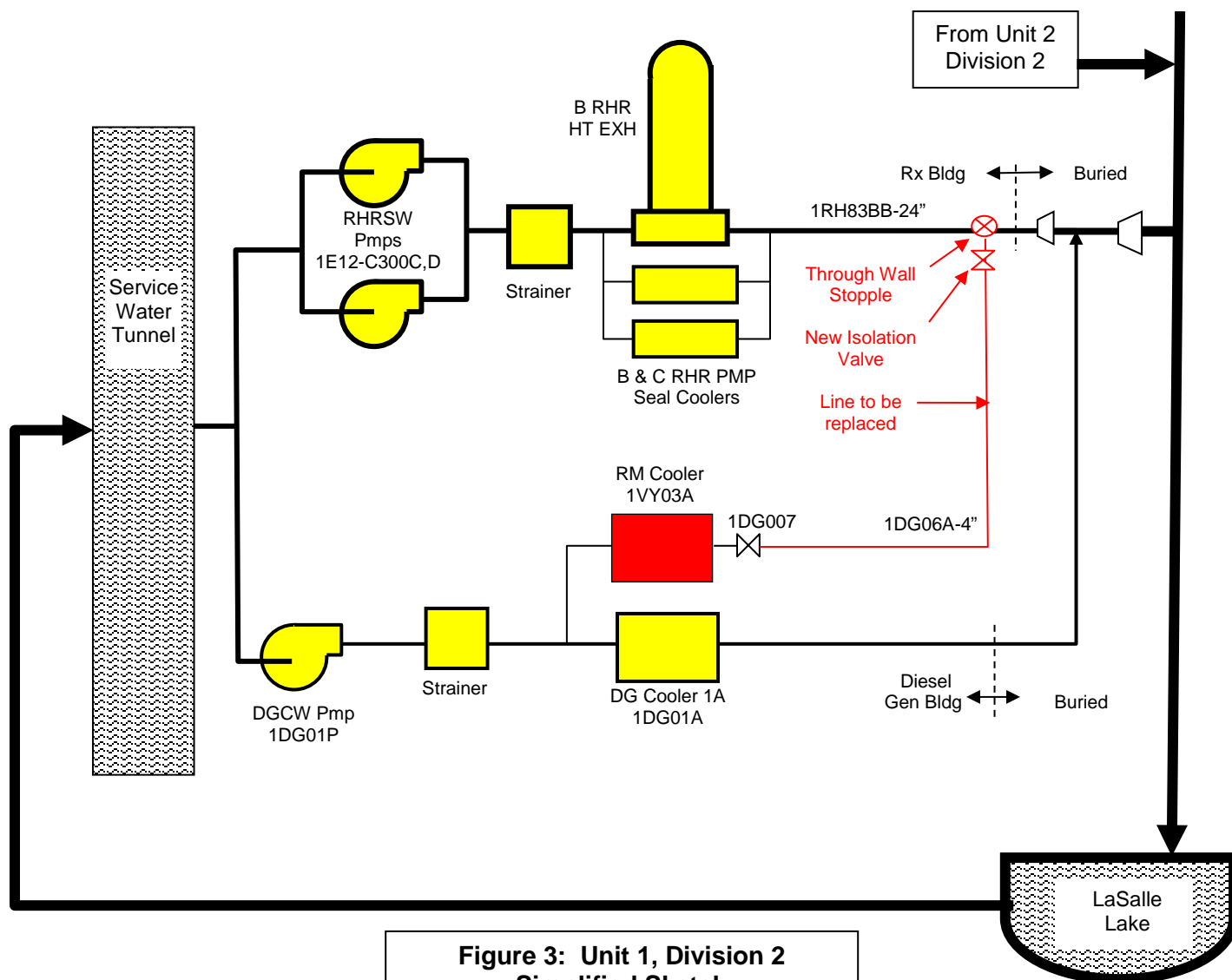
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Yellow, Inoperable/Available

Red, Inoperable/Unavailable

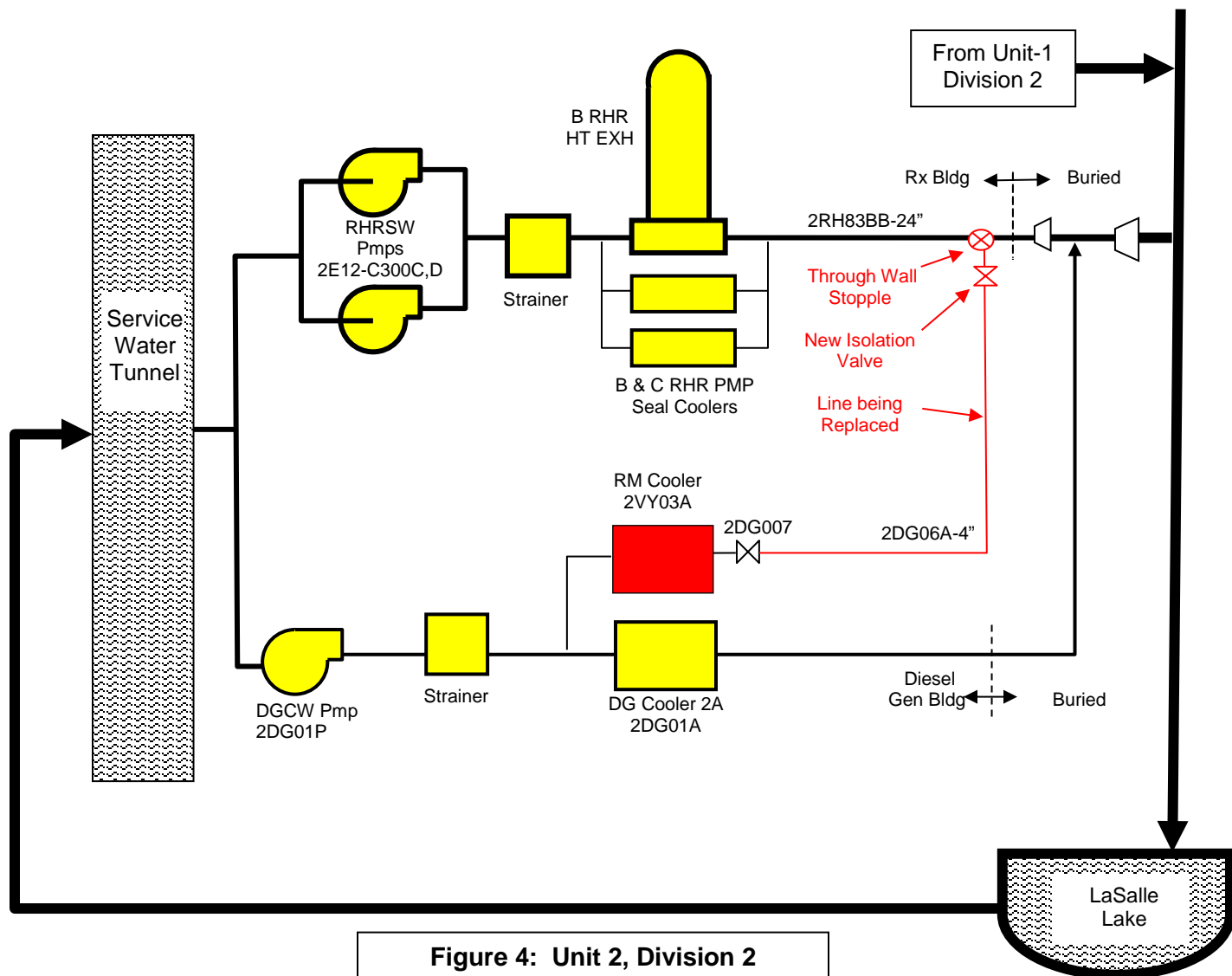
## ATTACHMENT 2 Supporting Figures

### License Amendment Request for Temporary Extensions to Technical Specifications Supporting Maintenance on Portions of the Core Standby Cooling System



**ATTACHMENT 2  
Supporting Figures**

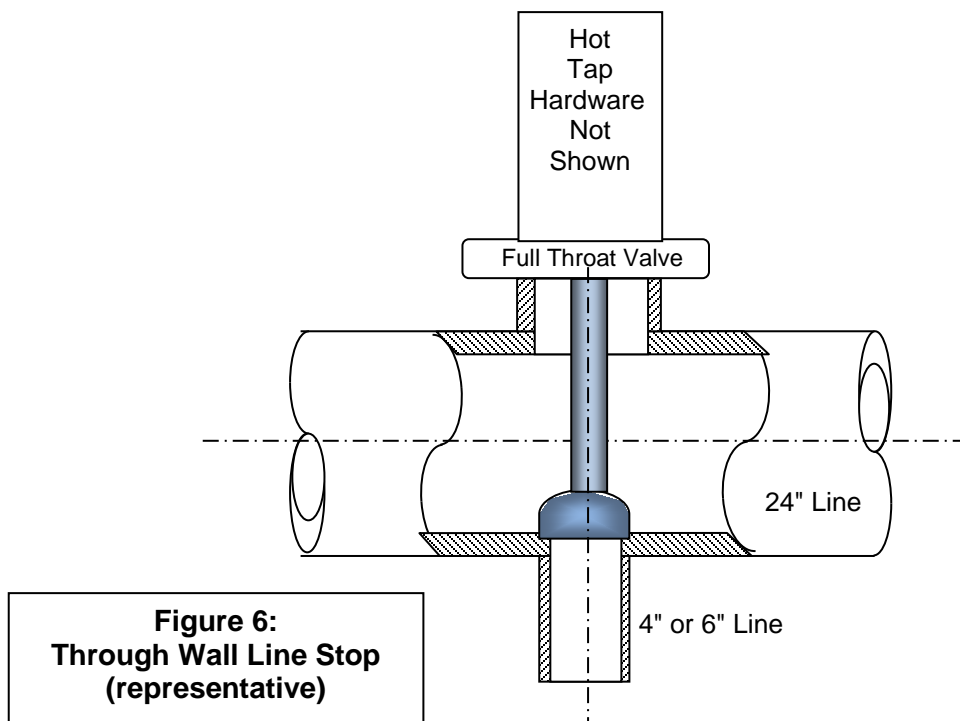
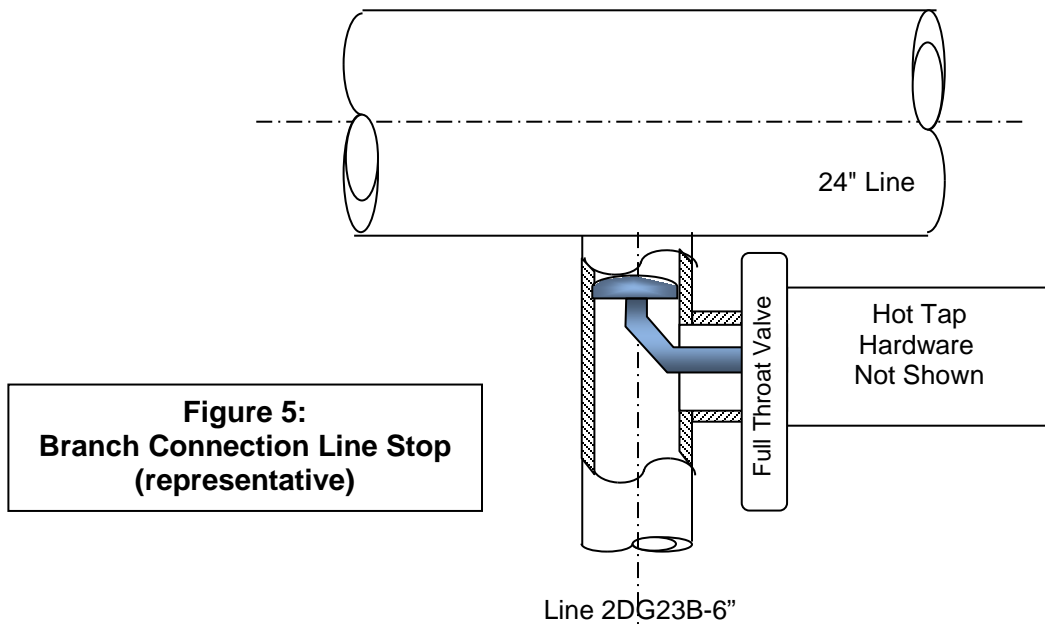
**License Amendment Request for Temporary Extensions to Technical Specifications  
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**ATTACHMENT 2**  
**Supporting Figures**

**License Amendment Request for Temporary Extensions to Technical Specifications**  
**Supporting Maintenance on Portions of the Core Standby Cooling System**



**ATTACHMENT 3**

**Proposed Technical Specification Changes for LaSalle County Station, Units 1 and 2**

### 3.7 PLANT SYSTEMS

#### 3.7.2 Diesel Generator Cooling Water (DGCW) System

- LC0 3.7.2           The following DGCW subsystems shall be OPERABLE:
- a.   Three DGCW subsystems; and
  - b.   The opposite unit Division 2 DGCW subsystem.

APPLICABILITY:   MODES 1, 2, and 3.

#### ACTIONS

-----NOTE-----  
Separate Condition entry is allowed for each DGCW subsystem.  
-----

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. <u>-----NOTES-----</u></p> <p><u>1. Not applicable to Division 1 during installation of the Division 1 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023, while the outage unit is in MODE 4,5, or defueled.</u></p> <p><u>2. Not applicable to Division 2 during installation of the Division 2 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023, while the outage unit is in MODE 4,5, or defueled.</u></p> <p><u>-----</u></p> <p>One or more DGCW subsystems inoperable.</p>	<p>A.1 Declare supported component(s) inoperable.</p>	<p>Immediately</p>

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p><u>B. -----NOTES-----</u></p> <p><u>1. Only applicable to Division 1 during installation of the Division 1 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023, while the outage unit is in MODE 4.5, or defueled.</u></p> <p><u>2. Only applicable to Division 2 during installation of the Division 2 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023, while the outage unit is in MODE 4.5, or defueled.</u></p> <p><u>-----</u></p> <p><u>One or more DGCW subsystems inoperable.</u></p>	<p><u>B.1 Restore DGCW subsystem to OPERABLE status.</u></p>	<p><u>7 days</u></p>

(continued)

# ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<u>C. Required Action and associated Completion Time of Condition B not met.</u>	<u>C.1 Be in MODE 3.</u> <u>AND</u> <u>C.2 Be in MODE 4.</u>	<u>12 hours</u>  <u>36 hours</u>

# SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.2.1	Verify each DGCW subsystem manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.7.2.2	Verify each DGCW pump starts automatically on each required actual or simulated initiation signal.	In accordance with the Surveillance Frequency Control Program

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>C. <u>-----NOTE-----</u>  <u>1. Not applicable to the Division 2 DG and the opposite unit Division 2 DG during installation of Division 2 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023, while the outage unit is in MODE 4,5, or defueled.</u>  <u>-----</u></p> <p>Required Division 3 DG inoperable.</p> <p><u>OR</u></p> <p>One required Division 1, 2, or 3 DG inoperable and the required opposite unit Division 2 DG inoperable.</p>	<p>C.1 Perform SR 3.8.1.1 for OPERABLE required offsite circuit(s).</p> <p><u>AND</u></p> <p>C.2 Declare required feature(s), supported by the inoperable DG(s), inoperable when the redundant required feature(s) are inoperable.</p> <p><u>AND</u></p> <p>C.3.1 Determine OPERABLE DG(s) are not inoperable due to common cause failure.</p> <p><u>OR</u></p> <p>C.3.2 Perform SR 3.8.1.2 for OPERABLE DG(s).</p> <p><u>AND</u></p> <p>C.4 Restore required DG(s) to OPERABLE status.</p>	<p>1 hour</p> <p><u>AND</u></p> <p>Once per 8 hours thereafter</p> <p>4 hours from discovery of Condition C concurrent with inoperability of redundant required feature(s)</p> <p>24 hours</p> <p>24 hours</p> <p>72 hours</p> <p><u>AND</u></p> <p>17 days from discovery of failure to meet LCO 3.8.1.a or b</p>

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>F. -----NOTE-----  <u>1. Not applicable during installation of the Division 2 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023, while the outage unit is in MODE 4,5, or defueled.</u>            -----</p> <p>Two required Division 1, 2, or 3 DGs inoperable.</p> <p><u>OR</u></p> <p>Division 2 DG and the required opposite unit Division 2 DG inoperable.</p>	<p>F.1 Restore one required DG to OPERABLE status.</p>	<p>2 hours</p> <p><u>OR</u></p> <p>72 hours if Division 3 DG is inoperable</p>

(continued)



ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p><u>G.</u> -----NOTE-----  <u>1. Only applicable during installation of Division 2 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023, while the outage unit is in MODE 4.5, or defueled.</u>  -----  <u>Division 2 DG and the required opposite unit Division 2 DG inoperable.</u></p>	<p><u>G.1</u>      <u>Restore required Division 2 DG to OPERABLE status.</u></p>	<p><u>7 days</u></p>
<p><u>H.</u>      Required Action and associated Completion Time of Condition A, B, C, D, E, <u>F or G</u> not met.</p>	<p><u>H.1</u>      Be in MODE 3.</p>	<p>12 hours</p>
<p><u>I.</u>      Three or more required AC sources inoperable.</p>	<p><u>I.1</u>      Enter LCO 3.0.3.</p>	<p>Immediately</p>

**ATTACHMENT 4**

**Proposed Technical Specification Bases Changes for LaSalle County Station,  
Units 1 and 2**

## BASES

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LCO  
(continued)

subsystem is based on having an OPERABLE pump and an OPERABLE flow path capable of taking suction from the CSCS water tunnel and transferring cooling water to the associated diesel generator, LPCS pump motor cooling coils, and ECCS cubicle area cooling coils, as required.

An adequate suction source is not addressed in this LCO since the minimum net positive suction head of the DGCW pump and the maximum suction source temperature are covered by the requirements specified in LCO 3.7.3, "Ultimate Heat Sink (UHS)."

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APPLICABILITY

In MODES 1, 2, and 3, the DGCW subsystems are required to support the OPERABILITY of equipment serviced by the DGCW subsystems and required to be OPERABLE in these MODES.

In MODES 4 and 5, the OPERABILITY requirements of the DGCW subsystems are determined by the systems they support. Therefore, the requirements are not the same for all facets of operation in MODES 4 and 5. Thus, the LCOs of the systems supported by the DGCW subsystems will govern DGCW System OPERABILITY requirements in MODES 4 and 5.

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ACTIONS

The ACTIONS Table is modified by a Note indicating that separate Condition entry is allowed for each DGCW subsystem. This is acceptable, since the Required Actions for the Condition provide appropriate compensatory actions for each inoperable DGCW subsystem. Complying with the Required Actions for one inoperable DGCW subsystem may allow for continued operation, and subsequent inoperable DGCW subsystem(s) are governed by separate Condition entry and application of associated Required Actions.

### A.1

Condition A is modified by two Notes indicating that this Condition is not applicable during installation of Division 1 and Division 2 CSCS isolation valves during Unit 1 refueling outages prior to July 1, 2024, and during Unit 2 refueling outages prior to July 1, 2023, while the outage unit is in MODE 4, 5, or defueled. For Unit 1, the use of this Note, once for Division 1 and once for

(continued)

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## BASES

### ACTIONS

#### A.1 (continued)

Division 2, will occur during Refueling Outages 18, 19, or 20. For Unit 2, the use of this Note, once for Division 1 and once for Division 2, will occur during Refueling Outages 17, 18, or 19. Either Division 1 or Division 2 CSCS isolation valve installation is performed on the outage unit during a single refueling outage and this note may not be used in subsequent outages for the same unit and division. When the specified DGCW subsystem(s) are inoperable during the CSCS isolation valve installation, Condition B provides appropriate Required Actions.

If one or more DGCW subsystems are inoperable, the associated DG(s) and ECCS components supported by the affected DGCW loop, including LPCS pump motor cooling coils or ECCS cubicle area cooling coils, as applicable, cannot perform their intended function and must be immediately declared inoperable. In accordance with LCO 3.0.6, this also requires entering into the Applicable Conditions and Required Actions for LCO 3.4.9, "RHR Shutdown Cooling System -Hot Shutdown," LCO 3.5.1, "ECCS-Operating," LCO 3.5.3, "RCIC System," LCO 3.6.2.3, "RHR Suppression Pool Cooling," LCO 3.6.2.4, "RHR Suppression Pool Spray," and LCO 3.8.1, "AC Sources—Operating," as appropriate.

#### B.1

Condition B is modified by two Notes indicating that this Condition is only applicable during installation of Division 1 and Division 2 CSCS isolation valves during Unit 1 refueling outages prior to July 1, 2024, and during Unit 2 refueling outages prior to July 1, 2023, while the outage unit is in MODE 4, 5, or defueled. For Unit 1, the use of this Note, once for Division 1 and once for Division 2, will occur during Refueling Outages 18, 19, or 20. For Unit 2, the use of this Note, once for Division 1 and once for Division 2, will occur during Refueling Outages 17, 18, or 19. Either Division 1 or Division 2 CSCS isolation valve installation is performed on the outage unit during a single refueling outage and this note may not be used in subsequent outages for the same unit and division.

(continued)

## BASES

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### ACTIONS                      B.1 (continued)

Required Action B.1 is intended to handle the inoperability of one DGCW subsystem during installation of CSCS isolation valves. The Completion Time of 7 days is allowed to restore the DGCW subsystem to OPERABLE status. During installation of each CSCS isolation valve a mechanical line stop will be used to maintain availability of the CSCS system and DGCW subsystem for the online Unit. The line stops are designed to the same or greater pressure rating and seismic design as the CSCS piping.

If the DGCW subsystem for the online Unit is not maintained available while in this Condition, Condition A should be entered immediately.

#### C.1 and C.2

If the Required Action and associated Completion Time of Condition B is not met, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 12 hours and in MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

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(continued)

BASES

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ACTIONS

B.4 (continued)

failure to meet the LCO, to restore the offsite circuit. At this time, another offsite circuit could become inoperable, the DG restored OPERABLE, and an additional 72 hours (for a total of 20 days) allowed prior to complete restoration of the LCO. The 17 day Completion Time provides a limit on the time allowed in a specified condition after discovery of failure to meet LCO 3.8.1.a or b. This limit is considered reasonable for situations in which Conditions are entered concurrently for combinations of Conditions A, B, and C. The "AND" connector between the 14 day and 17 day Completion Times means that both Completion Times apply simultaneously, and the more restrictive Completion Time must be met.

Similar to Required Action B.2, the Completion Time of Required Action B.4 allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." This exception results in establishing the "time zero" at the time the LCO was initially not met, instead of the time Condition B was entered.

Condition C

Condition C is modified by a Note indicating that this Condition is not applicable to the Division 2 DG and the opposite unit Division 2 DG during installation of Division 2 CSCS isolation valves during a single Unit 1 refueling outage completed prior to July 1, 2024, and during a single Unit 2 refueling outage completed prior to July 1, 2023, while the outage unit is in MODE 4, 5, or defueled. For Unit 1, the one-time use of this Note will occur during Refueling Outage 18, 19, or 20. For Unit 2, the one-time use of this Note will occur during Refueling Outage 17, 18, or 19. When the Division 2 DGs are inoperable during the CSCS isolation valve maintenance, Conditions B and G provide appropriate Required Actions.

C.1

To ensure a highly reliable power source remains, it is necessary to verify the availability of the remaining required offsite circuit on a more frequent basis. Since the Required Action only specifies "perform," a failure of SR 3.8.1.1 acceptance criteria does not result in a Required

(continued)

BASES

ACTIONS

E.1 and E.2 (continued)

provide requirements for the loss of an offsite circuit and one required unit DG without regard to whether a division is de-energized. LCO 3.8.7 provides the appropriate restrictions for a de-energized division.

According to Regulatory Guide 1.93 (Ref. 6), operation may continue in Condition E for a period that should not exceed 12 hours. In Condition E, individual redundancy is lost in both the offsite electrical power system and the onsite AC electrical power system. Since power system redundancy is provided by two diverse sources of power, however, the reliability of the power systems in this Condition may appear higher than that in Condition D (loss of both required offsite circuits). This difference in reliability is offset by the susceptibility of this power system configuration to a single bus or switching failure. The 12 hour Completion Time takes into account the capacity and capability of the remaining AC sources, reasonable time for repairs, and low probability of a DBA occurring during this period.

Condition F

Condition F is modified by a Note indicating that this Condition is not applicable during installation of Division 2 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023, while the Outage Unit is in MODE 4, 5, or defueled. For Unit 1, the one-time use of this Note will occur during Refueling Outage 18, 19, or 20. For Unit 2, the one-time use of this Note will occur during Refueling Outage 17, 18, or 19. When the Division 2 DGs are inoperable during the CSCS isolation valve maintenance, Conditions B and G provide appropriate Required Actions.

F.1

With two required unit DGs inoperable or both required Division 2 DGs inoperable, there is no more than two remaining standby AC sources. Thus, with an assumed loss of offsite electrical power, sufficient standby AC sources may not be available to power the minimum required ESF functions. Since the offsite electrical power system is the only source of AC power for the majority of ESF equipment at

(continued)

BASES

ACTIONS  
(continued)

Condition G

Condition G is modified by a Note indicating that this Condition is only applicable during installation of Division 2 CSCS isolation valves during a single Unit 1 Refueling Outage completed prior to July 1, 2024, and during a single Unit 2 Refueling Outage completed prior to July 1, 2023, while the Outage Unit is in MODE 4, 5, or defueled. For Unit 1, the one-time use of this Note will occur during Refueling Outage 18, 19, or 20. For Unit 2, the one-time use of this Note will occur during Refueling Outage 17, 18, or 19.

G.1

With both required Division 2 DGs inoperable, there are no more than two remaining OPERABLE standby AC sources. Thus, with an assumed loss of offsite electrical power, sufficient standby AC sources may not be available to power the minimum required Division 2 ESF functions. Since the offsite electrical power system is the only source of AC power for the Division 2 ESF equipment at this level of degradation, the risk associated with continued operation during the Division 2 CSCS valve replacement maintenance must be mitigated by the use of mechanical line stops to maintain the availability of the Division 2 CSCS system for the online Unit. The line stops are designed to the same or greater pressure rating and seismic design as the CSCS piping. At least one required Division 2 DG must be restored to OPERABLE status within 7 days of entry into Condition G.

If at least one Division 2 DG is not maintained available while in this Condition, Condition H should be entered immediately.

If, at any time when in this Condition (both required Division 2 DGs inoperable), an additional required DG subsequently becomes inoperable, Condition I should be entered immediately.

H.1

If the inoperable AC electrical power sources cannot be restored to OPERABLE status within the associated Completion Time, the unit must be brought to a MODE in which the overall plant risk is minimized. To achieve this status,

(continued)



BASES

ACTIONS

H.1 (continued)

the unit must be brought to MODE 3 within 12 hours. Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 11) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state. The allowed Completion Time is reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

I.1

Condition I corresponds to a level of degradation in which all redundancy in the AC electrical power supplies has been lost. At this severely degraded level, any further losses in the AC electrical power system will cause a loss of function. Therefore, no additional time is justified for continued operation. The unit is required by LCO 3.0.3 to commence a controlled shutdown.

SURVEILLANCE  
REQUIREMENTS

The AC sources are designed to permit inspection and testing of all important areas and features, especially those that have a standby function, in accordance with 10 CFR 50, GDC 18 (Ref. 8). Periodic component tests are supplemented by extensive functional tests during refueling outages under simulated accident conditions. The SRs for demonstrating the OPERABILITY of the DGs are consistent with the recommendations of Regulatory Guide 1.9 (Ref. 3) and Regulatory Guide 1.137 (Ref. 9).

The Surveillances are modified by two Notes to clearly identify how the Surveillances apply to the given unit and opposite unit's Division 2 DGs. Note 1 states that SR 3.8.1.1 through SR 3.8.1.20 are applicable only to the given unit AC electrical power sources and Note 2 states that SR 3.8.1.21 is applicable to the opposite unit's Division 2 DG. These Notes are necessary since the opposite unit AC electrical power source is not required to meet all of the requirements of the given unit AC electrical power sources (e.g., the opposite unit DG is not required to start on the opposite unit's ECCS initiation signal to support

(continued)