UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 26, 2020

Mr. James M. Welsch
Senior Vice President, Generation
and Chief Nuclear Officer
Pacific Gas and Electric Company
Diablo Canyon Nuclear Power Plant
P.O. Box 56, Mail Code 104/6
Avila Beach, CA 93424

SUBJECT: DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2 - ISSUANCE OF AMENDMENT NOS. 235 AND 237 RE: CHANGES TO THE INTAKE STRUCTURE PHYSICAL SECURITY CLASSIFICATION (EPID L-2019-LLA-0029)

Dear Mr. Welsch:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 235 to Facility Operating License No. DPR-80 and Amendment No. 237 to Facility Operating License No. DPR-82 for the Diablo Canyon Nuclear Power Plant (Diablo Canyon), Units 1 and 2, respectively. The amendments consist of changes to the Diablo Canyon, Units 1 and 2, Emergency Plan and Security Plan in response to your application dated February 14, 2019, as supplemented by letters dated September 19, 2019, and October 24, 2019.

The amendments to the Emergency Plan and Physical Security Plan change the physical security classification of the intake structure and modify portions of Diablo Canyon's protected area.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Balwant K. Singal, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-275 and 50-323

Enclosures:
1. Amendment No. 235 to DPR-80
2. Amendment No. 237 to DPR-82
3. Safety Evaluation

cc: Listserv

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PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-275

DIABLO CANYON NUCLEAR POWER PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 235
License No. DPR-80

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Pacific Gas and Electric Company (the licensee), dated February 14, 2019, as supplemented by letters dated September 19, 2019, and October 24, 2019, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, by Amendment No. 235, Facility Operating License No. DPR-80 is hereby amended to authorize revision to the Diablo Canyon Nuclear Power Plant Emergency Plan and Physical Security Plan to change the physical security classification of the intake structure and modify portions of the site's protected area as set forth in the Pacific Gas and Electric Company's application dated February 14, 2019, as supplemented by letters dated September 19, 2019, and October 24, 2019, and evaluated in the NRC staff's safety evaluation.

3. This license amendment is effective as of its date of issuance and shall be implemented within 365 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA Mirela Gavrilas for/

Ho K. Nieh, Director
Office of Nuclear Reactor Regulation

Date of Issuance: March 26, 2020

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-323

DIABLO CANYON NUCLEAR POWER PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 237
License No. DPR-82

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Pacific Gas and Electric Company (the licensee), dated February 14, 2019, as supplemented by letters dated September 19, 2019, and October 24, 2019, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, by Amendment No. 237, Facility Operating License No. DPR-82 is hereby amended to authorize revision to the Diablo Canyon Nuclear Power Plant Emergency Plan and Physical Security Plan to change the physical security classification of the intake structure and modify portions of the site's protected area as set forth in the Pacific Gas and Electric Company's application dated February 14, 2019, as supplemented by letters dated September 19, 2019, and October 24, 2019, and evaluated in the NRC staff's safety evaluation.

3. This license amendment is effective as of its date of issuance and shall be implemented within 365 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA Mirela Gavrilas for/

Ho K. Nieh, Director
Office of Nuclear Reactor Regulation

Date of Issuance: March 26, 2020

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 235 TO FACILITY OPERATING LICENSE NO. DPR-80

AND AMENDMENT NO. 237 TO FACILITY OPERATING LICENSE NO. DPR-82

PACIFIC GAS AND ELECTRIC COMPANY

DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2

DOCKET NOS. 50-275 AND 50-323

1.0 INTRODUCTION

By application dated February 14, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19045A698), as supplemented by letters dated September 19, 2019, and October 24, 2019 (ADAMS Accession Nos. ML19266A418 and ML19297H645, respectively), Pacific Gas and Electric Company (PG&E or the licensee) requested changes to the Diablo Canyon Nuclear Power Plant, Units 1 and 2 (Diablo Canyon), Emergency Plan and Security Plan. The Diablo Canyon Security Plan includes the Physical Security Plan (PSP), Training and Qualification Plan, Safeguards Contingency Plan, and Cyber Security Plan (CSP)[1], as well as the Independent Spent Fuel Storage Installation (ISFSI) security program.

Specifically, the license amendment request (LAR) seeks U.S. Nuclear Regulatory Commission (NRC or the Commission) review and approval of:

(1) The basis for no longer designating the auxiliary saltwater (ASW) system as vital equipment per Title 10 of the *Code of Federal Regulations* (10 CFR) Part 73, "Physical Protection of Plants and Materials," Section 73.2, "Definitions";

(2) The revision to the PSP so that the "ASW system" and "intake" are no longer included in discussions or figures concerning the vital area (VA) and protected area (PA); changes to appropriate site security and implementing procedures to make such documents consistent with the PSP changes; security changes associated with inclusion of the intake structure as part of the owner-controlled area (OCA); compensatory measures; and

(3) Revision to the Emergency Plan to exclude the intake structure from the definition of "protected area," and revision to the emergency action level classification and

[1] The amendment does not impact Diablo Canyon's CSP; therefore, the CSP was not part of the safety evaluation.

accountability methodology at the intake structure, as required, to reflect the Emergency Plan change.

The licensee states in its request that the proposed change in classification of the intake structure does not constitute a reduction in effectiveness of the Security Plan or reduction in effectiveness of the Emergency Plan. However, PG&E stated that it was seeking a license amendment due to the complexity of the changes, the absence of NRC review of such changes in the past that could serve as a precedent, and the lack of examples of similar changes in regulatory guidance that involve reclassification of VAs. Additionally, the licensee stated in its request that despite the change in the physical security classification, both the intake structure and ASW system will continue to meet applicable requirements for safety-related equipment and the safety-related classification of Design Class I.[2]

The NRC staff's evaluation of the physical security protection program presented in this safety evaluation (SE) is publicly-available and does not include security-related information (SRI). The licensee's response to the NRC staff's request for additional information (RAI), provided by letter dated September 19, 2019, contains SRI and is withheld from public disclosure under 10 CFR 2.390, "Public inspections, exemptions, requests for withholding." This document is in the agency's non-public ADAMS. The Diablo Canyon Security Plan contains safeguards information (SGI) and is withheld from public disclosure in accordance with 10 CFR 73.21, "Protection of Safeguards Information: Performance requirements," and 10 CFR 73.22, "Protection of Safeguards Information: Specific Requirements." This document is in the agency's Secure Agencywide Database for Safeguards Information. As directed by 10 CFR 73.22, those persons with the correct access authorization and need-to-know may view the Diablo Canyon Security Plan.

From June 18–19, 2019, the NRC staff conducted an onsite audit to examine information not included in the application (e.g., site implementing procedures and drawings) on selected topics for the licensing basis associated with the physical protection systems described in the PG&E Security Plans for Diablo Canyon. The NRC staff reviewed the ASW design features as described in the LAR. The audit also included a site walkdown of the intake structure area, the ASW systems and their location, and a walkdown of the pre-staged equipment (FLEX)[3] and security-controlled areas to get a better understanding of the scope of the proposed change. The NRC staff issued the audit summary by letter dated August 15, 2019 (ADAMS Accession No. ML19214A119).

The supplemental letters dated September 19, 2019, and October 24, 2019, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on May 7, 2019 (84 FR 19972).

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[2] Items vital to safe shutdown and isolation of the reactor, or whose failure might cause or increase the severity of a loss-of-coolant accident (LOCA), or result in an uncontrolled release of excessive amounts of radioactivity, are designated by PG&E as Design Class I.

[3] Diverse and Flexible Coping Strategies.

2.0 REGULATORY EVALUATION

2.1 Background

The Diablo Canyon intake structure arrangement is depicted in the Updated Final Safety Analysis Report (UFSAR), Chapter 9, “Auxiliary Systems,” Figure 9.2-2, “Arrangement of Intake Structure” (ADAMS Accession No. ML19231A067). The intake structure houses the bar rack, traveling screens, the screen wash system, four circulating water pumps, and four safety-related ASW system pumps.

The ASW system is described in Section 9.2.7, “Auxiliary Saltwater System,” of the Diablo Canyon UFSAR. The ASW system function is to provide cooling water to the Diablo Canyon component cooling water (CCW) system. The CCW system transfers heat from the following systems to the ASW system during normal operation at power, normal shutdown, and following design-basis loss-of-coolant and main steam line break accidents:

- Containment fan coolers and motors
- Residual heat removal (RHR) system heat exchangers
- RHR pumps
- Centrifugal charging pumps (CCPs 1 and 2)
- Safety injection pumps
- CCW pumps

The CCW system also cools several components that may be isolated during design-basis accident conditions, including the spent fuel pool (SFP) heat exchangers, the letdown heat exchanger, and the thermal barrier heat exchangers for the reactor coolant pumps.

The Diablo Canyon onsite emergency power sources are air-cooled emergency diesel generators that operate without any dependence on the ASW system or CCW system.

The ASW systems and components are located inside the intake structure. In the original design, the licensee considered the ASW systems and components located inside the intake structure as vital equipment. The intake structure is designated as a VA and is widely separated from the reactor containment buildings, the shared auxiliary building, the fuel buildings, and the turbine buildings. The licensee has maintained the intake structure as a VA within a surrounding PA.

2.2 Proposed Change

The LAR proposes removing the physical security classification of the intake structure as a VA inside a PA and to include it as part of the OCA. Consistent with this change, the intake structure would be located in the OCA. As described above, during the original licensing of Diablo Canyon, the safety-related ASW system had been classified as vital equipment. The definition of vital equipment in 10 CFR 73.2 includes any equipment, system, device, or material, the failure, destruction, or release of which could directly or indirectly endanger public health and safety by exposure to radiation. The licensee conducted an analysis of the plant’s ability to safely shutdown the reactor and maintain the reactor core cooling to cope with a loss of an ultimate heat sink resulting from a security event Considering the latest regulatory guidance and Diablo Canyon system design changes since original licensing, the licensee concluded that the intake structure and ASW system are not needed to achieve and maintain the plant in a safe

shutdown condition. Therefore, the licensee has determined that the ASW system located in the intake structure no longer meets the definition of vital equipment and the physical security classification of the intake structure may be changed from a VA within a surrounding PA to an OCA. However, despite the proposed change in the physical security classification, the license stated that both the intake structure and ASW system would retain the safety-related classification of Design Class I.

2.3 Regulatory Requirements and Guidance Documents

2.3.1 Regulatory Requirements

The NRC staff's technical evaluation considers whether the safety and security measures, as stated in the LAR, provide a level of protection commensurate with the protection provided by the following measures:

The regulation at 10 CFR 73.55(b)(3)(ii) requires the licensee to provide "defense-in-depth through the integration of systems, technologies, programs, equipment, supporting processes, and implementing procedures as needed to ensure the effectiveness of the physical protection program."

The regulation at 10 CFR 73.55(b)(4) requires the licensee to analyze and identify site-specific conditions that may affect the specific measures needed to implement the physical protection program.

The regulation at 10 CFR 73.55(e), "Physical barriers," requires that "[e]ach licensee shall identify and analyze site-specific conditions to determine the specific use, type, function, and placement of physical barriers needed to satisfy the physical protection program design requirements of 10 CFR 73.55(b)."

The regulations at 10 CFR 73.55(e)(9), "Vital areas," include, in part, the following requirements:

> (i) Vital equipment must be located only within vital areas, which must be located within a protected area so that access to vital equipment requires passage through at least two physical barriers, except as otherwise approved by the Commission and identified in the security plans.
>
> (ii) The licensee shall protect all vital area access portals and vital area emergency exits with intrusion detection equipment and locking devices that allow rapid egress during an emergency and satisfy the vital area entry control requirements of this section.
>
> (iii) Unoccupied vital areas must be locked and alarmed.

In 10 CFR 73.2, vital equipment is defined as:

> Any equipment, system, device, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation. Equipment or systems which would be required to function to protect public health and safety following such failure, destruction, or release are also considered to be vital.

The regulation at 10 CFR 73.55(f), “Target sets,” requires that “[t]he licensee shall document and maintain the process used to develop and identify target sets, to include site-specific analyses and methodologies used to determine and group the target set equipment or elements.

The regulation at 10 CFR 73.55(g), “Access controls,” states that “(1) Consistent with the function of each barrier or barrier system, the licensee shall control personnel, vehicle, and material access, as applicable, at each access control point in accordance with the physical protection program design requirements of 10 CFR 73.55(b).”

The regulation at 10 CFR 73.55(h), “Search programs,” states, in part, that the licensee is required to develop and implement a search program “to detect, deter, and prevent the introduction of firearms, explosives, incendiary devices, or other items which could be used to commit radiological sabotage.”

The regulation at 10 CFR 73.55(i), “Detection and assessment systems,” states that “(1) The licensee shall establish and maintain intrusion detection and assessment systems that satisfy the design requirements of § 73.55(b) and provide, at all times, the capability to detect and assess unauthorized persons and facilitate the effective implementation of the licensee’s protective strategy.”

The regulation at 10 CFR 73.55(k), “Response Requirements,” states that “(1)The licensee shall establish and maintain, at all times, properly trained, qualified and equipped personnel required to interdict and neutralize threats up to and including the design-basis threat of radiological sabotage as defined in § 73.1, to prevent significant core damage and spent fuel sabotage.”

The regulations at 10 CFR 73.55(o), “Compensatory measures,” state, in part that

(1) The licensee shall identify criteria and measures to compensate for degraded or inoperable equipment, systems, and component…;

(2) Compensatory measures must provide a level of protection that is equivalent to the protection that was provided by the degraded or inoperable, equipment, system, or components; and

(3) Compensatory measures must be implemented within specific time frames necessary to meet the requirements stated in paragraph (b) of this section and described in the security plans.”

The regulation in Appendix B, “General Criteria for Security Personnel,” Criterion VI(A), to 10 CFR Part 73, states that:

(1) The licensee shall ensure that all individuals who are assigned duties and responsibilities required to prevent significant core damage and spent fuel sabotage, implement the Commission-approved security plans, licensee response strategy, and implementing procedures, meet minimum training and qualification requirements to ensure each individual possesses the knowledge, skills, and abilities required to effectively perform the assigned duties and responsibilities.

The regulation at 10 CFR 73.58(b) states “The licensee shall assess and manage the potential adverse effects on safety and security, including the site emergency plan, before implementing changes to plant configurations, facilities conditions, or security.”

The regulation at 10 CFR 50.47, “Emergency plans,” states that (b)(4) A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.”

The regulations in Appendix E, “Emergency Planning and Preparedness for Production and Utilization Facilities, “Section IV, “Content of Emergency Plans,” to 10 CFR Part 50 state, in part, that:

> B.1. The emergency action levels shall be based on in-plant conditions and instrumentation in addition to onsite and offsite monitoring;” and “C.2. By June 20, 2012, nuclear power reactor licensees shall establish and maintain the capability to assess, classify, and declare an emergency condition within 15 minutes after the availability of indications to plant operators that an emergency action level has been exceeded and shall promptly declare the emergency condition as soon as possible following identification of the appropriate emergency classification level.”

2.3.2 Regulatory Guidance Documents

Regulatory Guide (RG) 5.76, “Physical Protection of Nuclear Power Plants Against Industrial Sabotage,” dated July 2009, provides an unclassified statement that VAs, in part, relate to “equipment required to perform the functions of reactivity control, decay heat removal and process monitoring for the purpose of achieving and maintaining hot shutdown for a minimum of 8 hours from the time of the reactor trip (i.e., piping, water sources, power supplies, controls, and instrumentation).”

Nuclear Energy Institute (NEI) document NEI 99-01, Revision 6, “Development of Emergency Action Levels for Non-Passive Reactors,” Revision 6, dated November 2012 (ADAMS Accession No. ML12326A805), provides the latest guidance endorsed by the NRC for the development of emergency action levels for non-passive large light water power reactors.

3.0 TECHNICAL EVALUATION

3.1 System Description (Safety and Security Interface)

The licensee noted that RG 5.76 includes an unclassified statement that vital equipment, in part, includes that “equipment required to perform the functions of reactivity control, decay heat removal and process monitoring for the purpose of achieving and maintaining hot shutdown for a minimum of 8 hours from the time of the reactor trip (i.e., piping, water sources, power supplies, controls, and instrumentation).”

In order to determine what equipment must be classified as vital, the NRC staff analyzes the necessary safety functions and the equipment or systems that would be required to perform those safety functions to protect public health and safety. This defines the scope of equipment considered vital when the reactor is operating at power. When the reactor is in operating modes

where the steam generators are not available for decay heat removal, and soluble neutron absorbers are necessary for reactivity control, other equipment may be necessary to maintain a safe shutdown condition. The equipment necessary to achieve and maintain hot standby from the power mode of reactor operation generally includes adequate equipment to perform the essential safety functions in all other modes. This is because decay heat rapidly decreases after shutdown and, within 24 hours of entering cold shutdown, injected water from the high-pressure injection or charging system, which would be protected as essential hot standby equipment, could provide adequate cooling for decay heat removal. Furthermore, the charging system also provides reactor coolant system (RCS) inventory control and boration for reactivity control in modes other than power operation and hot shutdown (i.e., cold shutdown and refueling at low water levels).

In the enclosure to its letter dated February 14, 2019, Section 3.1.1, “Achieving and Maintaining Safe Shutdown with Loss of Auxiliary Saltwater,” the licensee stated that the ASW system is not necessary to reach and maintain safe shutdown conditions in response to the security design-basis threat and loss of access to the ultimate heat sink. Section 7.4.2.1, “Safe Shutdown Equipment,” of the Diablo Canyon UFSAR (ADAMS Accession No. ML19231A065) identifies the following minimum functions to establish and maintain safe shutdown in Operational Mode 3, “Hot Standby”:

- Reactivity control through insertion of the control rods;
- Decay heat removal using the AFW system and the steam generator safety valves;
- RCS pressure control through control heat removal and by preventing water-solid or uncovered-core conditions (pressurizer heaters assist, but are not necessary);
- RCS inventory (water level) control via charging (high-pressure injection of water) flow; and
- Safety support systems, including electric power and heat removal from essential equipment.

The licensee determined that the ASW system is not essential for performance of these safety functions. The control rods do not require heat removal to perform the reactivity control function necessary to keep the reactor subcritical in Mode 3. Similarly, the AFW system and main steam safety valves perform the decay heat removal safety function without the need for any supporting heat removal through the ASW system. Although two of the three installed CCPs rely on bearing and oil cooling normally provided by the CCW and ASW systems, the licensee described that a third CCP is air-cooled and described operating procedures that direct actions to make alternate cooling available to the other two CCPs without reliance on the ASW system or the intake structure. The licensee also described that the emergency diesel generators providing power to the critical systems during safe shutdown are air-cooled and do not require CCW/ASW cooling.

The NRC staff evaluated the capability to maintain safe shutdown from hot shutdown (Mode 4), cold shutdown (Mode 5), and refueling (Mode 6). In Mode 4, the operators normally transition the plant decay heat removal path from the steam generators to direct heat removal through the RHR heat exchangers. In Modes 5 and 6, the RHR system normally provides the decay heat removal function by transferring heat to the ASW system via the CCW system. Thus, the ASW

system becomes part of the normal mode of decay heat removal. However, the licensee has established and implemented procedures for alternate means of decay heat removal in these operating modes.

The NRC staff evaluated the reliability of the Diablo Canyon CCPs for completion of essential safety functions without reliance on ASW cooling. Sections 9.3.4.2.1, “Reactivity Control,” and 9.3.4.2.2, “Regulation of Reactor Coolant Inventory,” of the Diablo Canyon UFSAR describe that the chemical and volume control (CVCS) system maintains the proper RCS inventory in all normal modes of operation and regulates the concentration of chemical neutron absorber in the reactor coolant, which provides reactivity control during and following cooldown from Mode 3. For each Diablo Canyon unit, the CVCS system relies on three CCPs to provide inventory to the RCS. Similarly, Section 9.3.4.3.30, “Generic Letter 88-17, October 1988 – Loss of Decay Heat Removal,” of the Diablo Canyon UFSAR describes that makeup to the RCS could be provided by a CCP, gravity feed from the refueling water storage tank (RWST), or a safety injection pump that can be quickly put in service, should RHR be lost. Each of these backup sources can provide enough water for decay heat removal in addition to continued core coverage. This UFSAR section also includes a statement that PG&E has updated procedures to ensure these pumps are available prior to entering RHR mid-loop operation.

During the regulatory audit conducted from June 18–19, 2019, the NRC staff verified that multiple means of decay heat removal have been identified in required procedures and that availability of equipment for at least one decay heat removal path, independent of the normal decay heat removal path, is reasonably assured by technical specification requirements. Thus, the NRC staff concluded that the Diablo Canyon equipment necessary for maintaining hot shutdown conditions reasonably provides for essential safety functions in the cold shutdown and refueling modes of operation.

Although the CVCS provides an alternate means of accomplishing essential safety functions, the proposed security reclassification of the intake structure to an OCA affects some of the CVCS equipment that supports the essential safety functions of decay heat removal, reactivity control, and RCS inventory control. Specifically, Section 6.3.2.4.3.2, “Centrifugal Charging Pumps (i.e., CCP1 and CCP2),” of the Diablo Canyon UFSAR (ADAMS Accession No. ML19231A064), states that the pumps (i.e., CCP1 and CCP2) have a self-contained lubrication system cooled by the CCW, which in turn is cooled by the ASW system. The enclosure to the letter dated February 14, 2019, describes that the licensee had installed a third CCP (CCP3) in place of a positive-displacement charging pump. This pump has comparable capability to CCP1 and CCP2, but it is air-cooled. The licensee provided the following description of CCP performance in the enclosure to the letter dated September 19, 2019. The licensee stated, in part:

> Each of the three CCPs provides approximately 84-87 gallons per minute (gpm) of flow at normal operating RCS pressure. During shutdown conditions, CCP3 is capable of providing up to 135 gpm, and CCP1 and CCP2 are each capable of providing 420 gpm, with RCS pressure at 400 pounds per square inch, gage.

Thus, CCP3 increases the capability to maintain essential safety functions in shutdown without reliance on the ASW system for heat removal. However, if CCP3 was not available, CCP1 and CCP2 have a dependence on cooling water.

To assess the reliability of the CVCS equipment, the NRC staff requested that the licensee address the degree of dependence that CCP1 and CCP2 have on ASW cooling to perform

essential safety functions and the overall reliability of the air-cooled CCP3. In response to the NRC staff's RAI-1 provided in the enclosure to the letter dated September 19, 2019, the licensee described the procedural options to respond to a loss of the ultimate heat sink (ASW system) in each of the operating modes. The licensee described that short-term actions initiated from Operating Modes 1 through 4 would generally rely on control of decay heat removal via the steam generators to manage RCS inventory and, thus, would not require operation of the CCPs. The licensee stated that short-term actions in Modes 1 through 4 could generally be completed from the control room. With the RCS intact in Mode 5, the preferred means of decay heat removal following loss of the RHR system would be to restore cooling via the steam generators. Otherwise, the procedural guidance to use the charging pumps for decay heat removal in Modes 5 and 6 would be followed. If CCP3 was not available, short-term operation of CCP1 or CCP2 to provide for RCS inventory control and decay heat removal in Modes 5 and 6 would be supported by use of the CCW system alone as a heat sink, with the potential to reject heat from the running CCP to the SFP or the containment atmosphere at moderately elevated CCW temperatures. In the long-term, cooling could be provided to CCP1 or CCP2 using fire water supplies or other reliable water sources if necessary. During audit activities, the NRC staff sampled a number of emergency operating procedures (EOPs) to verify that appropriate guidance was in place to support operation of these components, as described for decay heat removal and RCS inventory control, consistent with the technical specification requirements for maintenance of these procedures.

The details of the site-specific conditions and plant operation in Modes 1 through 6 for short-term and long-term mitigation are provided in Section 3.3 of this SE. Section 3.3 discusses the plant capability to supply cooling water for each operational mode (e.g., Modes 1 through 6, including the most limiting refueling condition where maintaining reactor volumetric cooling is important) and actions taken by operators to continuously supply cooling to the reactor.

3.2 Safety and Security Measures

The NRC staff evaluation is based on the following information provided by the licensee in its letters dated February 14, 2019; September 19, 2019; and October 24, 2019:

- No outside control room operator actions were credited in responding to the license design-basis loss of ASW from a postulated security event.

- The licensee identified systems and components unique to Diablo Canyon and equipment and cooling sources that would be used to ensure plant safe shutdown, including AFW, RCS inventory control, air-cooled charging pump (CCP3), atmospheric dump valves (ADVs), and cooling source from condensate storage tank (CST) and RWST.

- The licensee identified additional storage of more than 2.3 million gallons of water from alternate sources for long-term cooling beyond the license design-basis cooling of 8 hours. The specific locations of alternate water source(s) are SRI and are withheld from the public under 10 CFR 2.390.

- As stated in the letter dated September 19, 2019, along with CST (200,000 gallons for Unit 1 and 166,000 gallons for Unit 2) and RWST (363,000 gallons) cooling sources, ADVs and RCS inventory charging pump can be used as a method for cooling the

reactor to RHR entry conditions. The licensee stated that these systems, equipment, and components, along with available water in the CST, would provide RCS cooling for up to 17 hours through AFW injection to reduce heat generated from the reactor core after a reactor trip.

- For beyond-design-basis events, long-term cooling supplies to safety-related, non-safety-related, and pre-staged equipment and components to maintain the reactor in safe shutdown conditions are discussed in Section 3.3 of this SE.

- The use of systems, equipment, components, and operator actions to ensure plant safe shutdown and their interaction with physical security protection are incorporated into plant abnormal operating procedures (AOPs), and EOPs protective strategy is integrated with plant design-basis events procedures and implemented through the requirements of 10 CFR 73.58.

- In its letter dated October 24, 2019, the licensee stated that the instrument air system is normally used to operate the ADVs. In a loss of instrument air system event, backup air function is accomplished by the nonsafety-related nitrogen system. This system comprises nine high-pressure nitrogen bottles for Unit 1 and six high-pressure bottles for Unit 2. In the event that both the normal air and the nonsafety-related systems are lost, a seismically qualified backup air system is available and can be manually aligned from the control room. Also, additional backup air bottle (standby) is located near the ADVs and can be aligned via local valves. The licensee also confirmed that the air supply is available to provide 10 cycles over a 6-hour period per pressure control valve. The NRC staff notes that each plant unit has four ADVs to provide a cooling method when steam generators are relied upon for heat removal, and not all ADVs necessarily need to operate at all times.

- The licensee stated that the CST provides an additional 9 hours of cooling, longer than that of 8 hours, as discussed in RG 5.76, recommended to mitigate a license design-basis event. The licensee further stated multiple air supply systems will support the operation of ADVs for decay heat removal for as long as steam generators are available.

- The licensee states that physical protection defense in depth for the main site will continue to use physical barriers, delay gates and fencing, external and internal fighting positions, and responder tailback (or readiness) positions to neutralize an adversary's ability to adversely impact protected equipment and operators, and assistance from the local law enforcement agency. The licensee states that the other target set equipment at the main site will continue to be protected from the design-basis threat of radiological sabotage.

3.3 Site-Specific Conditions

In its letter dated September 19, 2019, the licensee discussed various modes of operation in which systems and components and cooling sources discussed above, as well as operator actions and mitigation strategies, are used to provide safe shutdown and maintain plant safe shutdown conditions in a loss of ASW event.

3.3.1 Modes 1, 2, and 3 (Short-Term Mitigation)

The licensee stated that upon receiving a loss of the ASW signal, operations personnel (operators) would initially enter AOPs and EOPs and verify the status of ASW pumps. Operators would also contact the security organization to confirm a loss of the ASW system due to a security event. This action is an integral part of the safety and security interface to support entry conditions of security contingency actions, which is part of the NRC-approved site Security Plan and protective strategy. The licensee stated that AOPs and EOPs would direct operators to trip the reactors and initiate the containment air cooling system to limit the rise in containment air temperature and utilize the SFP heat exchanger. Operators would subsequently perform reactor coolant injection and natural circulation cooldown as required by plant EOPs using CCP3 to provide makeup water to the reactor. The Diablo Canyon CCP3 does not depend on the CCW system cooling, which will likely be unavailable due to a loss of the ASW system, to operate and maintain injection capability. This CCP3 feature is unique to Diablo Canyon, and the availability and reliability discussion of the pump can be found in Section 3.1 of this SE. As part of the required actions to provide decay heat removal pathways, cooling water from the CST is injected through available AFW to steam generators and ADVs. As discussed above, available water in the CST supplies a total of 17 hours of cooling source, which is 9 hours beyond what is required to meet the license design-basis event in Mode 3. All required operator actions to safely shut down the reactor, initiate coolant injection, and provide decay heat removal pathways are accomplished inside the control room. No additional operator actions outside the control room are credited.

In its letter dated September 19, 2019 (response to RAI-1d), the licensee stated that Diablo Canyon's protective strategy implements a defense-in-depth approach using physical barriers to provide delay and external and internal defensive positions to neutralize an adversary's ability to adversely impact protected equipment and operators. This protective strategy is integrated with plant design-basis events procedures and implemented through the requirements of 10 CFR 73.58 to ensure that security equipment and response actions are not adversely impacting plant safety.

Based on its review of the information discussed above, the NRC staff concludes that necessary equipment (e.g., CCP3, ADVs, and CST) is available and is not adversely impacted by a loss of ASW. Available equipment can provide coolant injection and decay heat removal pathways to maintain plant safe shutdown as required in 10 CFR 73.55(b)(3)(ii). The available water in the CST provides an additional 9 hours of cooling water beyond the minimum 8 hours for the license design-basis event discussed in RG 5.76. The safety and security actions are integrated in plant AOPs and EOPs as required in 10 CFR 73.58(b). Site-specific plant conditions have been appropriately identified and analyzed, along with operating procedures as required in 10 CFR 73.55(b)(4). Therefore, the NRC staff finds that the cooling supply and short-term cooling support, as discussed above, are acceptable because the licensee has identified sufficient alternate water sources, equipment, procedures, and processes to maintain core cooling in a loss of ASW event.

3.3.2 Modes 1, 2, and 3 (Long-Term Mitigation)

If the CCP3 is not available, the licensee stated that operators would contact the security organization as part of its safety and security interface and plant protective strategy. The operators would then be directed to enter AOPs and EOPs that direct the operators to utilize available sources of supply water to CCP1 or CCP2 not affected by a loss of ASW. The water supply would provide cooling necessary to recover the functional capability of these pumps to

continue RCS coolant injection. The emergency procedures would also direct the operators to secure water from established sources to establish an alternative cooling supply to cool the CCW heat exchangers and maintain AFW injection of water to available steam generators for decay heat removal capability. The specific locations of alternate water source(s) are SRI and withheld from the public under 10 CFR 2.390.

The licensee states that these procedures require local actions to utilize certain pre-staged flexible equipment to establish suction from alternate water sources. As part of the plant overall walkdown in June 2019 during the regulatory audit, the NRC staff observed locations of alternate water sources, connection points, available flexible equipment and components, and an air-cooled diesel-driven emergency generator. The specific flexible equipment and air-cooled diesel-driven emergency generator are identified, staged at designated locations at the site, and regularly maintained. Access to water locations, flexible equipment, and an emergency power to the ASW pump are monitored and regularly patrolled by security personnel as part of plant protective strategy to ensure that alternate cooling capabilities can provide reasonable assurance that RCS cooling can be accomplished and maintained during emergency events.

Based on its review of the information discussed above, the NRC staff concludes that (1) the volume of alternate water sources will provide a sustained supply of water to support long-term RCS cooling beyond the minimum 8 hours discussed in RG 5.76; (2) operators and the security organization are aware of these important resources; (3) access to staging equipment and locations are well controlled; and (4) security personnel are aware of needed actions necessary to assist operators to establish cooling paths through safety and security interface activities as required in 10 CFR 73.55(b)(3)(ii) and 10 CFR73.58(b). Site-specific plant conditions have been appropriately identified and analyzed by the licensee, along with operating procedures as required in 10 CFR 73.55(b)(4). Therefore, the NRC staff finds that these capabilities are acceptable because the licensee has identified sufficient alternate water sources, equipment, procedures, and processes to maintain core cooling in the event that the CCP3 is not available during Modes 1, 2 and 3.

3.3.3 Modes 4 and 5 (Short-Term and Long-Term Mitigation)

The licensee states that upon recognition of a loss of ASW, operators would contact the security organization as part of its safety and security interface. The operators would also be directed to implement AOPs and EOPs. These procedures would direct the operators to (1) secure non-essential loads and align SFP heat exchangers to be available as CCW heat sinks, (2) initiate containment cooling, and (3) take actions to provide RCS coolant makeup using CCP3 and AFW injection of water to steam generators and utilize ADVs to complete a decay heat removal path. If the RCS was not intact, and the CCP3 was not available in this scenario, the RCS temperature would be lower than 200 degrees Fahrenheit (°F). The RCS inventory makeup could be accomplished using the water supply from the RWST and intermittently utilize CCP1 or CCP2 that were impacted by a loss of ASW with unavailable CCW cooling support. The licensee indicated that with a degraded CCW supply to CCP1 and CCP2, intermittent CCP1 or CCP2 operation, as necessary to control RCS temperature less than 200 °F, would prevent exceeding pump limits, and such intermittent operation would not affect the lifetime of the pump's components.

For long-term cooling, the SFP can be used to provide alternate water makeup sources to the RCS. If emergency diesel generators are not available to support RCS makeup operations,

RCS feed-and-bleed operation can be accomplished using gravity injection by manually aligning RWST valves to provide RCS cold leg injection.

With regard to the most limiting refueling condition where maintaining reactor cooling inventory is important, Diablo Canyon discussed a defense-in-depth strategy under the procedure for "Outage Safety Scheduling" that would ensure backup of plant safety functions using redundancy, alternative, and diverse methods to maintain reactor core cooling. The Diablo Canyon administrative procedures would mandate the completion of an outage safety checklist per shift basis to ensure such redundancy, alternative, and diverse equipment is available, especially during an RCS loop-not-filled condition (e.g., volume of water available in the RWST must be greater than or equal to 80 percent to ensure adequate cooling of reactor fuel).

Based on its review of the information discussed above, the NRC staff concludes that in the event of a loss of ASW, security personnel are aware of needed actions necessary to assist operators to establish cooling paths through their safety and security interface activities as required in 10 CFR 73.58(b). Alternate equipment and cooling supplies identified in plant EOPs will ensure plant safe shutdown conditions as required in 10 CFR 73.55(b)(3)(ii). Site-specific plant conditions have been appropriately identified and analyzed by the licensee, along with operating procedures as required in 10 CFR 73.55(b)(4). In addition, Diablo Canyon administrative procedures mandate the completion of an outage safety checklist on a per-shift basis to ensure such redundancy, alternative, and diverse equipment is available. Therefore, the NRC staff finds that the cooling supply and short-term and alternate long-term cooling support, as discussed above, are acceptable because the licensee has identified sufficient alternate water sources, equipment, procedures, and processes to maintain core cooling in the event that the CCP3 is not available during Modes 4 and 5.

3.3.4 Mode 6 (Short-Term and Long-Term Mitigation)

The licensee stated that once the ASW system is determined unavailable, operators would contact the security organization as part of their safety and security interface. Operators would initiate procedures to secure nonessential heat loads and utilize SFP heat exchangers as available CCW heat sinks. When the RCS loop is not intact, CCP3 would take suction from the RWST and inject cool water into the reactor to stabilize RCS temperature.

When the CCP3 is not available and the RCS temperature in this mode is in relatively low 200 °F range, CCP1 and CCP2 that were impacted by a loss of ASW with unavailable CCW cooling would be used intermittently for feed-and-bleed operation with water provided by the RWST. The licensee indicated that with a degraded CCW supply to CCP1 and CCP2, intermittent CCP1 or CCP2 operation as necessary to control RCS temperature less than 200 °F would prevent exceeding pump limits and such intermittent operation would not affect the lifetime of the pump's components.

As an alternate to the RCS cooling using identified sources as indicated in the licensee's RAI-1 response by letter dated September 19, 2019, the SFP can be used to inject water to the reactor for long-term cooling. If CCP3 and the emergency diesel generator are not available to support RCS makeup operations, RCS feed-and-bleed operations can be accomplished using gravity injection by manually aligning RWST valves to provide RCS cold leg injection.

Similar to the long-term mitigation discussion above for Mode 5, Diablo Canyon administrative procedures mandate the completion of an outage safety checklist on a per-shift basis to ensure such redundancy, an alternative, and diverse equipment is available, especially when the

refueling cavity is not flooded in Mode 6. Also, the administrative procedures require that the volume of water available in the RWST must be greater than or equal to 90 percent when at reduced RCS inventory to ensure adequate cooling of reactor fuel.

Based on the information discussed above, the NRC staff concludes that in the event of a loss of ASW, security personnel are aware of needed actions necessary to assist operations personnel to establish cooling paths through their safety and security interface activities as required in 10 CFR 73.58(b). Alternate equipment and cooling supplies as identified in plant AOPs and EOPs will ensure plant safe shutdown conditions as required in 10 CFR 73.55(b)(3)(ii). Site-specific plant conditions have been appropriately identified and analyzed, along with operating procedures, as required in 10 CFR 73.5(b)(4). In addition, plant administrative procedures mandate the completion of an outage safety checklist on a per-shift basis to ensure such redundancy, alternative, and diverse equipment is available. Therefore, the NRC staff finds that the cooling supply and short-term and alternate long-term cooling support, as discussed above, are acceptable, because the licensee has identified sufficient alternate water sources, equipment, procedures, and processes to maintain core cooling in the event that the CCP3 is not available during Mode 6.

3.3.5 Summary of the NRC Staff Evaluation – Site-Specific Conditions

Based on the above evaluation, the NRC staff concludes that the volume of water in the CST provides an additional 9 hours of cooling, which is longer than that of 8 hours discussed in RG 5.76 to mitigate a design-basis event. Site-specific plant conditions have been appropriately identified and analyzed by the licensee, along with operating procedures as required in 10 CFR 73.55(b)(4). Additionally, the defense in depth through integration of systems, the cooling process, and implementing procedures, have been identified to ensure that various cooling sources and injection systems are available as required in 10 CFR 73.55(b)(3)(ii). Operators are trained to mitigate a loss of ASW cooling. Security and safety organizations coordinate activities through the licensee's safety-security interface as required in 10 CFR 73.58(b) to ensure these sources of water and equipment are available and controlled as part of the site protective strategy. Therefore, the NRC staff finds that such cooling methods and protective strategy are acceptable because the licensee has identified sufficient water sources, equipment, procedures, and processes to maintain core cooling in the event of a loss of ASW.

3.4 Underground Pathways

The licensee responded to the NRC staff's RAI-2 concerning certain circumstances in which access to underground pathways could be created, to include intake structure hatches and any other components that could potentially become traversable pathways in accordance with 10 CFR 73.55(o) and 10 CFR 73.55(i).

The licensee described the compensatory measures to these potential degradations, which will be implemented depending on the ASW configuration, to prevent exploitation consistent with industry guidance and will continue to meet the requirements of 10 CFR 73.55(i)(5)(iii). These compensatory measures will include a physical barrier and will be monitored by intrusion detection equipment or observed by security personnel at a frequency sufficient to detect exploitation. The Diablo Canyon PSP and implementing procedures provide instructions for equivalent levels of protection concerning circumstances in which access to underground pathways could be created.

The licensee states that the design of the circulating water pump tunnels could become traversable pathways only during planned evolutions. However, plant modifications conducted in August 2016 have rendered them non-traversable. The compensatory measures would depend on the circumstances of the ASW system reconfiguration. The licensee states that the need for compensatory measures during these known and planned evolutions are required with or without the devitalization of the intake structure. These security actions remain regardless of the ASW system's designated security classification. In addition, depending on sea gate configurations, location of tunnel draining, and/or removal of access portals, compensatory measures may be altered. Short-term ASW configurations may include posting armed officers at each entry or exit point of the pathway to establish temporary security areas where access is controlled. Long-term ASW configurations may require establishing a security area with intrusion detection and assessment equipment or monitoring or installing physical barriers with intrusion detection and assessment equipment. The licensee states that specific compensatory measures are described in facility procedures.

The licensee indicated that the configurations mentioned above would not require a change to the Security Plan or protective strategy once the intake structure is no longer designated as a VA. The licensee provides an example that illustrates required temporary security-controlled compensatory measures that include physical barriers, video monitoring, search facility, and access control devices within the OCA to meet the requirements of 10 CFR 73.55(g) and (h) prior to performing ASW system tunnel work. The safety and security interface on the status of ASW configuration will continue to provide awareness on potential underground pathways created.

The NRC staff finds that the response to RAI-2 regarding security protection to mitigate potential underground pathways is acceptable, as it provides information on the ASW piping elevation and additional plant modifications, which provides reasonable assurance that the licensee will meet the requirements of 10 CFR 73.55(o) and 10 CFR 73.55(i). In addition, the licensee states that implementation of security compensatory measures will occur regardless of the ASW's designated security classification, which is factored into the physical security protective strategy.

3.5 Physical Protection of the ASW Intake Structure

Diablo Canyon is uniquely divided into three independent PAs surrounding three separate areas of the site (the "main site" which includes Units 1 and 2 and associated buildings), the ASW intake structure, and the ISFSI). By e-mail dated August 13, 2019 (ADAMS Accession No. ML19225D313), the NRC staff issued RAI-3 to the licensee. RAI-3 asked questions about the physical protection measures applicable to the ASW intake structure. Specifically, the NRC staff asked the licensee to describe the future defense in depth of existing security posts/bullet-resistant enclosures to be changed to include overlapping fields of fire and training in accordance with Criterion VI, "Nuclear Power Reactor Training and Qualification Plan for Personnel Performing Security Program Duties," of Appendix B to 10 CFR Part 73.

By letter dated September 19, 2019, the licensee responded to RAI 3 indicating that the current ASW intake structure is considered a VA inside a PA. The licensee states that the Diablo Canyon ASW intake structure PA is subject to the requirements of 10 CFR 73.55. However, based in the licensee's site-specific analysis, once the LAR is approved there would be no

target sets within the intake structure and it would no longer need to be in a PA.[4] Accordingly, the provisions of 10 CFR 73.55(f) would no longer apply. Similarly, because the ASW intake structure would be part of the OCA and no longer in a VA and PA, the requirements of 10 CFR 73.55(e) and 10 CFR 73.55(k) would no longer be applicable. Commensurate with the circumstance(s) defined in the site implementing procedures, armed officer(s) and/or local law enforcement may respond to the intake structure as needed.

The licensee further stated in its response to RAI-3 that it will continue to implement all 10 CFR 73.55 requirements, including 10 CFR 73.55(e), (f), and (k), at the main site PA surrounding the two operating units. At the main site PA, the licensee states that security posts and bullet-resistant enclosures will remain in place, and that interlocking/overlapping fields-of-fire, adversary timelines, and responder timelines remain the same. The licensee further states that defense in depth will remain by using physical barriers, delay gates and fencing, external and internal fighting positions, responder tailback (or readiness) positions, and assistance from the local law enforcement agency. The licensee states that the other target set equipment at the main site will continue to be protected from the design-basis threat of radiological sabotage.

Upon approval of these amendments, the licensee stated that security posts at the intake structure will not be needed to implement the site protective strategy and will be eliminated. This includes two 24/7 posts and numerous other job-specific, non-required/credited security-related posts. The security access and controls and response for the OCA, however, will continue to be utilized for this area.

The licensee also states that the security force will continue to be trained and qualified in accordance with the NRC-approved Training and Qualification Plan. The licensee asserts that no change is required for the protective strategy, as there are no intake structure-specific Appendix B to 10 CFR Part 73 qualifications that apply to personnel performing security program duties in the intake structure area.

If the LAR is approved, the intake structure would be located in the OCA and not have an associated VA or PA. Accordingly, the licensee would not have to protect the intake structure in accordance with the requirements of 10 CFR 73.55, including paragraphs (e), (f), and (k), since these requirements are not applicable to the OCA.

Accordingly, the NRC staff finds that the response to RAI-3 regarding physical protection of the intake structure is acceptable, as it provides an adequate description of the future defense in depth of existing security posts/bullet-resistant enclosures to include overlapping fields of fire in accordance with the requirements of 10 CFR 73.55, except for 10 CFR 73.55(e), (f), and (k). The NRC staff determined that the intake structure does not contain vital equipment for the reasons stated above; therefore, there is no need to declare the intake structure a VA and no need to have it within a protected area. Therefore, this area can be protected in accordance with the physical security requirements for the OCA. Accordingly, the regulations in 10 CFR 73.55(e), (f), and (k) would not be applicable to the protection of the intake structure. The licensee would continue to implement all appropriate security requirements for Units 1 and 2 PA and the ISFSI PA in accordance with its existing physical Security Plan.

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[4] Target sets were not evaluated as part of this review. The target sets and target set analysis will be reviewed during the site's next triennial target set inspection, and therefore, are subject to the future NRC inspection to comply with the requirements of 10 CFR 73.55(b)(4) and 73.55(f)(1), (2), (3), and (4).

3.6 Cyber Security

The new intake configuration does not result in a change to the licensee's previously approved CSP. The reclassification of the ASW system as nonvital does not impact the licensee's ability to continue to meet the cyber security requirements of 10 CFR 73.54. Therefore, no evaluation of the CSP is needed.

3.7 Emergency Planning

PG&E proposed changes to the Diablo Canyon Emergency Plan as part of its application. The proposed changes include the following:

- The definition for "protected area" will have the reference to the intake structure PA removed;
- A hostile action event in the intake structure PA will be reclassified from a Site Area Emergency to an Alert; and
- The accountability methodology at the intake structure will change from a PA to an OCA.

3.7.1 Definition Change

Section 1, "Definitions," of the proposed Diablo Canyon Emergency Plan will be revised for the term "protected area" to remove reference to the intake structure PA in accordance with the proposed change to the security classification of the intake structure. The NRC staff has reviewed this proposed change and determined that this change is acceptable because the intake structure will not contain vital equipment.

3.7.2 Reclassification of Hostile Action Event in the Intake PA

Currently, a hostile action event in the intake structure PA is classified as a Site Area Emergency in the Diablo Canyon Emergency Plan. The proposed change will redesignate the intake structure as part of the OCA. The proposed new classification level for a hostile action in the intake structure would be Alert. This classification level is consistent with the guidance in NEI 99-01, Revision 6, which was endorsed by the NRC by letter dated March 28, 2013 (ADAMS Accession No. ML12346A463). NEI 99-01, Revision 6, provides an Alert level classification for a hostile action occurring or that has occurred in the OCA. Because the proposed new classification level is consistent with the NRC-endorsed guidance, the NRC staff has determined that this change is acceptable.

3.7.3 Accountability Methodology

The proposed change impacts the accountability methodology at the intake structure due to the redesignation of the intake structure from a PA to be part of the OCA. Diablo Canyon currently has established accountability methodology for areas within the PA and OCA. Personnel accountability at the intake structure currently is established through control of identification badges, supervisory accountability, and the computerized security systems electronically as part of the PA. After the proposed change, personnel accountability for the intake area will be completed, as it is in the OCA, with the use of supervisory accountability and security to alert workers. All workers in the OCA who are not involved with emergency response are considered

non-essential and will be alerted to assemble and evacuate as determined by the Site Emergency Coordinator. Because there is no specific change proposed to the Diablo Canyon Emergency Plan wording, and the accountability will be completed using the methodology consistent with the current Diablo Canyon Emergency Plan and implementing procedures for the OCA versus the PA, the NRC staff has determined that this change is acceptable.

3.7.4 Summary of the NRC Staff Evaluation – Emergency Planning

The NRC staff performed a technical and regulatory review of the proposed changes to the Diablo Canyon Emergency Plan. Based on this review, the staff finds that the proposed Diablo Canyon Emergency Plan, as changed, is consistent with the NRC-endorsed guidance provided in NEI 99-01, Revision 6. As such, the NRC staff has determined that the Diablo Canyon emergency action levels, as revised, continue to meet the standards of 10 CFR 50.47(b)(4) and the requirements in Sections IV.B.1 and IV.B.2 of Appendix E to 10 CFR Part 50 and provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. Therefore, the NRC staff concludes that the proposed Diablo Canyon Emergency Plan is acceptable.

3.8 Summary of the Overall NRC Staff Evaluation

The NRC staff has determined that the ASW system does not have to be designated as vital equipment because the licensee has identified sufficient alternate cooling water sources, equipment, procedures, and processes to maintain core cooling in a loss of ASW event and achieve and maintain the plant in safe shutdown condition, ensuring public health and safety by exposure to radiation. Since the ASW is not vital equipment, there is no need to have the intake structure designated as a VA and have it located in a PA. Based on this review, the NRC staff concludes that the proposed Diablo Canyon Emergency Plan, as changed, is consistent with the NRC-endorsed guidance provided in NEI 99-01, Revision 6. Accordingly, the NRC staff concludes that (1) the licensee's proposed removal of the VA and PA physical security classification from the intake structure physical security classification does not create an unanalyzed plant condition; (2) the safety cooling for plant license design-basis event and alternate cooling that include multiple water sources will remain available to support plant safe shutdown conditions; (3) the site protective strategy incorporates safety and security interfaces to ensure equipment is available; and (4) the security responses remain effective as required in the performance objectives specified in 10 CFR 73.55(e); 10 CFR 73.55(i)(1); 10 CFR 73.55(o)(1), (2), and (3); 10 CFR 73.55(g); 10 CFR 73.55(h); and Appendix B to 10 CFR Part 73, Criterion VI(A)(1). Therefore, the NRC staff finds the proposed removal of the VA and PA physical security classification from the intake structure is acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the California State official was notified of the proposed issuance of the amendments on December 31, 2019. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no

significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration published in the *Federal Register* on May 7, 2019 (84 FR 19972), and there has been no public comment on such finding. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

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

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Date: March 26, 2020

SUBJECT: DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2 - ISSUANCE OF AMENDMENT NOS. 235 AND 237 RE: CHANGES TO THE INTAKE STRUCTURE PHYSICAL SECURITY CLASSIFICATION (EPID L-2019-LLA-0029) DATED MARCH 26, 2020

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