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

December 21, 2022

Ms. Paula Gerfen
Senior Vice President, Generation
and Chief Nuclear Officer
Pacific Gas and Electric Company
Diablo Canyon 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. 243 AND 244 RE: TECHNICAL SPECIFICATIONS AND REVISED LICENSE CONDITIONS FOR THE PERMANENTLY DEFUELED CONDITION (EPID L-2020-LLA-0261)

Dear Ms. Gerfen:

The U.S. Nuclear Regulatory Commission (NRC, the Commission) has issued the enclosed Amendment No. 243 to Facility Operating License No. DPR-80 and Amendment No. 244 to Facility Operating License No. DPR-82 for the Diablo Canyon Nuclear Power Plant, Units 1 and 2, respectively. The amendments consist of changes to the operating licenses, including Technical Specifications and license conditions, in response to Pacific Gas and Electric Company (the licensee) application dated December 3, 2020, as supplemented by letters dated April 1, 2021, May 13, 2021, January 13, 2022, and July 20, 2022.

The amendments revise the facility operating licenses, including appendix A, “Technical Specifications,” and appendix D, “Additional Conditions,” to reflect the permanent cessation of reactor operation. The amendments will be effective after the following conditions have been met: (1) docketing of the certifications required by Title 10 of the *Code of Federal Regulations* (10 CFR) Sections 50.82(a)(1)(i) and (ii) for Diablo Canyon Nuclear Power Plant, Units 1 and 2; and (2) implementation of the Certified Fuel Handler Training and Retraining Program in accordance with 10 CFR 50.2. The amendments must be implemented within 180 days of the effective date of the amendments. The effective date of the amendments is uncertain at this time because, by letter dated October 31, 2022, the licensee indicated that it is seeking to renew the Diablo Canyon licenses (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22304A691). Because the amendments are not expected to be effective for some time, the NRC staff requests the licensee, when submitting future licensing requests during the intervening period, to consider the potential effect that such licensing requests might have on the changes made by these amendments.

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

Sincerely,

/RA/

Samson S. Lee, 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. 243 to DPR-80
2. Amendment No. 244 to DPR-82
3. Safety Evaluation

cc: Listserv

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

PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-275

DIABLO CANYON NUCLEAR POWER PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 243
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 December 3, 2020, as supplemented by letters dated April 1, 2021, May 13, 2021, January 13, 2022, and July 20, 2022, 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, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraphs 1.B, 1.C, 1.D, 2.A, 2.B.(1), 2.B.(2), 2.B.(3), 2.B.(5), 2.C.(1), 2.C.(2), 2.C.(3), 2.C.(4), 2.C.(5), 2.C.(6), 2.C.(8), 2.C.(9), 2.C.(10), 2.C.(11), 2.C.(12), 2.C.(13), 2.C.(14), 2.D, and 2.J, of Facility Operating License No. DPR-80 are hereby amended to read as follows:

1.B Deleted per Amendment No. 243.

1.C The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;

1.D There is reasonable assurance (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations of the Commission set forth in 10 CFR Chapter I;

2.A This License applies to the Diablo Canyon Nuclear Power Plant, Unit 1, a pressurized water nuclear reactor[1] and associated equipment (the facility), owned by the Pacific Gas and Electric Company (PG&E). The facility is located in San Luis Obispo County, California, and is described in PG&E's Final Safety Analysis Report as supplemented and amended, and the Environmental Report as supplemented and amended.

2.B.(1) Pursuant to Section 104(b) of the Act and 10 CFR Part 50, “Licensing of Production and Utilization Facilities”, to possess and use the facility at the designated location in San Luis Obispo County, California, in accordance with the procedures and limitations set forth in this license;

2.B.(2) Pursuant to the Act and 10 CFR Part 70, to possess at any time special nuclear material that was used as reactor fuel, in accordance with the limitations for storage, as described in the Final Safety Analysis Report, as supplemented and amended;

2.B.(3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources that were used for reactor startup, sealed sources that were used for calibration of reactor instrumentation and are used in the calibration of radiation monitoring equipment, and as fission detectors in amounts as required;

[1] In accordance with 10 CFR 50.82(a)(2), the Pacific Gas and Electric Company is no longer authorized to operate the reactor or emplace or retain fuel in the reactor vessel because the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel have been docketed.

2.B.(5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials that were produced by the operation of the facility.

2.C.(1) Deleted per Amendment No. 243.

2.C.(2) Permanently Defueled Technical Specifications

The Permanently Defueled Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 243, are hereby incorporated in the license. Pacific Gas & Electric Company shall maintain the facility in accordance with the Permanently Defueled Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

2.C.(3) Deleted per Amendment No. 243.

2.C.(4) Deleted per Amendment No. 243.

2.C.(5) Deleted per Amendment No. 243.

2.C.(6) Deleted per Amendment No. 243.

2.C.(8) Deleted per Amendment No. 243.

2.C.(9) Deleted per Amendment No. 243.

2.C.(10) Deleted per Amendment No. 243.

2.C.(11) Deleted per Amendment No. 243.

2.C.(12) Deleted per Amendment No. 243.

2.C.(13) Aging Management Program

If all spent fuel has not been removed from the Unit 1 spent fuel pool prior to November 2, 2028, an aging management program shall be submitted prior to this date for NRC approval. The scope of the program shall include those long-lived, passive structures and components that are needed to provide reasonable assurance of the safe condition of the spent fuel in the spent fuel pool. Once approved, the program shall be described in the Final Safety Analysis Report and shall remain in effect for Unit 1 until such time that all spent fuel has been removed from the Unit 1 spent fuel pool.

2.C.(14) Restriction on Handling Spent Nuclear Fuel

Handling of spent nuclear fuel in the spent fuel pool and heavy loads over the spent fuel pool will not be permitted following implementation of the Permanently Defueled Technical Specifications until a minimum of 45 days following permanent shutdown.

2.D Deleted per Amendment No. 243.

2.J Term of License

This License is effective as of the date of issuance and is effective until the Commission notifies the licensee in writing that the license is terminated.

The Attachments are hereby amended to read as follows:

Attachments:
1. Appendix A – Permanently Defueled Technical Specifications
4. Appendix D – Deleted

3. This license amendment is effective after the following conditions have been met:

- Docketing of the certifications required by 10 CFR 50.82(a)(1)(i) and (ii) for Diablo Canyon Power Plant, Units 1 and 2; and

- Certified Fuel Handler Training and Retraining Program has been implemented in accordance with 10 CFR 50.2.

The amendment shall be implemented within 180 days of the effective date of the amendment.

FOR THE NUCLEAR REGULATORY COMMISSION

Jennifer L. Dixon-Herrity

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Date: 2022.12.21 15:08:30 -05'00'

Jennifer L. Dixon-Herrity, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Facility Operating
License No. DPR-80; the Appendix A,
Technical Specifications; and the
Appendix D, Additional Conditions

Date of Issuance: December 21, 2022

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. 244
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 December 3, 2020, as supplemented by letters dated April 1, 2021, May 13, 2021, January 13, 2022, and July 20, 2022, 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, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraphs 1.B, 1.C, 1.D, 2.A, 2.B.(1), 2.B.(2), 2.B.(3), 2.B.(5), 2.C.(1), 2.C.(2), 2.C.(3), 2.C.(4), 2.C.(5), 2.C.(6), 2.C.(7), 2.C.(8), 2.C.(9), 2.C.(10), 2.C.(11), 2.C.(12), 2.C.(13), 2.C.(14), 2.D, and 2.J, of Facility Operating License No. DPR-82 are hereby amended to read as follows:

1.B Deleted per Amendment No. 244.

1.C The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;

1.D There is reasonable assurance (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations of the Commission set forth in 10 CFR Chapter I;

2.A This License applies to the Diablo Canyon Nuclear Power Plant, Unit 2, a pressurized water nuclear reactor[1] and associated equipment (the facility), owned by PG&E. The facility is located in San Luis Obispo County, California, and is described in PG&E's Final Safety Analysis Report as supplemented and amended, and the Environmental Report as supplemented and amended.

2.B.(1) Pursuant to Section 104(b) of the Act and 10 CFR Part 50, “Licensing of Production and Utilization Facilities”, to possess and use the facility at the designated location in San Luis Obispo County, California, in accordance with the procedures and limitations set forth in this license;

2.B.(2) Pursuant to the Act and 10 CFR Part 70, to possess at any time special nuclear material that was used as reactor fuel, in accordance with the limitations for storage, as described in the Final Safety Analysis Report, as supplemented and amended;

2.B.(3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources that were used for reactor startup, sealed sources that were used for calibration of reactor instrumentation and are used in the calibration of radiation monitoring equipment, and as fission detectors in amounts as required;

[1] In accordance with 10 CFR 50.82(a)(2), the Pacific Gas and Electric Company is no longer authorized to operate the reactor or emplace or retain fuel in the reactor vessel because the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel have been docketed.

2.B.(5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials that were produced by the operation of the facility.

2.C.(1) Deleted per Amendment No. 244.

2.C.(2) Permanently Defueled Technical Specifications (SSER 32, Section 8)* and Environmental Protection Plan

The Permanently Defueled Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 244, are hereby incorporated in the license. Pacific Gas & Electric Company shall maintain the facility in accordance with the Permanently Defueled Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

2.C.(3) Deleted per Amendment No. 244.

2.C.(4) Deleted per Amendment No. 244.

2.C.(5) Deleted per Amendment No. 244.

2.C.(6) Deleted per Amendment No. 244.

2.C.(7) Deleted per Amendment No. 244.

2.C.(8) Deleted per Amendment No. 244.

2.C.(9) Deleted per Amendment No. 244.

2.C.(10) Deleted per Amendment No. 244.

2.C.(11) Deleted per Amendment No. 244.

2.C.(12) Deleted per Amendment No. 244.

2.C.(13) Aging Management Program

If all spent fuel has not been removed from the Unit 2 spent fuel pool prior to August 26, 2029, an aging management program shall be submitted prior to this date for NRC approval. The scope of the program shall include those long-lived, passive structures and components that are needed to provide reasonable assurance of the safe condition of the spent fuel in the spent fuel pool. Once approved, the program shall be described in the Final Safety Analysis Report and shall remain in effect for Unit 2 until such time that all spent fuel has been removed from the Unit 2 spent fuel pool.

2.C.(14) Restriction on Handling Spent Nuclear Fuel

Handling of spent nuclear fuel in the spent fuel pool and heavy loads over the spent fuel pool will not be permitted following implementation of the Permanently Defueled Technical Specifications until a minimum of 45 days following permanent shutdown.

2.D Deleted per Amendment No. 244.

2.J Term of License

This License is effective as of the date of issuance and is effective until the Commission notifies the licensee in writing that the license is terminated.

The Attachments are hereby amended to read as follows:

Attachments:
1. Appendix A – Permanently Defueled Technical Specifications
4. Appendix D – Deleted

3. This license amendment is effective after the following conditions have been met:

- Docketing of the certifications required by 10 CFR 50.82(a)(1)(i) and (ii) for Diablo Canyon Power Plant, Units 1 and 2; and

- Certified Fuel Handler Training and Retraining Program has been implemented in accordance with 10 CFR 50.2.

The amendment shall be implemented within 180 days of the effective date of the amendment.

FOR THE NUCLEAR REGULATORY COMMISSION

Jennifer L. Dixon-Herrity

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Date: 2022.12.21 15:09:16 -05'00'

Jennifer L. Dixon-Herrity, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Facility Operating
License No. DPR-82; the Appendix A,
Technical Specifications; and the
Appendix D, Additional Conditions

Date of Issuance: December 21, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 243

TO FACILITY OPERATING LICENSE NO. DPR-80

AND LICENSE AMENDMENT NO. 244 TO FACILITY OPERATING LICENSE NO. DPR-82

DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2

DOCKET NOS. 50-275 AND 50-323

Replace the following pages of Facility Operating License Nos. DPR-80 and DPR-82, the Appendix A, Technical Specifications, and the Appendix D, Additional Conditions, with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Facility Operating License No. DPR-80

REMOVE	INSERT
1 through 12	1 through 6

Facility Operating License No. DPR-82

REMOVE	INSERT
1 through 10	1 through 6

Technical Specifications

REMOVE	INSERT
TOC pages 1 through 4	TOC page 1
1.1-1 through 1.1-7	1.1-1
1.3-1 through 1.3-10	1.3-1
1.4-1 through 1.4-4	1.4-1 through 1.4-3
2.0-1 through 2.0-2	2.0-1
3.0-1 through 3.0-3	3.0-1 through 3.0-2
3.1-1 through 3.1-17	----
3.2-1 through 3.2-11	----
3.3-1 through 3.3-53	----
3.4-1 through 3.4-38	----
3.5-1 through 3.5-8	----
3.6-1 through 3.6-18	----
3.7-1 through 3.7-33	3.7-1 through 3.7-6
3.8-1 through 3.8-32	----
3.9-1 through 3.9-8	----
4.0-1 through 4.0-3	4.0-1
5.0-1 through 5.0-5	5.0-1 through 5.0-5
5.0-7 through 5.0-26	5.0-7 through 5.0-15

Appendix D, Additional Conditions

REMOVE	INSERT
Pages 1 through 4	-----

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

PACIFIC GAS AND ELECTRIC COMPANY

DIABLO CANYON NUCLEAR POWER PLANT, UNIT 1

DOCKET NO. 50-275

FACILITY OPERATING LICENSE

License No. DPR-80

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

   A. The application for licenses by Pacific Gas and Electric Company complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;

   B. Deleted per Amendment No. 243.

   C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;

   D. There is reasonable assurance (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations of the Commission set forth in 10 CFR Chapter I;

   E. The Pacific Gas and Electric Company is technically qualified to engage in the activities authorized by this operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;

   F. The Pacific Gas and Electric Company has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements", of the Commission's regulations;

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

H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Facility Operating License No. DPR-80, subject to the conditions for protection of the environment set forth herein, is in accordance with applicable Commission regulations governing environmental reviews (10 CFR Part 50, Appendix D and 10 CFR Part 51) and all applicable requirements have been satisfied; and

I. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.

2. Pursuant to Commission's Memorandum and Order CLI-84-13, dated August 10, 1984, Facility Operating License No. DPR-76 issued September 22, 1981, as subsequently amended, is superseded by Facility Operating License No. DPR-80, hereby issued to Pacific Gas and Electric Company to read as follows:

A. This License applies to the Diablo Canyon Nuclear Power Plant, Unit 1, a pressurized water nuclear reactor[1] and associated equipment (the facility), owned by the Pacific Gas and Electric Company (PG&E). The facility is located in San Luis Obispo County, California, and is described in PG&E's Final Safety Analysis Report as supplemented and amended, and the Environmental Report as supplemented and amended.

B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the Pacific Gas and Electric Company:

(1) Pursuant to Section 104(b) of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities", to possess and use the facility at the designated location in San Luis Obispo County, California, in accordance with the procedures and limitations set forth in this license;

(2) Pursuant to the Act and 10 CFR Part 70, to possess at any time special nuclear material that was used as reactor fuel, in accordance with the limitations for storage, as described in the Final Safety Analysis Report, as supplemented and amended;

(3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources that were used for reactor startup, sealed sources that were used for calibration of reactor instrumentation and are used in the calibration of radiation monitoring equipment, and as fission detectors in amounts as required;

[1] In accordance with 10 CFR 50.82(a)(2), the Pacific Gas and Electric Company is no longer authorized to operate the reactor or emplace or retain fuel in the reactor vessel because the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel have been docketed.

(4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

(5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials that were produced by the operation of the facility.

C. This License shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Deleted per Amendment No. 243.

(2) Permanently Defueled Technical Specifications

The Permanently Defueled Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 243, are hereby incorporated in the license. Pacific Gas & Electric Company shall maintain the facility in accordance with the Permanently Defueled Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

(3) Deleted per Amendment No. 243.

(4) Deleted per Amendment No. 243.

(5) Deleted per Amendment No. 243.

(6) Deleted per Amendment No. 243.

(7) Seismic Design Bases Reevaluation Program (SSER 27 Section IV.5)

PG&E shall develop and implement a program to reevaluate the seismic design bases used for the Diablo Canyon Nuclear Power Plant.

The program shall include the following Elements:

(1) PG&E shall identify, examine, and evaluate all relevant geologic and seismic data, information, and interpretations that have become available since the 1979 ASLB hearing in order to update the geology, seismology and tectonics in the region of the Diablo Canyon Nuclear Power Plant. If needed to define the earthquake potential of the region as it affects the Diablo Canyon Plant, PG&E will also reevaluate the earlier information and acquire additional new data.

(2) PG&E shall reevaluate the magnitude of the earthquake used to determine the seismic basis of the Diablo Canyon Nuclear Plant using the information from Element 1.

(3) PG&E shall reevaluate the ground motion at the site based on the results obtained from Element 2 with full consideration of site and other relevant effects.

(4) PG&E shall assess the significance of conclusions drawn from the seismic reevaluation studies in Elements 1, 2 and 3, utilizing a probabilistic risk analysis and deterministic studies, as necessary, to assure adequacy of seismic margins.

PG&E shall submit for NRC staff review and approval a proposed program plan and proposed schedule for implementation by January 30, 1985. The program shall be completed and a final report submitted to the NRC three years following the approval of the program by the NRC staff.

PG&E shall keep the staff informed on the progress of the reevaluation program as necessary, but as a minimum will submit quarterly progress reports and arrange for semi-annual meetings with the staff. PG&E will also keep the ACRS informed on the progress of the reevaluation program as necessary, but not less frequently than once a year.

(8) Deleted per Amendment No. 243.

(9) Deleted per Amendment No. 243.

(10) Deleted per Amendment No. 243.

(11) Deleted per Amendment No. 243.

(12) Deleted per Amendment No. 243.

(13) Aging Management Program

If all spent fuel has not been removed from the Unit 1 spent fuel pool prior to November 2, 2028, an aging management program shall be submitted prior to this date for NRC approval. The scope of the program shall include those long-lived, passive structures and components that are needed to provide reasonable assurance of the safe condition of the spent fuel in the spent fuel pool. Once approved, the program shall be described in the Final Safety Analysis Report and shall remain in effect for Unit 1 until such time that all spent fuel has been removed from the Unit 1 spent fuel pool.

(14) Restriction on Handling Spent Nuclear Fuel

Handling of spent nuclear fuel in the spent fuel pool and heavy loads over the spent fuel pool will not be permitted following implementation of the Permanently Defueled Technical Specifications until a minimum of 45 days following permanent shutdown.

D. Deleted per Amendment No. 243.

E. Physical Protection

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54 (p). The combined set of plans, which contains Safeguards Information protected under 10 CFR 73.21, is entitled: "Diablo Canyon Power Plant, Units 1 and 2 Physical Security Plan, by Training and Qualification Plan, and Safeguards Contingency Plan," submitted by letter dated May 16, 2006.

PG&E shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The PG&E CSP was approved by License Amendment No. 210, as supplemented by a change approved by License Amendment No. 220.

Pursuant to NRC's Order EA-13-092, dated June 5, 2013, NRC reviewed and approved the license amendment 222 that permitted the security personnel of the licensee to possess and use certain specific firearms, ammunition, and other devices, such as large-capacity ammunition feeding devices, notwithstanding local, State, and certain Federal firearms laws that may prohibit such possession and use.

F. Deleted.

G. Deleted.

H. Financial Protection

PG&E shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

I. Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

(a) Fire fighting response strategy with the following elements:

1. Pre-defined coordinated fire response strategy and guidance
2. Assessment of mutual aid fire fighting assets
3. Designated staging areas for equipment and materials
4. Command and control
5. Training of response personnel

(b) Operations to mitigate fuel damage considering the following:

1. Protection and use of personnel assets
2. Communications
3. Minimizing fire spread
4. Procedures for implementing integrated fire response strategy
5. Identification of readily-available pre-staged equipment
6. Training on integrated fire response strategy
7. Spent fuel pool mitigation measures

(c) Actions to minimize release to include consideration of:

1. Water spray scrubbing
2. Dose to onsite responders

J. Term of License

This License is effective as of the date of issuance and is effective until the Commission notifies the licensee in writing that the license is terminated.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by:
Edson G. Case for

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Attachments:
1. Appendix A – Permanently Defueled Technical Specifications
2. Appendix B - Environmental Protection Plan
3. Appendix C - Deleted
4. Appendix D – Deleted

Date of Issuance: November 2, 1984

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

PACIFIC GAS AND ELECTRIC COMPANY

DIABLO CANYON NUCLEAR POWER PLANT, UNIT 2

DOCKET NO. 50-323

FACILITY OPERATING LICENSE

License No. DPR-82

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

   A. The application for licenses by Pacific Gas and Electric Company (PG&E) complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;

   B. Deleted per Amendment No. 244.

   C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;

   D. There is reasonable assurance (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations of the Commission set forth in 10 CFR Chapter I;

   E. The Pacific Gas and Electric Company is technically qualified to engage in the activities authorized by this operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;

   F. The Pacific Gas and Electric Company has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements", of the Commission's regulations;

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

H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Facility Operating License No. DPR-82, subject to the conditions for protection of the environment set forth herein, is in accordance with applicable Commission regulations governing environmental reviews (10 CFR Part 50, Appendix D and 10 CFR Part 51) and all applicable requirements have been satisfied; and

I. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.

2. Pursuant to approval by the Nuclear Regulatory Commission in its Memorandum and Order (CLI-85-14) dated August 1, 1985, the license for fuel loading and low power testing, Facility Operating License No. DPR-81, issued on April 26, 1985, is superseded by Facility Operating License No. DPR-82, hereby issued to Pacific Gas and Electric Company to read as follows:

A. This License applies to the Diablo Canyon Nuclear Power Plant, Unit 2, a pressurized water nuclear reactor[1] and associated equipment (the facility), owned by PG&E. The facility is located in San Luis Obispo County, California, and is described in PG&E's Final Safety Analysis Report as supplemented and amended, and the Environmental Report as supplemented and amended.

B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the Pacific Gas and Electric Company:

(1) Pursuant to Section 104(b) of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities", to possess and use the facility at the designated location in San Luis Obispo County, California, in accordance with the procedures and limitations set forth in this license;

(2) Pursuant to the Act and 10 CFR Part 70, to possess at any time special nuclear material that was used as reactor fuel, in accordance with the limitations for storage, as described in the Final Safety Analysis Report, as supplemented and amended;

(3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources that were used for reactor startup, sealed sources that were used for calibration of reactor instrumentation and are used in the calibration of radiation monitoring equipment, and as fission detectors in amounts as required;

[1] In accordance with 10 CFR 50.82(a)(2), the Pacific Gas and Electric Company is no longer authorized to operate the reactor or emplace or retain fuel in the reactor vessel because the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel have been docketed.

(4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

(5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials that were produced by the operation of the facility.

C. This License shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Deleted per Amendment No. 244.

(2) Permanently Defueled Technical Specifications (SSER 32, Section 8)* and Environmental Protection Plan

The Permanently Defueled Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 244, are hereby incorporated in the license. Pacific Gas & Electric Company shall maintain the facility in accordance with the Permanently Defueled Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

(3) Deleted per Amendment No. 244.

(4) Deleted per Amendment No. 244.

(5) Deleted per Amendment No. 244.

(6) Deleted per Amendment No. 244.

(7) Deleted per Amendment No. 244.

(8) Deleted per Amendment No. 244.

(9) Deleted per Amendment No. 244.

(10) Deleted per Amendment No. 244.

* The parenthetical notation following the title of many license conditions denotes the section of the Safety Evaluation Report and/or its supplements wherein the license condition is discussed.

(11) Deleted per Amendment No. 244.

(12) Deleted per Amendment No. 244.

(13) Aging Management Program

If all spent fuel has not been removed from the Unit 2 spent fuel pool prior to August 26, 2029, an aging management program shall be submitted prior to this date for NRC approval. The scope of the program shall include those long-lived, passive structures and components that are needed to provide reasonable assurance of the safe condition of the spent fuel in the spent fuel pool. Once approved, the program shall be described in the Final Safety Analysis Report and shall remain in effect for Unit 2 until such time that all spent fuel has been removed from the Unit 2 spent fuel pool.

(14) Restriction on Handling Spent Nuclear Fuel

Handling of spent nuclear fuel in the spent fuel pool and heavy loads over the spent fuel pool will not be permitted following implementation of the Permanently Defueled Technical Specifications until a minimum of 45 days following permanent shutdown.

D. Deleted per Amendment No. 244.

E. Physical Protection

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provision of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54 (p). The combined set of plans, which contains Safeguards Information protected under 10 CFR 73.21, is entitled: “Diablo Canyon Power Plant, Units 1 and 2 Physical Security Plan, Training and Qualification Plan and Safeguards Contingency Plan,” submitted by letter dated May 16, 2006.

PG&E shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The PG&E CSP was approved by License Amendment No. 212, as supplemented by a change approved by License Amendment No. 222.

Pursuant to NRC’s Order EA-13-092, dated June 5, 2013, NRC reviewed and approved the license amendment 224 that permitted the security personnel of the licensee to possess and use certain specific firearms, ammunition, and other devices, such as large-capacity ammunition feeding devices, notwithstanding local, State, and certain Federal firearms laws that may prohibit such possession and use.

F. Deleted.

G. Deleted

H. Financial Protection

PG&E shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims

I. Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

(a) Fire fighting response strategy with the following elements:

1. Pre-defined coordinated fire response strategy and guidance
2. Assessment of mutual aid fire fighting assets
3. Designated staging areas for equipment and materials
4. Command and control
5. Training of response personnel

(b) Operations to mitigate fuel damage considering the following:

1. Protection and use of personnel assets
2. Communications
3. Minimizing fire spread
4. Procedures for implementing integrated fire response strategy
5. Identification of readily-available pre-staged equipment
6. Training on integrated fire response strategy
7. Spent fuel pool mitigation measures

(c) Actions to minimize release to include consideration of:

1. Water spray scrubbing
2. Dose to onsite responders

J. Term of License

This License is effective as of the date of issuance and is effective until the Commission notifies the licensee in writing that the license is terminated.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by: Harold R. Denton

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Attachments:
1. Appendix A - Permanently Defueled Technical Specifications
2. Appendix B - Environmental Protection Plan
3. Appendix C - Deleted
4. Appendix D - Deleted

Date of Issuance: August 26, 1985

1.0 USE AND APPLICATION

1.1 Definitions

----------NOTE----------
The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.

Term	Definition
ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
CERTIFIED FUEL HANDLER	A CERTIFIED FUEL HANDLER is an individual who complies with the provisions of the CERTIFIED FUEL HANDLER Training and Retraining Program required by Specification 5.3.2.
NON-CERTIFIED OPERATOR	A NON-CERTIFIED OPERATOR is an operator who complies with the qualification requirements of Specification 5.3.1, but is not a CERTIFIED FUEL HANDLER.

1.0 USE AND APPLICATION

1.3 Completion Times

PURPOSE	The purpose of this section is to establish the Completion Time convention and to provide guidance for its use.
BACKGROUND	Limiting Conditions for Operation (LCOs) specify minimum requirements for ensuring safe handling and storage of nuclear fuel. The ACTIONS associated with an LCO state Conditions that typically describe the ways in which the requirements of the LCO can fail to be met. Specified with each stated Condition are Required Action(s) and Completion Time(s).
DESCRIPTION	The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of discovery of a situation (e.g., variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the facility is in a specified condition stated in the Applicability of the LCO. Required Actions must be completed prior to the expiration of the specified Completion Time. An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the facility is not within the LCO Applicability.
IMMEDIATE COMPLETION TIME	When "Immediately" is used as a Completion Time, the Required Action should be pursued without delay and in a controlled manner.

1.0 USE AND APPLICATION

1.4 Frequency

PURPOSE	The purpose of this section is to define the proper use and application of Frequency requirements.
DESCRIPTION	Each Surveillance Requirement (SR) has a specified Frequency in which the Surveillance must be met in order to meet the associated LCO. An understanding of the correct application of the specified Frequency is necessary for compliance with the SR. The "specified Frequency" is referred to throughout this section and each of the Specifications of Section 3.0, Surveillance Requirement (SR) Applicability. The "specified Frequency" consists of the requirements of the Frequency column of each SR as well as certain Notes in the Surveillance column that modify performance requirements. Situations where a Surveillance could be required (i.e., its Frequency could expire), but where it is not possible or not desired that it be performed until sometime after the associated LCO is within its Applicability, represent potential SR 3.0.4 conflicts. To avoid these conflicts, the SR (i.e., the Surveillance or the Frequency) is stated such that it is only "required" when it can be and should be performed. With an SR satisfied, SR 3.0.4 imposes no restriction.
EXAMPLES	The following examples illustrate the type of frequency statements that appear in the Permanently Defueled Technical Specifications (PDTS).

(continued)

EXAMPLES
(continued)

EXAMPLE 1.4-1

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
Verify level is within limits.	12 hours

Example 1.4-1 contains the type of SR most often encountered in the PDTS. The Frequency specifies an interval (12 hours) during which the associated Surveillance must be performed at least one time. Performance of the Surveillance initiates the subsequent interval. Although the Frequency is stated as 12 hours, an extension of the time interval to 1.25 times the stated Frequency is allowed by SR 3.0.2 for flexibility. The measurement of this interval continues at all times, even when the SR is not required to be met per SR 3.0.1 (such as when a variable is outside specified limits, or the facility is outside the Applicability of the LCO). If the interval specified by SR 3.0.2 is exceeded while the facility is in a specified condition in the Applicability of the LCO, and the performance of the Surveillance is not otherwise modified, then SR 3.0.3 becomes applicable.

If the interval as specified by SR 3.0.2 is exceeded while the facility is not in a specified condition in the Applicability of the LCO for which performance of the SR is required, the Surveillance must be performed within the Frequency requirements of SR 3.0.2 prior to entry into the specified condition. Failure to do so would result in a violation of SR 3.0.4.

(continued)

1.4 Frequency

EXAMPLES
(continued)

EXAMPLE 1.4-2

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
Verify ...	Prior to each fuel assembly move…

Example 1.4-2 illustrates a one time performance Frequency.

This type of Frequency does not qualify for the 25% extension allowed by SR 3.0.2.

2.0 Deleted

3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

LCO 3.0.1	LCOs shall be met during the specified conditions in the Applicability, except as provided in LCO 3.0.2.
LCO 3.0.2	Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met.

3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

SR 3.0.1	SRs shall be met during the specified conditions in the Applicability for individual LCOs, unless otherwise stated in the SR. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO. Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO except as provided in SR 3.0.3. Surveillances do not have to be performed on variables outside specified limits.
SR 3.0.2	The specified Frequency for each SR is met if the Surveillance is performed within 1.25 times the interval specified in the Frequency, as measured from the previous performance or as measured from the time a specified condition of the Frequency is met.
SR 3.0.3	If it is discovered that a Surveillance was not performed within its specified Frequency, then compliance with the requirement to declare the LCO not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified Frequency, whichever is greater. This delay period is permitted to allow performance of the Surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed. If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered. When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.
SR 3.0.4	Entry into a specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified Frequency, except as provided by SR 3.0.3. This provision shall not prevent entry into specified conditions in the Applicability that are required to comply with ACTIONS.

3.7 PLANT SYSTEMS

3.7.15 Spent Fuel Pool Water Level

LCO 3.7.15 The spent fuel pool water level shall be ≥ 23 ft over the top of irradiated fuel assemblies seated in the storage racks.

APPLICABILITY: During movement of irradiated fuel assemblies in the spent fuel pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Spent fuel pool water level not within limit.	A.1 Suspend movement of irradiated fuel assemblies in the spent fuel pool.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.15.1	Verify the spent fuel pool water level is ≥ 23 ft above the top of the irradiated fuel assemblies seated in the storage racks.	7 days

3.7 PLANT SYSTEMS

3.7.16 Spent Fuel Pool Boron Concentration

LCO 3.7.16 The spent fuel pool boron concentration shall be ≥ 2000 ppm.

APPLICABILITY: When fuel assemblies are stored in the spent fuel pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Spent fuel pool boron concentration not within limit.	A.1 Suspend movement of fuel assemblies in the spent fuel pool. AND	Immediately
	A.2 Initiate action to restore spent fuel pool boron concentration to within limit.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.16.1	Verify the spent fuel pool boron concentration is within limit.	7 days

3.7 PLANT SYSTEMS

3.7.17 Spent Fuel Assembly Storage

LCO 3.7.17 Fuel assembly storage in the spent fuel pool shall be maintained such that:

a. In the permanent spent fuel storage racks any four cells shall be in a configuration as shown in Figure 3.7.17-1.

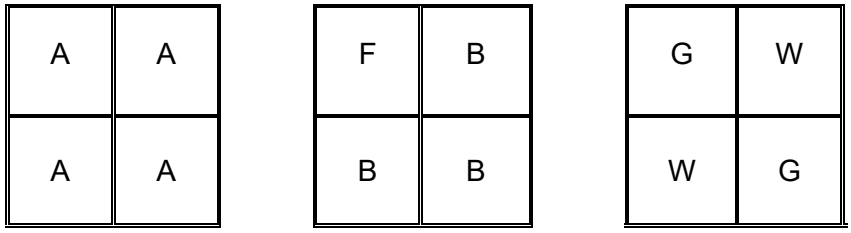
APPLICABILITY: Whenever any fuel assembly is stored in the spent fuel pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of the LCO not met.	A.1 Initiate action to move the noncomplying fuel assembly into an acceptable storage location.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.17.1	Verify by administrative means that the fuel assembly characteristics and its expected storage location is in accordance with LCO 3.7.17.	Prior to each fuel assembly move, when the assembly will be stored in the spent fuel pool.



All Cell Configuration | 2x2 Array Configuration | Checkerboard Configuration

All Cell:

A Fuel assembly with a discharge burnup in the "acceptable" region of Figure 3.7.17-2.

2x2 Array:

F (a) Fuel assembly with an initial enrichment ≤ 4.9 wt% U-235; or

(b) Fuel assembly with an initial enrichment ≤ 5.0 wt% U-235 and an IFBA loading equivalent to 16 rods each with 1.5 mg ^{10}B/in over 120 inches.

B Fuel assembly with a discharge burnup in the "acceptable" region of Figure 3.7.17-3.

Checkerboard:

G Fuel assembly with an initial enrichment ≤ 5.0 wt% U-235.

W Water cell – locations where fuel assemblies are not present, non-fissile components are permitted.

FIGURE 3.7.17-1
ALLOWABLE STORAGE CONFIGURATIONS
(ALL CELL, 2X2 ARRAY, CHECKERBOARD)
FOR THE PERMANENT SPENT FUEL POOL STORAGE RACKS

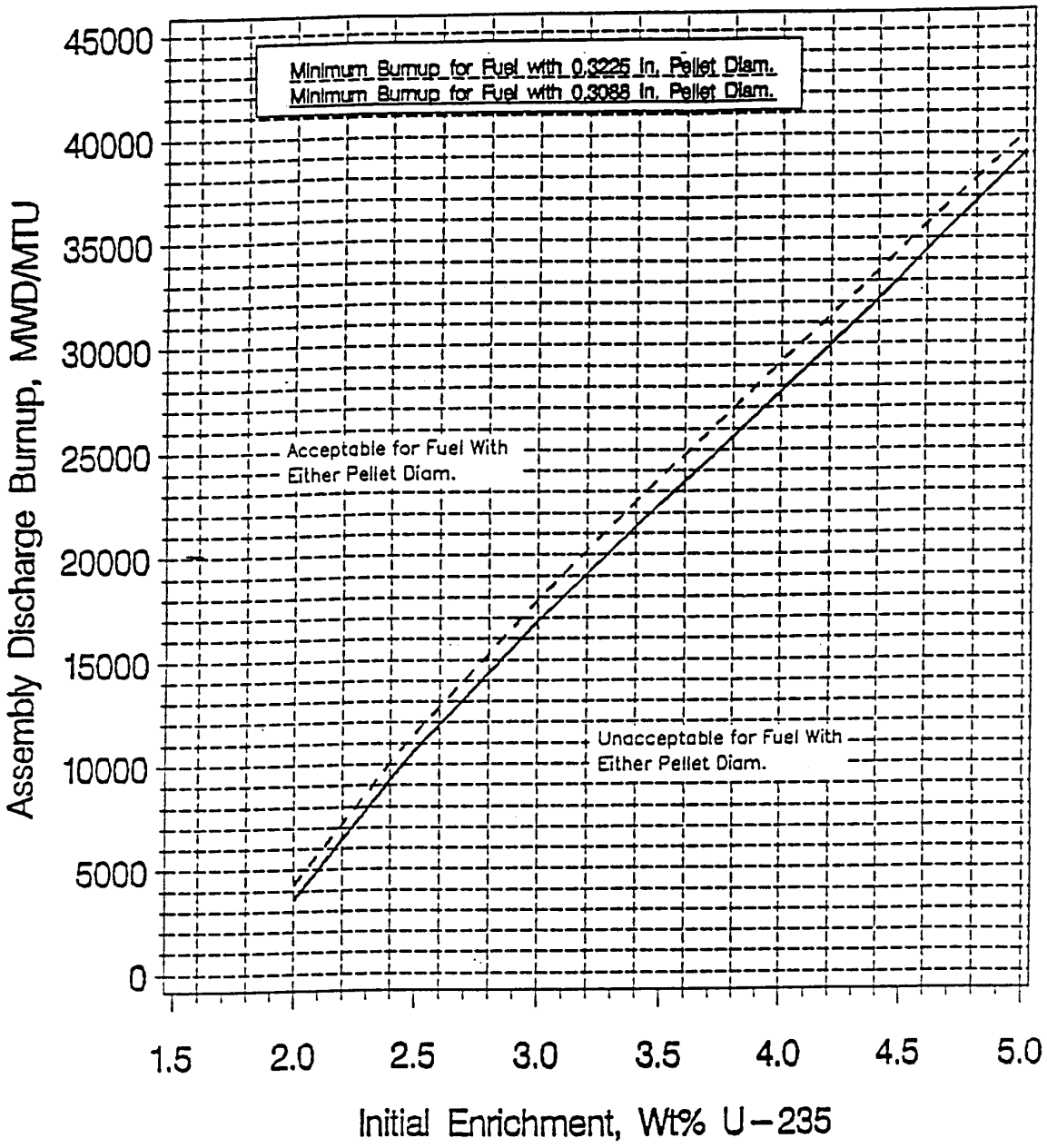


FIGURE 3.7.17-2
MINIMUM REQUIRED ASSEMBLY DISCHARGE BURNUP
AS A FUNCTION OF INITIAL ENRICHMENT AND FUEL PELLET DIAMETER
FOR AN ALL CELL STORAGE CONFIGURATION FOR THE PERMANENT SPENT
FUEL POOL STORAGE RACKS

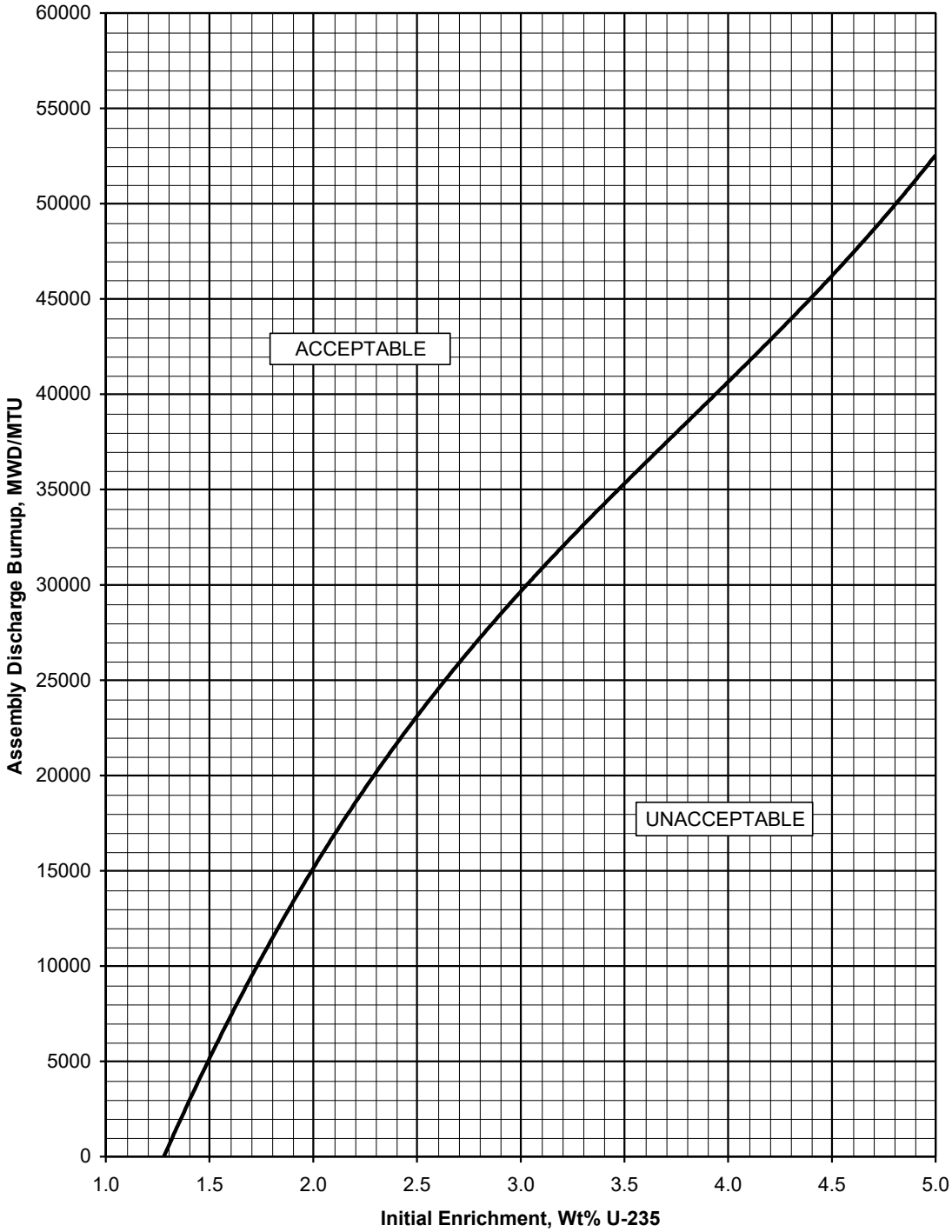


FIGURE 3.7.17-3
MINIMUM REQUIRED ASSEMBLY DISCHARGE BURNUP
AS A FUNCTION OF INITIAL ENRICHMENT
FOR A 2X2 ARRAY STORAGE CONFIGURATION FOR THE PERMANENT SPENT
FUEL POOL STORAGE RACKS

4.0 DESIGN FEATURES

4.1 Site Location

The DCPP site consists of approximately 750 acres which are adjacent to the Pacific Ocean in San Luis Obispo County, California, and is approximately twelve (12) miles west-southwest of the city of San Luis Obispo.

4.2 Deleted

4.3 Fuel Storage

4.3.1 Criticality

4.3.1.1 The permanent spent fuel pool storage racks are designed and shall be maintained with:

a. Fuel assemblies having a maximum U-235 enrichment of 5.0 weight percent;

b. $k_{eff} < 1.0$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1.2.3 of the Final Safety Analysis Report (FSAR);

c. $k_{eff} \leq 0.95$ if fully flooded with water borated to 806 ppm, which includes an allowance for uncertainties as described in Section 9.1.2.3 of the FSAR;

d. A nominal 11 inch center to center distance between fuel assemblies placed in the fuel storage racks;

e. Fuel assemblies with a discharge burnup in the "acceptable" region of Figure 3.7.17-2 for the all cell configuration as shown in Figure 3.7.17-1;

f. Fuel assemblies with a discharge burnup in the "acceptable" region of Figure 3.7.17-3 for the 2x2 array configuration as shown in Figure 3.7.17-1.

4.3.2 Drainage

The spent fuel storage pools are designed and shall be maintained to prevent inadvertent draining of the pool below elevation 133 ft.

4.3.3 Capacity

The permanent spent fuel pool storage racks are designed and shall be maintained with a storage capacity limited to no more than 1324 fuel assemblies.

5.0 ADMINISTRATIVE CONTROLS

5.1 Responsibility

5.1.1 The plant manager shall be responsible for overall facility operation and shall delegate in writing the succession to this responsibility when absent.

The plant manager or designee shall approve, prior to implementation, each proposed test, experiment, or modification to systems or equipment that affect the safe handling and storage of nuclear fuel.

5.1.2 The Shift Supervisor shall be responsible for the shift command function.

5.0 ADMINISTRATIVE CONTROLS

5.2 Organization

5.2.1 Onsite and Offsite Organizations

Onsite and offsite organizations shall be established for facility staff and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safe storage and handling of spent nuclear fuel. The primary role of all nuclear workers is to protect the health and safety of the public.

a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all facility organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements, including the plant-specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications, shall be documented in the FSAR Update;

b. The plant manager shall be responsible for overall safe operation of the facility and shall have control over those onsite activities necessary for safe storage and handling of the nuclear fuel;

c. A specified corporate officer shall have corporate responsibility for the safe storage and handling of nuclear fuel and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the facility to ensure safe storage and handling of nuclear fuel; and

d. The individuals who train the CERTIFIED FUEL HANDLERs, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their ability to perform their assigned functions.

5.2.2 Facility Staff

The facility staff organization shall include the following:

a. Each on duty shift shall be composed of at least one Shift Supervisor shared between Units 1 and 2, and one NON-CERTIFIED OPERATOR per unit. The NON-CERTIFIED OPERATOR position may be filled by a CERTIFIED FUEL HANDLER.

b. Except for the Shift Supervisor, shift crew composition may be less than the minimum requirement of 5.2.2.a for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements and all of the following conditions are met:

(continued)

5.2 Organization

5.2.2 Facility Staff (continued)

(1) No fuel movements are in progress;

(2) No movement of loads over fuel are in progress; and

(3) No unmanned shift positions during shift turnover shall be permitted while the shift crew is less than the minimum.

c. A health physics technician shall be on site during fuel handling operations and during movement of heavy loads over the fuel storage racks. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.

d. Not used.

e. The Shift Supervisor shall be a CERTIFIED FUEL HANDLER.

f. At least one person qualified to stand watch in the control room (NON-CERTIFIED OPERATOR or CERTIFIED FUEL HANDLER) shall be present in the control room when nuclear fuel is stored in a spent fuel pool.

g. Oversight of fuel handling operations shall be provided by a CERTIFIED FUEL HANDLER.

5.0 ADMINISTRATIVE CONTROLS

5.3 Facility Staff Qualifications

5.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Quality Assurance Program.

5.3.2 A training and retraining program for CERTIFIED FUEL HANDLERs shall be maintained.

5.0 ADMINISTRATIVE CONTROLS

5.4 Procedures

5.4.1 Written procedures shall be established, implemented, and maintained covering the following activities:

a. The procedures applicable to the safe storage of spent nuclear fuel, recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978;

b. Not Used;

c. Quality assurance for effluent and environmental monitoring;

d. Not used; and

e. All programs specified in Specification 5.5.

5.5 Programs and Manuals

5.5.2 Not Used

5.5.3 Not Used

5.5.4 Radioactive Effluent Controls Program

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the ODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM;

b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to 10 times the concentration values in Appendix B, Table 2, Column 2, to 10 CFR 20.1001-20.2402;

c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the ODCM;

d. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from the facility to unrestricted areas, conforming to 10 CFR 50, Appendix I;

(continued)

5.5 Programs and Manuals

5.5.4 Radioactive Effluent Controls Program (continued)

e. Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with methodology and parameters in the ODCM at least every 31 days.

f. Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2% of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I;

g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents from the site to areas at or beyond the site boundary shall be in accordance with the following:

1. For noble gases: a dose rate ≤ 500 mrem/yr to the whole body and a dose rate ≤ 3000 mrem/yr to the skin, and

2. For Iodine-131, for Iodine-133, for tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: a dose rate ≤ 1500 mrem/yr to any organ.

h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from the facility to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;

i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from the facility to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;

j. Limitations on the annual dose or dose commitment to any member of the public, beyond the site boundary, due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190; and

k. The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Radioactive Effluent Controls Program Surveillance frequency.

5.5.5 Not Used

5.5.6 Not Used

5.5.7 Not Used

5.5.8 Not Used

5.5.9 Not Used

5.5.10 Not Used

5.5.11 Not Used

(continued)

5.5 Programs and Manuals

5.5.12 Explosive Gas and Storage Tank Radioactivity Monitoring Program

This program provides controls for potentially explosive gas mixtures contained in the Waste Gas Holdup System, the quantity of radioactivity contained in gas storage tanks, and the quantity of radioactivity contained in temporary unprotected outdoor liquid storage tanks.

The gaseous radioactivity quantities shall be determined following the methodology in Regulatory Guide 1.24 "Assumptions Used For Evaluating the Potential Radiological Consequences of a Pressurized Water Reactor Radioactive Gas Storage Tank Failure." The liquid radwaste quantities shall be maintained such that 10 CFR Part 20 limits are met.

The program shall include:

a. The limits for concentrations of hydrogen and oxygen in the Waste Gas Holdup System and a surveillance program to ensure the limits are maintained. Such limits shall be appropriate to the system's design criteria (i.e., whether or not the system is designed to withstand a hydrogen explosion);

b. A surveillance program to ensure that the quantity of radioactivity contained in each gas storage tank is less than the amount that would result in a whole body exposure of ≥ 0.5 rem to any individual in an unrestricted area, in the event of an uncontrolled release of the tanks' contents; and

c. A surveillance program to ensure that the quantity of radioactivity contained in temporary outdoor liquid radwaste tanks that are not surrounded by liners, dikes, or walls, capable of holding the tanks' contents and that do not have tank overflows and surrounding area drains connected to the Liquid Radwaste Treatment System is less than the amount that would result in concentrations less than the limits of 10 CFR 20, Appendix B, Table II, Column 2, at the nearest potable water supply and the nearest surface water supply in an unrestricted area, in the event of an uncontrolled release of the tanks' contents.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Explosive Gas and Storage Tank Radioactivity Monitoring Program surveillance frequencies.

5.5.13 Not Used

(continued)

5.5 Programs and Manuals

5.5.14 Technical Specifications (TS) Bases Control Program

This program provides a means for processing changes to the Bases of these Technical Specifications.

a. Changes to the Bases of the TS shall be made under appropriate administrative controls and reviews.

b. Licensees may make changes to Bases without prior NRC approval provided the changes do not require either of the following:

1. a change in the TS incorporated in the license; or

2. a change to the updated FSAR or Bases that requires NRC approval pursuant to 10 CFR 50.59.

c. The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the FSAR.

d. Proposed changes that meet the criteria of Specification 5.5.14b above shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10 CFR 50.71(e).

5.5.15 Not Used

5.5.16 Not Used

5.5.17 Not Used

5.5.18 Not Used

5.5.19 Not Used

5.0 ADMINISTRATIVE CONTROLS

5.6 Reporting Requirements

The following reports shall be submitted in accordance with 10 CFR 50.4.

5.6.1 Not Used

5.6.2 Annual Radiological Environmental Operating Report

----------NOTE----------
A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.

The Annual Radiological Environmental Operating Report covering the operation of the facility during the previous calendar year shall be submitted by May 1 of each year. The report shall include summaries, interpretations, and analyses of trends of the results of the radiological environmental monitoring program for the reporting period. The material provided shall be consistent with the objectives outlined in the Offsite Dose Calculation Manual (ODCM), and in 10 CFR 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.

The Annual Radiological Environmental Operating Report shall include the results of analyses of all radiological environmental samples and of all environmental radiation measurements taken during the period pursuant to the locations specified in the table and figures in the ODCM, as well as summarized and tabulated results of these analyses and measurements in a format similar to the table in the Radiological Assessment Branch Technical Position, Revision 1, November 1979. In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted in a supplementary report as soon as possible.

(continued)

5.6 Reporting Requirements

5.6.3 Radioactive Effluent Release Report

----------NOTE----------

A single submittal may be made for a multiple unit station. The submittal shall combine sections common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

The Radioactive Effluent Release Report covering the operation of the facility during the previous year shall be submitted prior to May 1 of each year in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the facility. The material provided shall be consistent with the objectives outlined in the ODCM and Process Control Program and in conformance with 10 CFR 50.36a and 10 CFR 50, Appendix I, Section IV.B.1.

5.6.4 Not Used

5.6.5 Not Used

5.6.6 Not Used

5.6.7 Not Used

5.6.8 Not Used

5.6.9 Not Used

5.6.10 Not Used

5.0 ADMINISTRATIVE CONTROLS

5.7 High Radiation Area

As provided in paragraph 20.1601(c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601(a) and (b) of 10 CFR Part 20:

5.7.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation:

a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.

b. Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual or group entering such an area shall possess:

1. A radiation monitoring device that continuously displays radiation dose rates in the area; or

2. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

3. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or

4. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

(continued)

5.7 High Radiation Area

5.7.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation (continued)

(ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with individuals in the area who are covered by such surveillance.

e. Except for individuals qualified in radiation protection procedures or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them.

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation:

a. Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked or continuously guarded door or gate that prevents unauthorized entry, and, in addition:

1. All such door and gate keys shall be maintained under the administrative control of the shift supervisor, radiation protection manager, or his or her designee.

2. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit.

b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual or group entering such an area shall possess:

1. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

(continued)

5.7 High Radiation Area

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation (continued)

2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area, or

3. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

(ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with and control every individual in the area, or

4. In those cases where options (2) and (3), above, are impractical or determined to be inconsistent with the “As Low As is Reasonably Achievable” principle, a radiation monitoring device that continuously displays radiation dose rates in the area.

e. Except for individuals qualified in radiation protection procedures or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them.

f. Such individual areas that are within a larger area, such as PWR containment, where no enclosure exists for the purpose of locking and where no enclosure can reasonably be constructed around the individual area need not be controlled by a locked door or gate nor continuously guarded, but shall be barricaded, conspicuously posted, and a clearly visible flashing light shall be activated at the area as a warning device.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 243 TO FACILITY OPERATING LICENSE NO. DPR-80

AND AMENDMENT NO. 244 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

On November 27, 2018, Pacific Gas and Electric Company (PG&E, the licensee) notified the U.S. Nuclear Regulatory Commission (NRC, the Commission) that it would permanently cease power operations at Diablo Canyon Nuclear Power Plant (Diablo Canyon), Units 1 and 2, upon expiration of the facility operating licenses (FOLs) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18331A553). The FOL for Diablo Canyon, Unit 1, currently expires on November 2, 2024, and the FOL for Diablo Canyon, Unit 2, currently expires on August 26, 2025. However, the NRC staff notes that the actual expiration dates are uncertain at this time because, by letter dated October 31, 2022, the licensee indicated that it is seeking to renew the Diablo Canyon licenses (ML22304A691). Upon docketing of the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessels for Diablo Canyon, Units 1 and 2, in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Sections 50.82(a)(1)(i) and (ii), the 10 CFR Part 50 licenses will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels in accordance with 10 CFR 50.82(a)(2).

By application dated December 3, 2020 (ML20338A546), as supplemented by letters dated April 1, 2021, May 13, 2021, January 13, 2022, and July 20, 2022 (ML21091A069, ML21133A300, ML22013B278, and ML22201A526, respectively), the licensee requested changes to the license, including the Technical Specifications (TSs) (appendix A) and Additional Conditions (appendix D) to FOL Nos. DPR-80 and DPR-82 for Diablo Canyon, Units 1 and 2. The proposed amendments would revise the FOLs to reflect the permanent cessation of reactor operation and editorial corrections.

The NRC has previously issued a proposed finding that the amendments involve no significant hazards consideration published in the *Federal Register* on May 18, 2021 (86 FR 26955), based on the application dated December 3, 2020, and the supplemental letter dated April 1, 2021. The supplemental letters dated May 13, 2021, January 13, 2022, and July 20, 2022, 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 18, 2021 (86 FR 26955).

2.0 REGULATORY EVALUATION

2.1 Regulatory Requirements

Section 50.36(c)(6) of 10 CFR states:

> Decommissioning. This paragraph applies only to nuclear power reactor facilities that have submitted the certifications required by § 50.82(a)(1) and to non-power reactor facilities which are not authorized to operate. Technical specifications involving safety limits, limiting safety system settings, and limiting control system settings; limiting conditions for operation; surveillance requirements; design features; and administrative controls will be developed on a case-by-case basis.

Section 50.36(e) of 10 CFR states that the provisions of 10 CFR 50.36 "apply to each nuclear reactor licensee whose authority to operate the reactor has been removed by license amendment, order, or regulation."

Section 50.48(a) of 10 CFR requires a fire protection program (FPP) for an operating plant and 10 CFR 50.48(c) provides the National Fire Protection Association (NFPA) Standard 805 as an alternative. Section 50.48(f) of 10 CFR states the FPP requirements for a decommissioning plant.

Section 50.51(b) of 10 CFR states: "Each license for a facility that has permanently ceased operations, continues in effect beyond the expiration date to authorize ownership and possession of the production or utilization facility, until the Commission notifies the licensee in writing that the license is terminated…"

Section 50.54(s)(2)(ii) of 10 CFR requires correcting deficiencies in providing reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

Section 50.65 of 10 CFR requires monitoring the effectiveness of maintenance of structures, systems, and components (SSCs). Section 50.65(a) of 10 CFR requires nuclear power plants for which the licensee has submitted the certifications specified in 10 CFR 50.82(a)(1) must apply the requirements of 10 CFR 50.65 only to the extent that the licensee shall monitor the performance or condition of all SSCs associated with the storage, control, and maintenance of spent fuel in a safe condition, in a manner sufficient to provide reasonable assurance that these SSCs can perform their intended functions.

Section 50.67(b)(2) of 10 CFR states, in part, that the NRC may issue a license amendment to revise a licensee's current accident source term only if the applicant's analysis demonstrates with reasonable assurance that:

> (i) An individual located at any point on the boundary of the exclusion area for any 2-hour period following the onset of the postulated fission product release, would not receive a radiation dose in excess of 0.25 Sv [sievert] (25 rem [roentgen equivalent man] total effective dose equivalent (TEDE).

(ii) An individual located at any point on the outer boundary of the low population zone, who is exposed to the radioactive cloud resulting from the postulated fission product release (during the entire period of its passage), would not receive a radiation dose in excess of 0.25 Sv (25 rem) total effective dose equivalent TEDE.

(iii) Adequate radiation protection is provided to permit access to and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of 0.05 Sv (5 rem) total effective dose equivalent (TEDE) for the duration of the accident.

Section 50.82(a)(1)(i) of 10 CFR states: “When a licensee has determined to permanently cease operations the licensee shall, within 30 days, submit a written certification to the NRC...”

Section 50.82(a)(1)(ii) of 10 CFR states: “Once fuel has been permanently removed from the reactor vessel, the licensee shall submit a written certification to the NRC...”

Section 50.82(a)(2) of 10 CFR states: “Upon docketing of the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel, ..., the 10 CFR part 50 license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel.”

Section 100.11 of 10 CFR provides, in part, the requirements for the determination of exclusion area and low population zone.

2.2 Regulatory Guidance

Regulatory Guide (RG) 1.183, Revision 0, “Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors,” dated July 2000 (ML003716792). RG 1.183, Revision 0, provides the methodology for analyzing the radiological consequences of several design basis accidents (DBAs) to show compliance with 10 CFR 50.67. RG 1.183 provides guidance to licensees on acceptable application of alternative source term (AST) submittals, including acceptable radiological analysis assumptions for use in conjunction with the accepted AST.

3.0 TECHNICAL EVALUATION

3.1 Accident Analysis

Chapter 15, “Accident Analysis,” of the Diablo Canyon Updated Final Safety Analysis Report (UFSAR) (ML21305A094) describes the postulated DBA and transient scenarios applicable during power operations. In addition, Diablo Canyon UFSAR, Chapter 11, “Radioactive Waste Management” (ML21305A103), provides an evaluation of tank ruptures associated with storage of radioactive waste. In these UFSAR sections, the licensee demonstrates that the plant could be operated safely, and that radiological consequences from postulated accidents do not exceed the regulatory guidelines of 10 CFR 50.67 or 10 CFR Part 100, as applicable.

The NRC staff evaluated all DBAs documented in the Diablo Canyon UFSAR for applicability to the facility in its permanently defueled condition. While spent fuel remains in the spent fuel pool (SFP), the accidents that remain applicable to Diablo Canyon, Units 1 and 2, in the permanently

shutdown and defueled condition are the fuel handling accident (FHA) in the fuel handling building (FHB) and the accidental release of waste liquid or waste gas.

3.1.1 FHA Analysis for Permanently Defueled Condition

The FHA analysis evaluates the credible accident possible after the reactor is defueled - an FHA in the SFP. The DBA FHA in the SFP is applicable when Diablo Canyon is in a permanently shutdown and defueled condition. The licensee received NRC approval for a revised accident source term under 10 CFR 50.67 in License Amendment Nos. 230 and 232 for Diablo Canyon, Units 1 and 2, respectively, dated April 27, 2017 (ML17012A246). These license amendments approved the FHA analysis utilizing the AST methodology, in accordance with 10 CFR 50.67, to perform the radiological consequences analyses of DBAs as described in RG 1.183. The licensee's analysis applied the AST methodology outlined in RG 1.183 to determine the radiological consequences to operators in the control room and the public at the exclusion area boundary (EAB) and low population zone (LPZ) as a function of time after shut down. The FHA dose consequence analysis, as well as the supporting atmospheric dispersion calculations, are consistent with the assumptions and methodology approved in License Amendment Nos. 230 and 232 for Diablo Canyon, Units 1 and 2, respectively, with the exception that the analysis does not take credit for protection provided by the building ventilation/structure at the receptor location, uses the worst case location for the release point, uses a reduced depth of water credited above the damaged assembly (discussed below), and accounts for additional decay time of the fuel that would occur before these amendments become effective.

The FHA is defined as the dropping of a single spent fuel assembly in the SFP during fuel handling activities resulting in the perforation of all rods in that assembly. The assembly activity inventory is based on the at-power core average power level with an additional radial peaking factor of 1.65 times. The gap activity in the damaged rods is instantaneously released into the SFP. The water level in the SFP is maintained at a minimum of 23 feet above the top of irradiated fuel assemblies seated in the storage racks during movement of irradiated fuel assemblies in the SFP, per the proposed revised TS Limiting Condition for Operation (LCO) 3.7.15, "Spent Fuel Pool Water Level." The pool water acts as a filter over the damaged fuel assembly. However, unlike the current licensing basis where 23 feet of water was assumed above the damaged fuel assembly in the FHA radiological analysis, the licensee now assumes 21 feet of water above the damaged fuel assembly. Using a water depth of less than 23 feet increases the quantity of halogens that are assumed to escape from the pool. All particulates are assumed to be retained in the SFP water, noble gases escape freely from the SFP water to the environment, and a decontamination factor of 142 is applied to halogens. This methodology is consistent with RG 1.183 (including the proposed decontamination factor for halogens) and is, therefore, acceptable.

As in the current licensing basis, the activity released is assumed to be discharged to the environment outside the building within 2 hours, assuming the limiting release point and bounding atmospheric dispersion factors. Consistent with the current licensing basis, no credit is taken for removal of iodine by filters nor is credit taken for isolation of the release path or for shielding or confinement of the radioactive material released from the pool. Also consistent with the current licensing basis, the atmospheric dispersion factors are the same as those currently used.

Doses to the main control room personnel are calculated without taking credit for ventilation systems, filtration, or any benefit for the specific intake location. In addition, no credit is taken for

shielding the radioactive cloud at the location. The occupancy factors described in RG 1.183 are assumed in the analysis. Using these assumptions, the licensee's analysis shows that the radiological dose criteria can be met assuming the accident occurs 30 days after reactor shutdown (and subsequent radioactive decay). However, for the purposes of conservatism, the licensee proposes to require a minimum of 45 days after reactor shut down to allow fuel movement without crediting design features such as the control room ventilation system or the FHB ventilation system during fuel movement.

The analysis demonstrates that the dose consequences of the FHA will remain below the current licensing basis dose limits, provided the SFP water level requirements of TS LCO 3.7.15 are met, without crediting FHB ventilation, control room isolation, and control room filtration, assuming 45 days of decay time following a shutdown. Specifically, assuming the FHA occurs at the minimum allowed 45 days after reactor shutdown, the licensee determined that the worst case 2-hour dose at the EAB is less than 1 rem TEDE, the 30-day integrated dose to an individual at any point on the outer boundary of the LPZ is less than 100 millirem (mrem) TEDE, and the 30-day integrated dose to an operator in the control room is less than 1 rem TEDE. All of these dose values are less than the values calculated in the current licensing basis and less than the limits required by 10 CFR 50.67 and specified in RG 1.183.

In performing this review, the NRC staff relied upon information provided by the licensee and NRC staff experience in performing similar reviews. The NRC staff performed an independent analysis using the RADTRAD computer code and concludes that the dose consequence from an FHA for the permanently defueled Diablo Canyon, Units 1 and 2, meets the applicable radiological dose criteria at the EAB, LPZ, and in the control room.

3.1.2 Waste Gas Tank Rupture

Diablo Canyon UFSAR, Chapters 11 and 15, provide an evaluation of tank ruptures associated with storage of radioactive waste. Tanks accumulating significant quantities of radioactive gases are the volume control tanks (one for each unit) and the gas decay tanks. Each unit's volume control tank accumulates gases over a core cycle by stripping action of the entering spray. This activity is vented to the waste gas system and stored for decay.

UFSAR section 11.3.3.9, "General Design Criterion 69, 1967 – Protection Against Radioactivity Release from Spent Fuel and Waste Storage," specifies that the quantity of radioactive material contained in each gas decay tank is limited to less than or equal to (≤) 10^5 curies noble gases (considered as Xenon (Xe)-133 equivalent). This limit ensures that in the event of an uncontrolled release of the tank's contents that dose criteria continue to be met. This analysis does not credit any active components or filtration to mitigate the consequences of the event. The tank contents will continue to be limited during the permanently defueled condition and there will be no new gases generated from the reactor coolant system (RCS) as there is during normal operation. Therefore, the existing analysis remains valid and bounding for the permanently defueled condition.

The volume control tank rupture accident is discussed in Diablo Canyon UFSAR, section 11.2.3.12, "General Design Criterion 69, 1967 – Protection Against Radioactivity Release from Spent Fuel and Waste Storage." It assumes the failure of a volume control tank and the release of radioactive material in the tank. The volume control tank is assumed to be operating at its maximum capacity at the time of the accident. The results show that even when no ventilation systems are considered to control the release, doses remain below the acceptance criteria. This analysis remains bounding for the permanently defueled condition

since the quantities of radioactive material in the volume control tank will be lower than the maximum quantities in the tank during normal operation.

3.1.3 Liquid Holdup Tank Failure

A liquid holdup tank failure remains a viable accident following the reactor being permanently defueled since the liquid holdup tanks may continue to store radioactive liquid. Diablo Canyon UFSAR, section 11.2.3.12, discusses the liquid holdup tank failure. The liquid holdup tanks collect radioactive liquids drawn from the reactor primary coolant. The accident assumes a rupture of one of the liquid holdup tanks immediately following the tank being filled. The tanks are in vaults, which are Design Class 1, so that in the event of a rupture all liquids are retained in the vaults. Noble gases and some iodine are assumed to be exhausted to the atmosphere without decay. Since the radioactive source term of the primary coolant stored in the tanks would lessen due to radioactive decay following the permanently defueling of the reactor, the source term in the tanks would be lower than the source term during normal operation. As a result, the current UFSAR, section 11.2.3.12 analysis remains bounding, and the analysis is unchanged for the permanently defueled condition.

3.1.4 NRC Staff Accident Analysis Conclusions

The NRC staff reviewed the assumptions, inputs, and methods used by the licensee to assess the radiological impacts of the proposed changes. The NRC staff finds that the licensee's proposed changes use analysis methods and assumptions consistent with the guidance contained in RG 1.183. The NRC staff compared the doses estimated by the licensee to the applicable criteria. The NRC staff finds that there is reasonable assurance that Diablo Canyon, Units 1 and 2, as modified by these proposed amendments, will continue to provide sufficient safety margins with adequate defense-in-depth to address unanticipated events and to compensate for uncertainties in accident progression and in analysis assumptions and parameters. The NRC staff concludes that the licensee has demonstrated that the dose consequences for postulated accidents at the permanently shutdown and defueled Diablo Canyon, Units 1 and 2, would not have consequences that could potentially exceed the applicable 10 CFR 100.11 and 10 CFR 50.67 dose limits and RG 1.183 dose acceptance criteria. Therefore, the NRC staff finds the proposed changes to be acceptable from a dose consequence perspective.

3.2 Proposed Changes to the Facility Operating Licenses

3.2.1 Diablo Canyon, Unit 1, Changes to the License

3.2.1.1 License Finding 1.B

Currently, License Finding 1.B for Diablo Canyon, Unit 1, reads:

> Construction of the Diablo Canyon Nuclear Power Plant, Unit 1 (the facility), has been substantially completed in conformity with Provisional Construction Permit No. CPPR-39 and the application, as amended, the provisions of the Act, and the regulations of the Commission;

The licensee proposes to delete License Finding 1.B in its entirety because decommissioning of Diablo Canyon, Unit 1, is not dependent on the regulations that governed the construction of the facility. The NRC issued the Operating License for Diablo Canyon, Unit 1, on November 2, 1984

(ML022320621). Therefore, Construction Permit No. CPPR-39 was superseded by FOL No. DPR-80. Accordingly, the NRC staff finds the proposed deletion of License Finding 1.B acceptable.

3.2.1.2 License Finding 1.C

Currently, License Finding 1.C for Diablo Canyon, Unit 1, reads:

> The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission, except as exempted from compliance in Section 2.D below;

The licensee proposes License Finding 1.C to read:

> The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;

The licensee proposes to delete License Condition 2.D, which is evaluated by the NRC staff in section 3.2.1.22 of this SE and found acceptable. Therefore, the NRC concludes that it is appropriate to delete the reference to License Condition 2.D from License Finding 1.C.

3.2.1.3 License Finding 1.D

Currently, License Finding 1.D for Diablo Canyon, Unit 1, reads:

> There is reasonable assurance (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations of the Commission set forth in 10 CFR Chapter I, except as exempted from compliance in Section 2.D below;

The licensee proposes License Finding 1.D to read:

> There is reasonable assurance (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations of the Commission set forth in 10 CFR Chapter I;

The licensee proposes to delete License Condition 2.D, which is evaluated by the NRC staff in section 3.2.1.22 of this SE and found acceptable. Therefore, the NRC concludes that it is appropriate to delete the reference to License Condition 2.D from License Finding 1.D.

3.2.1.4 License Condition 2.A

Currently, License Condition 2.A for Diablo Canyon, Unit 1, reads:

> This License applies to the Diablo Canyon Nuclear Power Plant, Unit 1, a pressurized water nuclear reactor and associated equipment (the facility), owned by the Pacific Gas and Electric Company (PG&E). The facility is located in San Luis Obispo County, California, and is described in PG&E's Final Safety Analysis

> Report as supplemented and amended, and the Environmental Report as supplemented and amended.

The licensee proposes License Condition 2.A to read:

> This License applies to the Diablo Canyon Nuclear Power Plant, Unit 1, a pressurized water nuclear reactor[1] and associated equipment (the facility), owned by the Pacific Gas and Electric Company (PG&E). The facility is located in San Luis Obispo County, California, and is described in PG&E's Final Safety Analysis Report as supplemented and amended, and the Environmental Report as supplemented and amended.

The licensee proposes to add footnote 1 to state:

> [1]In accordance with 10 CFR 50.82(a)(2), the Pacific Gas and Electric Company is no longer authorized to operate the reactor or emplace or retain fuel in the reactor vessel because the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel have been docketed.

Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 license for Diablo Canyon, Unit 1, will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel, pursuant to 10 CFR 50.82(a)(2). The licensee's proposed footnote clarifies factual information. Therefore, the NRC staff finds the proposed change to License Condition 2.A acceptable.

3.2.1.5 License Condition 2.B.(1)

Currently, License Condition 2.B.(1) for Diablo Canyon, Unit 1, reads:

> Pursuant to Section 104(b) of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities", to possess, use, and operate the facility at the designated location in San Luis Obispo County, California, in accordance with the procedures and limitations set forth in this license;

The licensee proposes License Condition 2.B.(1) to read:

> Pursuant to Section 104(b) of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities", to possess and use the facility at the designated location in San Luis Obispo County, California, in accordance with the procedures and limitations set forth in this license;

Consistent with 10 CFR Part 50.82(a)(2), the license for Diablo Canyon, Unit 1, will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel. The facility would remain authorized to possess the existing spent fuel and use the systems required to support safe fuel storage (e.g., the SFP) during the decommissioning period in accordance with the specified limitations for storage. The removal of the discussion of operating would provide accuracy in the 10 CFR Part 50 license description. Therefore, the NRC staff finds the proposed change to License Condition 2.B.(1) acceptable.

3.2.1.6 License Condition 2.B.(2)

Currently, License Condition 2.B.(2) for Diablo Canyon, Unit 1, reads:

> Pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

The licensee proposes License Condition 2.B.(2) to read:

> Pursuant to the Act and 10 CFR Part 70, to possess at any time special nuclear material that was used as reactor fuel, in accordance with the limitations for storage, as described in the Final Safety Analysis Report, as supplemented and amended;

The proposed change to this license condition would remove the authorization for receipt and use of special nuclear material (SNM) as reactor fuel. It would eliminate the reference to use of the SNM for reactor operations and limit the possession of SNM to SNM “that was used” as reactor fuel. Pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for Diablo Canyon, Unit 1, will no longer authorize operation of the reactor. As such, Diablo Canyon, Unit 1, has no need to receive SNM in the form of reactor fuel and cannot use SNM as reactor fuel for reactor operations. The continued authorization to possess SNM “that was used” as reactor fuel is necessary, as Diablo Canyon, Unit 1, possesses reactor fuel that was used for past operations. Therefore, the NRC staff finds the proposed change to License Condition 2.B.(2) acceptable.

3.2.1.7 License Condition 2.B.(3)

Currently, License Condition 2.B.(3) for Diablo Canyon, Unit 1, reads:

> Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

The licensee proposes License Condition 2.B.(3) to read:

> Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources that were used for reactor startup, sealed sources that were used for calibration of reactor instrumentation and are used in the calibration of radiation monitoring equipment, and as fission detectors in amounts as required;

The proposed revision to License Condition 2.B.(3) revises the authorization to receive, possess, and use at any time byproduct, source and special nuclear materials as sealed sources to clarify that these sealed sources were previously used for reactor startup and

calibration of reactor instrumentation.[1] The continued authorization to possess sealed sources that were used for reactor startup and calibration for reactor instrumentation is consistent with the safe storage of byproduct, source and special nuclear materials. The proposed license condition retains the authorization to receive, possess, and use sealed sources for calibration of radiation monitoring equipment because use of sources for radiation monitoring will continue to be required. Since the Diablo Canyon, Unit 1, license will no longer authorize operation of the facility pursuant to 10 CFR 50.82(a)(2), this license condition is consistent with the requirements associated with the decommissioning plant. Therefore, the NRC staff finds the proposed change to License Condition 2.B.(3) acceptable.

3.2.1.8 License Condition 2.B.(5)

Currently, License Condition 2.B.(5) for Diablo Canyon, Unit 1, reads:

> Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

The licensee proposes License Condition 2.B.(5) to read:

> Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials that were produced by the operation of the facility.

The proposed revision is to allow possession, but not separation, of byproduct, source, and SNM “that were” produced by the operation of the facility, as opposed to those materials “as may be” produced by the operation of the facility. Since the Diablo Canyon, Unit 1, license will no longer authorize operation of the facility pursuant to 10 CFR 50.82(a)(2), this license condition is consistent with the requirements associated with the decommissioning plant. Therefore, the NRC staff finds the proposed change to License Condition 2.B.(5) acceptable.

3.2.1.9 License Condition 2.C.(1)

Currently, License Condition 2.C.(1) for Diablo Canyon, Unit 1, addresses maximum power level. The licensee proposes to delete License Condition 2.C.(1) in its entirety. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 license for Diablo Canyon, Unit 1, will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel, pursuant to 10 CFR 50.82(a)(2); reference to operation of the facility would be inconsistent with 10 CFR 50.82(a)(2).

The NRC staff reviewed the proposed deletion of License Condition 2.C.(1) and determined that operation would not be authorized at Diablo Canyon, Unit 1, at any power level once its 10 CFR 50.82(a)(1) certifications were docketed. Therefore, the NRC staff finds the proposed deletion of License Condition 2.C.(1) acceptable.

[1] The licensee did not propose to modify language authorizing receipt, possession, and use of these materials, but activities involving these materials are appropriately constrained during the decommissioning period by NRC requirements and provisions in the licensing basis.

3.2.1.10 License Condition 2.C.(2)

Currently, License Condition 2.C.(2) for Diablo Canyon, Unit 1, reads:

> Technical Specifications
>
> The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 241 are hereby incorporated in the license. Pacific Gas & Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

The licensee proposes License Condition 2.C.(2) to read:

> Permanently Defueled Technical Specifications
>
> The Permanently Defueled Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 243, are hereby incorporated in the license. Pacific Gas & Electric Company shall maintain the facility in accordance with the Permanently Defueled Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 license for Diablo Canyon, Unit 1, will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel, pursuant to 10 CFR 50.82(a)(2). The proposed change from “operate the facility” to “maintain the facility” would describe the permanently defueled condition in which the Diablo Canyon, Unit 1, license will no longer authorize the use of the facility for power operation. The proposed revision accounts for the permanently defueled condition of the facility and incorporates the Permanently Defueled TSs (PDTSs). Therefore, the NRC staff finds the proposed change to License Condition 2.C.(2) acceptable.

3.2.1.11 License Condition 2.C.(3)

Currently, License Condition 2.C.(3) for Diablo Canyon, Unit 1, addresses the Initial Test Programs. The licensee proposes to delete License Condition 2.C.(3) in its entirety. This license condition reflects the initial startup test program and is historical in nature. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 license for Diablo Canyon, Unit 1, will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel, pursuant to 10 CFR 50.82(a)(2). Therefore, the NRC staff finds the proposed deletion of License Condition 2.C.(3) acceptable.

3.2.1.12 License Condition 2.C.(4)

Currently, License Condition 2.C.(4) for Diablo Canyon, Unit 1, addresses special tests. The licensee proposes to delete License Condition 2.C.(4) in its entirety. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 license for Diablo Canyon, Unit 1, will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel, pursuant to 10 CFR 50.82(a)(2). During decommissioning activities, the

performance of steam generator (SG) moisture carryover studies and turbine performance tests for Diablo Canyon, Unit 1, is not necessary in a permanently shutdown and defueled condition. Therefore, the NRC staff finds the proposed deletion of License Condition 2.C.(4) acceptable.

3.2.1.13 License Condition 2.C.(5)

Currently, License Condition 2.C.(5) for Diablo Canyon, Unit 1, addresses fire protection for an operating plant and requires the site to comply with 10 CFR 50.48 (a) and (c) and how changes may be made to the FPP.

The licensee proposes to delete License Condition 2.C.(5) in its entirety. The licensee stated that after the certifications required by 10 CFR 50.82(a)(1) are docketed for Diablo Canyon, Unit 1, the 10 CFR Part 50 license will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel pursuant to 10 CFR 50.82(a)(2), and as a result, the FPP will be revised to reflect the facility conditions and activities during decommissioning. The licensee further stated that the license condition, which is based on maintaining an FPP at an operating reactor in accordance with 10 CFR 50.48(a) and (c), will no longer be applicable at Diablo Canyon, Units 1 and 2. However, many of the elements that are applicable for the operating plant FPP continue to be applicable during facility decommissioning. The licensee further stated that during the decommissioning process, an FPP is required by 10 CFR 50.48(f) to address the potential for fires that could result in a radiological hazard, and that the regulation is applicable regardless of whether a requirement for an FPP is included in the facility license, and therefore, a license condition requiring such a program for a permanently shutdown and defueled facility is not necessary.

The NRC staff finds that License Condition 2.C.(5) for Diablo Canyon, Unit 1, is based on maintaining an FPP that complies with 10 CFR 50.48(a) and (c). Compliance with 10 CFR 50.48(c) is no longer applicable to the decommissioned FPP at Diablo Canyon, Unit 1 once the facility is permanently shut down and the fuel has been permanently removed from the reactor. However, elements of the FPP will continue during decommissioning to address fire events that could result in radiological hazards. Section 50.48(f) of 10 CFR requires Diablo Canyon to address the potential for fires, which could result in a radiological hazard. The NRC staff concludes that the rule, which requires an FPP for licensees that have submitted the certifications under 10 CFR 50.82(a)(1), is sufficient to ensure that an FPP is maintained. Therefore, a license condition that also requires an FPP for the permanently shutdown and defueled unit is redundant. In accordance with 10 CFR 50.48(f), an FPP that complies with NFPA 805 is considered acceptable for complying with the requirements of 10 CFR 50.48(f). Based on the above, the NRC staff concludes that reliance on 10 CFR 50.48(f) is appropriate and that the licensee's request to delete License Condition 2.C.(5) for Diablo Canyon, Unit 1 is acceptable.

3.2.1.14 License Condition 2.C.(6)

Currently, License Condition 2.C.(6) for Diablo Canyon, Unit 1, addresses the conditions of NUREG-0737, "Clarification of TMI Action Plan Requirements," including:

a. Shift Technical Advisor
b. Shift Staffing
c. Management of Operations
d. Procedures for Verifying Correct Performance of Operating Activities
e. Deleted

f. Relief and Safety Valve Test Requirements
g. Containment Isolation Dependability
h. Calculations for Small-Break LOCAs [Loss-of-Coolant Accidents]
i. Long-Term Emergency Preparedness

The licensee proposes to delete License Condition 2.C.(6) in its entirety. The licensee states that NUREG-0737 and NUREG-0737, Supplement 1, implemented programmatic changes to the way reactor operators are trained, instrumentation information is presented, and procedures are structured using human factors and a function-oriented approach to address operating events and accidents. These accidents, and the associated emergency operating procedures to detect, respond to, and mitigate such accidents, concerned malfunctions of the reactor and its supporting systems and are not relevant to a permanently shutdown and defueled reactor.

In accordance with 10 CFR 50.82(a)(2), once Diablo Canyon, Unit 1, has permanently ceased operation and PG&E has certified that fuel has been permanently removed from the reactor, the 10 CFR Part 50 license will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel. The NRC staff finds this license condition is no longer applicable and can be deleted.

3.2.1.15 License Condition 2.C.(8)

Currently, License Condition 2.C.(8) for Diablo Canyon, Unit 1, addresses the control of heavy loads. The licensee proposes to delete License Condition 2.C.(8) in its entirety because the NRC previously determined (NRC Letter, "License Condition for Control of Heavy Loads, Diablo Canyon Unit 1," dated October 24, 1986 (ML16341D928)) that this license condition for Diablo Canyon, Unit 1, was no longer necessary and could be removed from the license by submittal of an application for a license amendment. The NRC staff finds that this license condition is historical and can be deleted.

3.2.1.16 License Condition 2.C.(9)

Currently, License Condition 2.C.(9) for Diablo Canyon, Unit 1, addresses emergency preparedness and the progress in the licensee completing procedures required by the Federal Emergency Management Agency's (FEMA's) final rule 44 CFR Part 350, "Review and Approval of State and Local Radiological Emergency Plans and Preparedness." The licensee proposes to delete License Condition 2.C.(9) in its entirety. The licensee's justification for eliminating this license condition is that it is historical in nature and related to the initial completion of procedures associated with FEMA's final rule. Additionally, the licensee indicates that 10 CFR 50.54(s)(2)(ii)[2] continues to be in effect regardless of the license condition.

Given the historical nature of License Condition 2.C.(9) and that 10 CFR 50.54(s)(2)(ii) has and will continue to remain in effect regardless of the existence of the license condition, the NRC staff finds the proposed deletion of License Condition 2.C.(9) for Diablo Canyon, Unit 1, is acceptable.

[2] Section 50.54(s)(2)(i) of 10 CFR was deleted and designated as "reserved" in the Final Rule, "Enhancements to Emergency Preparedness Regulations," published in the *Federal Register* on November 23, 2011 (76 FR 72560).

3.2.1.17 License Condition 2.C.(10)

Currently, License Condition 2.C.(10) for Diablo Canyon, Unit 1, addresses the qualification of masonry walls. The licensee proposes to delete License Condition 2.C.(10) in its entirety. The NRC staff had concluded in its letter dated November 4, 1986 (ML16341D962), that "the masonry walls are appropriately qualified and the requirements set forth in the conditions of the full power licenses for Diablo Canyon Unit 1 and Unit 2 (License Conditions 2.C.(10) and 2.C.(7), respectively) have been satisfied." Therefore, the NRC staff finds this license condition is historical and not applicable to decommissioning of the facility. The NRC staff finds that the proposed deletion of License Condition 2.C.(10) for Diablo Canyon, Unit 1 is acceptable.

3.2.1.18 License Condition 2.C.(11)

Currently, License Condition 2.C.(11) for Diablo Canyon, Unit 1, addresses modification of the SFP. The licensee proposes to delete License Condition 2.C.(11) in its entirety. The licensee stated that the current requirements for fuel storage racks are included in TSs 4.3, "Fuel Storage" and 3.7.17, "Spent Fuel Assembly Storage."

The NRC staff finds that this license condition is historical and not applicable to decommissioning of the facility because the fuel storage requirements are located in TSs 4.3 and 3.7.17, which will not be deleted by this amendment. Therefore, the NRC staff finds the proposed deletion of License Condition 2.C.(11) acceptable.

3.2.1.19 License Condition 2.C.(12)

Currently, License Condition 2.C.(12) for Diablo Canyon, Unit 1, addresses additional conditions being incorporated in the license. The licensee proposes to delete License Condition 2.C.(12) in its entirety. The NRC staff evaluated the licensee's proposed deletion of additional conditions contained in appendix D for Diablo Canyon, Unit 1, in section 3.2.1.25 of this SE. As discussed in section 3.2.1.25, the NRC staff finds the proposed deletion of additional conditions contained in appendix D is acceptable. Therefore, the NRC staff finds the proposed deletion of License Condition 2.C.(12) acceptable.

3.2.1.20 New License Condition 2.C.(13)

The licensee proposes to add License Condition 2.C.(13) for Diablo Canyon, Unit 1, to read:

> Aging Management Program
>
> If all spent fuel has not been removed from the Unit 1 spent fuel pool prior to November 2, 2028, an aging management program shall be submitted prior to this date for NRC approval. The scope of the program shall include those long-lived, passive structures and components that are needed to provide reasonable assurance of the safe condition of the spent fuel in the spent fuel pool. Once approved, the program shall be described in the Final Safety Analysis Report and shall remain in effect for Unit 1 until such time that all spent fuel has been removed from the Unit 1 spent fuel pool.

The licensee proposes this license condition to provide reasonable assurance of the safe condition of the spent fuel in the SFP.

The initial operating license for Diablo Canyon, Unit 1, is scheduled to expire on November 2, 2024. The NRC staff notes that the actual license expiration date for Unit 1 is uncertain at this time because, by letter dated October 31, 2022, the licensee indicated that it is seeking to renew the Diablo Canyon licenses (ML22304A691). The Irradiated Fuel Management Plan currently projects that all spent nuclear fuel (SNF) from the Unit 1 SFP will be in dry storage in 2031. However, PG&E has issued a request for proposal to implement a modified or new dry cask storage design to potentially reduce the required SFP cooling time to allow safe transfer to the Diablo Canyon Independent Spent Fuel Storage Installation (ISFSI) as soon as possible and not to exceed 4 years after the expiration of the Unit 1 operating license.

Therefore, the licensee anticipates that the period of extended use beyond the licensed operating period for structures and components associated with wet storage of spent fuel will be approximately 10 percent of the initial licensed operating period. This minimal increase in service time for SSCs associated with the SFP does not pose a nuclear safety concern for the reasons discussed below. In the permanently shutdown and defueled condition, safely storing spent fuel in the SFP relies principally on maintaining storage geometry, water level, and sub-critical characteristics of the spent fuel storage racks.

In accordance with 10 CFR 50.65(a), the licensee stated that it will continue to implement the portion of the Maintenance Rule program that is applicable to SSCs associated with the storage, control, and maintenance of spent fuel. Diablo Canyon procedures will continue to be implemented to ensure spent fuel storage structures and components maintain structural integrity. This program includes the SFP liner and the storage racks.

The SFP design protects against the possibility of a complete loss of water in the SFP. The SFP cooling suction connection enters near the normal water level so that the SFP cannot be drained by gravity. The cooling water return line contains an anti-siphon hole to prevent the possibility of gravity draining the SFP. The design ensures greater than 10 feet of water exists over the top of the fuel assemblies should inadvertent drainage occur.

Additionally, the licensee states that criticality analyses have been performed for the permanent storage racks, which demonstrate that the multiplication factor, k_{eff}, of the fuel assemblies in the spent fuel storage racks is less than or equal to 0.95. In order to maintain $k_{eff} \leq 0.95$, the presence of soluble boron is credited in the SFP criticality analyses. These criticality analyses were conservatively performed in the region of the SFP that does not contain Boraflex panels and therefore, does not take credit for these panels. TS 3.7.16, “Spent Fuel Pool Boron Concentration,” requires that the SFP boron concentration be greater than or equal to (≥) 2,000 parts per million (ppm) when fuel assemblies are stored in the SFP. In addition, TS 3.7.17 ensures the configuration of fuel assemblies in the SFP will maintain the k_{eff} of the pool at ≤ 0.95, under analyzed accident scenarios.

As part of the transition to decommissioning, PG&E will implement an FPP that complies with 10 CFR 50.48(f). The components and maintenance of the fire protection system will meet NFPA codes, as applicable. From an emergency planning perspective, firewater can be used to provide makeup water to the SFP.

The firewater system water supply is normally obtained from the raw water reservoir (360,000 gallons), and from the Firewater Storage Tank 0-1 (270,000 gallons) through Fire Pump 0-1 or 0-2. Fire Pumps 0-1 and 0-2 will continue to be run on a quarterly basis with pump

performance testing with visual checks of the position and condition of firewater system valves in the flow path. In addition, the indoor hoses are hydrostatically tested every 3 years.

For monitoring of spent fuel conditions, during continued wet storage of the fuel up to and beyond the original 40-year life of the plant, Diablo Canyon, Unit 1, will maintain portions of the radiation monitoring system. This will consist of two SFP area monitors (RM-58 and RM-59) with alert and high radiation level alarms and local audible and visual indicators. During decommissioning and permanently shut down, these local area radiation monitors will be tested quarterly and maintained to ensure continued functionality with contingency plans if a monitor becomes non-functional. Also, RM-58 and RM-59 monitors will continue to be included in Diablo Canyon procedures after conversion to the Post Shutdown and Permanently Defueled Emergency Plans as long as fuel remains in the SFP.

The NRC staff finds that the measures listed above provide reasonable assurance of adequate protection of the public health and safety for storing fuel in the Unit 1 SFP for 4 years beyond the expiration of the Unit 1 license. If all spent fuel has not been removed from the Unit 1 SFP prior to November 2, 2028, the licensee will submit a new aging management program prior to that date for NRC staff approval. The NRC staff will determine at that time if the new aging management program provides reasonable assurance of safety for the duration of the time the fuel remains in the SFP. The NRC staff finds that the actions described above are sufficient to ensure safe storage of spent fuel in the SFP, and therefore, the proposed new license condition is acceptable.

3.2.1.21 New License Condition 2.C.(14)

The licensee proposes to add License Condition 2.C.(14) for Diablo Canyon, Unit 1, to read:

> Restriction on Handling Spent Nuclear Fuel
>
> Handling of spent nuclear fuel in the spent fuel pool and heavy loads over the spent fuel pool will not be permitted following implementation of the Permanently Defueled Technical Specifications until a minimum of 45 days following permanent shutdown.

The licensee proposes this license condition to prevent movement of SNF until 45 days after shutdown as assumed in the post shutdown FHA analysis.

The FHA analysis for Diablo Canyon, Units 1 and 2, shows that, following 45 days of decay time after reactor shutdown, and provided the SFP water level requirements of TS 3.7.15 are met, the dose consequences for the control room, the EAB, and the LPZ remain below the regulatory limits, without relying on active components remaining functional for accident mitigation during and following the event. To preclude the possibility of an FHA until after the assumed 45-day SNF decay period, the licensee proposes a new license condition for Diablo Canyon, Unit 1, to prohibit movement of SNF after implementation of the PDTSs until 45 days after shutdown. In addition, as an added safety measure, the licensee will prohibit movement of heavy loads over the SFP during this timeframe.

The NRC staff finds that the proposed new license condition is acceptable because it ensures that the assumptions in the FHA analysis are met, thus ensuring dose consequences are within limits if an FHA were to occur.

3.2.1.22 License Condition 2.D

Currently, License Condition 2.D for Diablo Canyon, Unit 1, addresses an exemption from certain requirements of Appendix J, “Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors,” to 10 FR Part 50. The licensee proposes to delete License Condition 2.D in its entirety. The licensee indicates that once Diablo Canyon, Unit 1, has permanently ceased operation and PG&E has certified that fuel has been permanently removed from the reactor, Appendix J to 10 CFR Part 50 is no longer applicable, and therefore, the associated exemption is not necessary. The NRC staff finds that it is acceptable to delete this license condition because 10 CFR Part 50, Appendix J is not applicable following submission of the certifications required by 10 CFR 50.82(a)(1).

3.2.1.23 License Condition 2.J

Currently, License Condition 2.J for Diablo Canyon, Unit 1, reads:

> Term of License
>
> This License is effective as of the date of issuance and shall expire at midnight on November 2, 2024.

The licensee proposes License Condition 2.J to read:

> Term of License
>
> This License is effective as of the date of issuance and is effective until the Commission notifies the licensee in writing that the license is terminated.

The proposed change would modify this license condition to reflect the permanently shutdown and defueled condition of the facility. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 license for Diablo Canyon, Unit 1, will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel, pursuant to 10 CFR 50.82(a)(2). The proposed change would revise License Condition 2.J to conform with 10 CFR 50.51(b) in that the license authorizes ownership and possession by PG&E until the Commission notifies the licensee in writing that the license is terminated.

The NRC staff reviewed the proposed change to License Condition 2.J. The current License Condition 2.J, which documents the date of the expiration of the license for Diablo Canyon, Unit 1, is no longer necessary for the permanently shutdown and defueled condition of the plant in the process of decommissioning. The revised License Condition 2.J is consistent with the provisions of 10 CFR 50.51(b) as applied to a facility that has permanently ceased operations. Therefore, the NRC staff finds the proposed change to License Condition 2.J acceptable.

3.2.1.24 Attachments

Currently, the list of attachments for Diablo Canyon, Unit 1, reads:

> Attachments:
> 1. Appendix A – Technical Specifications
> 2. Appendix B – Environmental Protection Plan

3. Appendix C – Deleted
4. Appendix D – Additional Conditions

The licensee proposes the list of attachments to read:

Attachments:
1. Appendix A – Permanently Defueled Technical Specifications
2. Appendix B – Environmental Protection Plan
3. Appendix C – Deleted
4. Appendix D – Deleted

The licensee proposes to revise the list of attachments to reflect the proposed changes to the license. The NRC staff evaluations of the proposed title change of the TSs and deletion of appendix D for Diablo Canyon, Unit 1, are discussed in sections 3.2.1.10 and 3.2.1.25 of this SE, respectively. The changes to the list of attachments are editorial and do not change any technical content. The NRC staff finds that the proposed changes to the list of attachments is acceptable.

3.2.1.25 Attachment 4. Appendix D – Additional Conditions

3.2.1.25.1 Amendment Number 120

Amendment No. 120 for Diablo Canyon, Unit 1, authorized the licensee to relocate certain TS requirements to the equipment control guidelines as referenced in the UFSAR. By letter dated May 28, 1998, the licensee notified the NRC that the license amendment had been implemented according to the license condition (ML16342E116). The licensee is therefore proposing to delete this condition because it is historical. The NRC staff reviewed the licensee's proposal, and because the amendment was implemented according to the condition and is historical, the NRC staff agrees with the deletion and finds it acceptable.

3.2.1.25.2 Amendment Number 135

Amendment No. 135 for Diablo Canyon, Unit 1, authorized the licensee to relocate certain TS requirements to licensee-controlled documents. It also authorized changes to the schedule for the performance of new and revised surveillance requirements (SRs). By letter dated June 30, 2000, the licensee notified the NRC that the license amendment had been implemented (ML003729396). The licensee is therefore proposing to delete this condition because it is historical. The NRC staff reviewed the licensee's proposal, and because the amendment was implemented and is historical, the NRC staff agrees with the deletion and finds it acceptable.

3.2.1.25.3 Amendment Number 201

Amendment No. 201 for Diablo Canyon, Unit 1, addressed the control room envelope unfiltered air in-leakage. The NRC staff finds that the licensee completed implementation of this historical license amendment, and therefore, finds the deletion of this condition acceptable.

3.2.1.25.4 Amendment Number 230

Amendment No. 230 for Diablo Canyon, Unit 1, addressed the AST. The NRC staff finds that the licensee completed implementation of this historical license amendment, and therefore, finds the deletion of this condition acceptable.

3.2.2 Diablo Canyon, Unit 2, Changes to the License

3.2.2.1 License Finding 1.B

Currently, License Finding 1.B for Diablo Canyon, Unit 2, reads:

> Construction of the Diablo Canyon Nuclear Power Plant, Unit 2 (the facility), has been substantially completed in conformity with Provisional Construction Permit No. CPPR-69 and the application, as amended, the provisions of the Act, and the regulations of the Commission;

The licensee proposes to delete License Finding 1.B in its entirety because decommissioning of Diablo Canyon, Unit 2, is not dependent on the regulations that governed the construction of the facility. The NRC issued the Operating License for Diablo Canyon, Unit 2, on August 26, 1985 (ML022380438). Construction Permit No. CPPR-69 was superseded by FOL No. DPR-82. Accordingly, the NRC staff finds the proposed deletion of License Finding 1.B acceptable.

3.2.2.2 License Finding 1.C

Currently, License Finding 1.C for Diablo Canyon, Unit 2, reads:

> The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission, except as exempted from compliance in Section 2.D below;

The licensee proposes License Finding 1.C to read:

> The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;

The licensee proposes to delete License Condition 2.D, which is evaluated by the NRC staff in section 3.2.2.23 of this SE and found acceptable. Therefore, the NRC concludes that it is appropriate to delete the reference to License Condition 2.D from License Finding 1.C.

3.2.2.3 License Finding 1.D

Currently, License Finding 1.D for Diablo Canyon, Unit 2, reads:

> There is reasonable assurance (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations of the Commission set forth in 10 CFR Chapter I, except as exempted from compliance in Section 2.D below;

The licensee proposes License Finding 1.D to read:

> There is reasonable assurance (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations of the Commission set forth in 10 CFR Chapter I;

The licensee proposes to delete License Condition 2.D, which is evaluated by the NRC staff in section 3.2.2.23 of this SE and found acceptable. Therefore, the NRC concludes that it is appropriate to delete the reference to License Condition 2.D from License Finding 1.D.

3.2.2.4 License Condition 2.A

Currently, License Condition 2.A for Diablo Canyon, Unit 2, reads:

> This License applies to the Diablo Canyon Nuclear Power Plant, Unit 2, a pressurized water nuclear reactor and associated equipment (the facility), owned by PG&E. The facility is located in San Luis Obispo County, California, and is described in PG&E's Final Safety Analysis Report as supplemented and amended, and the Environmental Report as supplemented and amended.

The licensee proposes License Condition 2.A to read:

> This License applies to the Diablo Canyon Nuclear Power Plant, Unit 2, a pressurized water nuclear reactor[1] and associated equipment (the facility), owned by PG&E. The facility is located in San Luis Obispo County, California, and is described in PG&E's Final Safety Analysis Report as supplemented and amended, and the Environmental Report as supplemented and amended.

The licensee proposes to add footnote 1 to state:

> [1]In accordance with 10 CFR 50.82(a)(2), the Pacific Gas and Electric Company is no longer authorized to operate the reactor or emplace or retain fuel in the reactor vessel because the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel have been docketed.

Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 license for Diablo Canyon, Unit 2, will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel, pursuant to 10 CFR 50.82(a)(2). The licensee's proposed footnote clarifies factual information. Therefore, the NRC staff finds the proposed change to License Condition 2.A acceptable.

3.2.2.5 License Condition 2.B.(1)

Currently, License Condition 2.B.(1) for Diablo Canyon, Unit 2, reads:

> Pursuant to Section 104(b) of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities", to possess, use, and operate the facility at the designated location in San Luis Obispo County, California, in accordance with the procedures and limitations set forth in this license;

The licensee proposes License Condition 2.B.(1) to read:

> Pursuant to Section 104(b) of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities", to possess and use the facility at the designated location in San Luis Obispo County, California, in accordance with the procedures and limitations set forth in this license;

Consistent with 10 CFR Part 50.82(a)(2), the license for Diablo Canyon, Unit 2, will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel. The facility would remain authorized to possess the existing spent fuel and use the systems required to support safe fuel storage (e.g., the SFP) during the decommissioning period in accordance with the specified limitations for storage. The removal of the discussion of operating would provide accuracy in the 10 CFR Part 50 license description. Therefore, the NRC staff finds the proposed change to License Condition 2.B.(1) acceptable.

3.2.2.6 License Condition 2.B.(2)

Currently, License Condition 2.B.(2) for Diablo Canyon, Unit 2, reads:

> Pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

The licensee proposes License Condition 2.B.(2) to read:

> Pursuant to the Act and 10 CFR Part 70, to possess at any time special nuclear material that was used as reactor fuel, in accordance with the limitations for storage, as described in the Final Safety Analysis Report, as supplemented and amended;

The proposed change to this license condition would remove the authorization for receipt and use of SNM as reactor fuel. It would eliminate the reference to use of the SNM for reactor operations and limit the possession of SNM to SNM “that was used” as reactor fuel. Pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for Diablo Canyon, Unit 2, will no longer authorize operation of the reactor. As such, Diablo Canyon, Unit 2, has no need to receive SNM in the form of reactor fuel and cannot use SNM as reactor fuel for reactor operations. The continued authorization to possess SNM “that was used” as reactor fuel is necessary, as Diablo Canyon, Unit 2, possesses reactor fuel that was used for past operations. Therefore, the NRC staff finds the proposed change to License Condition 2.B.(2) acceptable.

3.2.2.7 License Condition 2.B.(3)

Currently, License Condition 2.B.(3) for Diablo Canyon, Unit 2, reads:

> Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

The licensee proposes License Condition 2.B.(3) to read:

> Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources that were used for reactor startup, sealed sources that were

> used for calibration of reactor instrumentation and are used in the calibration of radiation monitoring equipment, and as fission detectors in amounts as required;

The proposed revision to License Condition 2.B.(3) revises the authorization to receive, possess, and use at any time byproduct, source and SNMs as sealed sources to clarify that these sealed sources were previously used for reactor startup and calibration of reactor instrumentation.[3] The continued authorization to possess sealed sources that were used for reactor startup and calibration for reactor instrumentation is consistent with the safe storage of byproduct, source and special nuclear materials. The proposed license condition retains the authorization to receive, possess, and use sealed sources for calibration of radiation monitoring equipment because use of sources for radiation monitoring will continue to be required. Since the Diablo Canyon, Unit 2, license will no longer authorize operation of the facility pursuant to 10 CFR 50.82(a)(2), this license condition is consistent with the requirements associated with the decommissioning plant. Therefore, the NRC staff finds the proposed change to License Condition 2.B.(3) acceptable.

3.2.2.8 License Condition 2.B.(5)

Currently, License Condition 2.B.(5) for Diablo Canyon, Unit 2, reads:

> Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

The licensee proposes License Condition 2.B.(5) to read:

> Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials that were produced by the operation of the facility.

The proposed revision is to allow possession, but not separation, of byproduct, source, and SNM “that were” produced by the operation of the facility, as opposed to those materials “as may be” produced by the operation of the facility. Since the Diablo Canyon, Unit 2, license will no longer authorize operation of the facility pursuant to 10 CFR 50.82(a)(2), this license condition is consistent with the requirements associated with the decommissioning plant. Therefore, the NRC staff finds the proposed change to License Condition 2.B.(5) acceptable.

3.2.2.9 License Condition 2.C.(1)

Currently, License Condition 2.C.(1) for Diablo Canyon, Unit 2, addresses maximum power level. The licensee proposes to delete License Condition 2.C.(1) in its entirety. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 license for Diablo Canyon, Unit 2, will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel, pursuant to 10 CFR 50.82(a)(2); reference to operation of the facility would be inconsistent with 10 CFR 50.82(a)(2).

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[3] The licensee did not propose to modify language authorizing receipt, possession, and use of these materials, but activities involving these materials are appropriately constrained during the decommissioning period by NRC requirements and provisions in the licensing basis.

The NRC staff reviewed the proposed deletion of License Condition 2.C.(1) and determined that operation would not be authorized at Diablo Canyon, Unit 2, at any power level once its 10 CFR 50.82(a)(1) certifications were docketed. Therefore, the NRC staff finds the proposed deletion of License Condition 2.C.(1) acceptable.

3.2.2.10 License Condition 2.C.(2)

Currently, License Condition 2.C.(2) for Diablo Canyon, Unit 2, reads:

> Technical Specifications (SSER 32, Section 8)* and Environmental Protection Plan
>
> The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 242 are hereby incorporated in the license. Pacific Gas & Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

The licensee proposes License Condition 2.C.(2) to read:

> Permanently Defueled Technical Specifications (SSER 32, Section 8)* and Environmental Protection Plan
>
> The Permanently Defueled Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 244, are hereby incorporated in the license. Pacific Gas & Electric Company shall maintain the facility in accordance with the Permanently Defueled Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 license for Diablo Canyon, Unit 2, will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel, pursuant to 10 CFR 50.82(a)(2). The proposed change from “operate the facility” to “maintain the facility” would describe the permanently defueled condition in which the Diablo Canyon, Unit 2, license will no longer authorize the use of the facility for power operation. The proposed revision accounts for the permanently defueled condition of the facility and incorporates the PDTSs. Therefore, the NRC staff finds the proposed change to License Condition 2.C.(2) acceptable.

3.2.2.11 License Condition 2.C.(3)

Currently, License Condition 2.C.(3) for Diablo Canyon, Unit 2, addresses changes to the initial test program. The licensee proposes to delete License Condition 2.C.(3) in its entirety. This license condition reflects the initial startup test program and is historical in nature. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 license for Diablo Canyon, Unit 2, will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel, pursuant to 10 CFR 50.82(a)(2). Therefore, the NRC staff finds the proposed deletion of License Condition 2.C.(3) acceptable.

3.2.2.12 License Condition 2.C.(4)

Currently, License Condition 2.C.(4) for Diablo Canyon, Unit 2, addresses fire protection for an operating plant and requires the site to comply with 10 CFR 50.48 (a) and (c) and how changes may be made to the FPP.

The licensee proposes to delete License Condition 2.C.(4) in its entirety. The licensee stated that after the certifications required by 10 CFR 50.82(a)(1) are docketed for Diablo Canyon, Unit 2, the 10 CFR Part 50 license will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel pursuant to 10 CFR 50.82(a)(2), and as a result, the FPP will be revised to reflect the facility conditions and activities during decommissioning. The licensee further stated that the license condition, which is based on maintaining an FPP at an operating reactor in accordance with 10 CFR 50.48(a) and (c), will no longer be applicable at Diablo Canyon, Unit 2. However, many of the elements that are applicable for the operating plant FPP continue to be applicable during facility decommissioning. The licensee further stated that during the decommissioning process, an FPP is required by 10 CFR 50.48(f) to address the potential for fires that could result in a radiological hazard, and that the regulation is applicable regardless of whether a requirement for an FPP is included in the facility license, and therefore, a license condition requiring such a program for a permanently shutdown and defueled facility is not necessary.

The NRC staff finds that License Condition 2.C.(4) for Diablo Canyon, Unit 2, is based on maintaining an FPP that complies with 10 CFR 50.48(a) and (c). Compliance with 10 CFR 50.48(c) is no longer applicable to the decommissioned FPP at Diablo Canyon, Unit 2 once the facility is permanently shut down and the fuel has been permanently removed from the reactor. However, elements of the FPP will continue during decommissioning to address fire events that could result in radiological hazards. Section 50.48(f) of 10 CFR requires Diablo Canyon to address the potential for fires, which could result in a radiological hazard. The NRC staff concludes that the rule, which requires an FPP for licensees that have submitted the certifications under 10 CFR 50.82(a)(1), is sufficient to ensure that an FPP is maintained. Therefore, a license condition that also requires an FPP for the permanently shutdown and defueled unit is redundant. In accordance with 10 CFR 50.48(f), an FPP that complies with NFPA 805 is considered acceptable for complying with the requirements of 10 CFR 50.48(f). Based on the above, the NRC staff concludes that reliance on 10 CFR 50.48(f) is appropriate and that the licensee's request to delete License Condition 2.C.(4) for Diablo Canyon, Unit 2, is acceptable.

3.2.2.13 License Condition 2.C.(5)

Currently, License Condition 2.C.(5) for Diablo Canyon, Unit 2, addresses the conditions of NUREG-0737 including:

a. Detailed Control Room Design Review
b. Containment Isolation Dependability

The licensee proposes to delete License Condition 2.C.(5) in its entirety. The licensee states that NUREG-0737 and NUREG-0737, Supplement 1, implemented programmatic changes to the way reactor operators are trained, instrumentation information is presented, and procedures are structured using human factors and a function-oriented approach to address operating events and accidents. These accidents, and the associated emergency operating procedures to

detect, respond to, and mitigate such accidents, concerned malfunctions of the reactor and its supporting systems and are not relevant to a permanently shutdown and defueled reactor.

In accordance with 10 CFR 50.82(a)(2), once Diablo Canyon, Unit 2, has permanently ceased operation and PG&E has certified that fuel has been permanently removed from the reactor, the 10 CFR Part 50 license will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel. The NRC staff finds this license condition is no longer applicable and can be deleted.

3.2.2.14 License Condition 2.C.(6)

Currently, License Condition 2.C.(6) for Diablo Canyon, Unit 2, addresses emergency preparedness and the progress in the licensee completing procedures required by FEMA's final rule 44 CFR Part 350. The licensee proposes to delete License Condition 2.C.(6) in its entirety. The licensee's justification for eliminating this license condition is that it is historical in nature and related to the initial completion of procedures associated with FEMA's final rule. Additionally, the licensee indicates that 10 CFR 50.54(s)(2)(ii)[4] continues to be in effect regardless of the license condition.

Given the historical nature of License Condition 2.C.(6) and that 10 CFR 50.54(s)(2)(ii) has and will continue to remain in effect regardless of the existence of the license condition, the NRC staff finds that the proposed deletion of License Condition 2.C.(6) for Diablo Canyon, Unit 2, is acceptable.

3.2.2.15 License Condition 2.C.(7)

Currently, License Condition 2.C.(7) for Diablo Canyon, Unit 2, addresses the qualification of masonry walls. The licensee proposes to delete License Condition 2.C.(7) in its entirety. The NRC staff had concluded in its letter dated November 4, 1986 (ML16341D962), that "the masonry walls are appropriately qualified and the requirements set forth in the conditions of the full power licenses for Diablo Canyon Units 1 and 2 (License Conditions 2.C.(10) and 2.C.(7), respectively) have been satisfied." Therefore, the NRC staff finds this license condition is historical and not applicable to decommissioning of the facility. The NRC staff finds that the licensee's proposed deletion of License Condition 2.C.(7) for Unit 2 is acceptable.

3.2.2.16 License Condition 2.C.(8)

Currently, License Condition 2.C.(8) for Diablo Canyon, Unit 2, addresses reactor trip system (RTS) reliability. The licensee proposes to delete License Condition 2.C.(8) in its entirety. The NRC staff recognizes that the licensee has completed actions for Generic Letter 83-28, "Required Actions Based on Generic Implications of Salem ATWS [Anticipated Transient Without SCRAM] Events," which pertains to the RTS (ML16341F195). Once the reactor core is permanently defueled, there is no need for an RTS, therefore the NRC staff finds the proposed deletion of License Condition 2.C.(8) acceptable.

[4] Section 50 54(s)(2)(i) of 10 CFR was deleted and designated as "reserved" in the Final Rule, "Enhancements to Emergency Preparedness Regulations," published in the *Federal Register* on November 23, 2011 (76 FR 72560).

3.2.2.17 License Condition 2.C.(9)

Currently, License Condition 2.C.(9) for Diablo Canyon, Unit 2, addresses the SG tube rupture (SGTR) analysis to identify the most severe case with respect to release of fission products and calculated doses. The licensee proposes to delete License Condition 2.C.(9) in its entirety. By letter dated April 3, 1991 (ML20072R981), the NRC staff determined that this license condition for Diablo Canyon, Unit 2, has been met. Therefore, the NRC staff finds the proposed deletion of License Condition 2.C.(9) acceptable.

3.2.2.18 License Condition 2.C.(10)

Currently, License Condition 2.C.(10) for Diablo Canyon, Unit 2, addresses the pipeway structure design earthquake and double design earthquake analysis. The licensee proposes to delete License Condition 2.C.(10) in its entirety. The NRC staff had concluded in its letter dated September 14, 1987 (ML17083B969), that “the pipeway structure for Unit 2 of Diablo Canyon Nuclear Power Plant satisfies the FSAR commitments and is therefore acceptable.” This license condition is historical and not applicable to decommissioning the facility. Therefore, the NRC staff finds the proposed deletion of License Condition 2.C.(10) acceptable.

3.2.2.19 License Condition 2.C.(11)

Currently, License Condition 2.C.(11) for Diablo Canyon, Unit 2, addresses modification of the SFP. The licensee proposes to delete License Condition 2.C.(11) in its entirety. The licensee states that the current requirements for fuel storage racks are included in TSs 4.3 and 3.7.17.

The NRC staff finds that this license condition is historical and not applicable to decommissioning of the facility because the fuel storage requirements are located in TSs 4.3 and 3.7.17, which will not be deleted by this amendment. Therefore, the NRC staff finds the proposed deletion of License Condition 2.C.(11) acceptable.

3.2.2.20 License Condition 2.C.(12)

Currently, License Condition 2.C.(12) for Diablo Canyon, Unit 2, addresses additional conditions. The licensee proposes to delete License Condition 2.C.(12) in its entirety. The NRC staff evaluated the licensee’s proposed deletion of additional conditions contained in appendix D for Diablo Canyon, Unit 2, in section 3.2.2.26 of this SE. As discussed in section 3.2.2.26, the NRC staff finds the proposed deletion of additional conditions contained in appendix D is acceptable. Therefore, the NRC staff finds the proposed deletion of License Condition 2.C.(12) acceptable.

3.2.2.21 New License Condition 2.C.(13)

The licensee proposes to add License Condition 2.C.(13) for Diablo Canyon, Unit 2, to read:

> Aging Management Program
>
> If all spent fuel has not been removed from the Unit 2 spent fuel pool prior to August 26, 2029, an aging management program shall be submitted prior to this date for NRC approval. The scope of the program shall include those long-lived, passive structures and components that are needed to provide reasonable assurance of the safe condition of the spent fuel in the spent fuel pool. Once

approved, the program shall be described in the Final Safety Analysis Report and shall remain in effect for Unit 2 until such time that all spent fuel has been removed from the Unit 2 spent fuel pool.

The licensee proposes this license condition to provide reasonable assurance of the safe condition of the spent fuel in the SFP.

The initial operating license for Diablo Canyon, Unit 2, is scheduled to expire on August 26, 2025. The NRC staff notes that the actual license expiration date for Unit 2 is uncertain at this time because, by letter dated October 31, 2022, the licensee indicated that it is seeking to renew the Diablo Canyon licenses (ML22304A691). The Irradiated Fuel Management Plan currently projects that all SNF from the Unit 2 SFP will be in dry storage in 2032. However, PG&E has issued a request for proposal to implement a modified or new dry cask storage design to potentially reduce the required SFP cooling time to allow safe transfer to the Diablo Canyon ISFSI as soon as possible and not to exceed 4 years after the expiration of the Unit 2 operating license.

Therefore, the licensee anticipates that the period of extended use beyond the licensed operating period for structures and components associated with wet storage of spent fuel will be approximately 10 percent of the initial licensed operating period. This minimal increase in service time for SSCs associated with the SFP does not pose a nuclear safety concern for the reasons discussed below.

In the permanently shutdown and defueled condition, safely storing spent fuel in the SFP relies principally on maintaining storage geometry, water level, and sub-critical characteristics of the spent fuel storage racks.

In accordance with 10 CFR 50.65(a), the licensee stated that it will continue to implement the portion of the Maintenance Rule program that is applicable to SSCs associated with the storage, control, and maintenance of spent fuel. Diablo Canyon procedures will continue to be implemented to ensure spent fuel storage structures and components maintain structural integrity. This program includes the SFP liner and the storage racks.

The SFP design protects against the possibility of a complete loss of water in the SFP. The SFP cooling suction connection enters near the normal water level so that the SFP cannot be drained by gravity. The cooling water return line contains an anti-siphon hole to prevent the possibility of gravity draining the SFP. The design ensures greater than 10 feet of water exists over the top of the fuel assemblies should inadvertent drainage occur.

Additionally, the licensee states that criticality analyses have been performed for the permanent storage racks, which demonstrate that the multiplication factor, k_{eff}, of the fuel assemblies in the spent fuel storage racks is ≤ 0.95. In order to maintain k_{eff} ≤ 0.95, the presence of soluble boron is credited in the SFP criticality analyses. These criticality analyses were conservatively performed in the region of the SFP that does not contain Boraflex panels and therefore, does not take credit for these panels. TS 3.7.16, “Spent Fuel Pool Boron Concentration,” requires that the SFP boron concentration be ≥ 2,000 ppm when fuel assemblies are stored in the SFP. In addition, TS 3.7.17 ensures the configuration of fuel assemblies in the SFP will maintain the k_{eff} of the pool is ≤ 0.95, under analyzed accident scenarios.

As part of the transition to decommissioning, PG&E will implement an FPP that complies with 10 CFR 50.48(f). The components and maintenance of the fire protection system will meet

NFPA codes, as applicable. From an emergency planning perspective, firewater can be used to provide makeup water to the SFP.

The firewater system water supply is normally obtained from the raw water reservoir (360,000 gallons), and from the Firewater Storage Tank 0-1 (270,000 gallons) through Fire Pump 0-1 or 0-2. The Fire Pumps 0-1 and 0-2 will continue to be run on a quarterly basis with pump performance testing with visual checks of the position and condition of firewater system valves in the flow path. In addition, the indoor hoses are hydrostatically tested every 3 years.

For monitoring of spent fuel conditions, during continued wet storage of the fuel up to and beyond the original 40-year life of the plant, Diablo Canyon, Unit 2, will maintain portions of the radiation monitoring system. This will consist of two SFP area monitors (RM-58 and RM-59) with alert and high radiation level alarms and local audible and visual indicators. During decommissioning and permanently shut down, these local area radiation monitors will be tested quarterly, and maintained to ensure continued functionality with contingency plans if a monitor becomes non-functional. Also, RM-58 and RM-59 monitors will continue to be included in Diablo Canyon procedures after conversion to the Post Shutdown and Permanently Defueled Emergency Plans as long as fuel remains in the SFP.

The NRC staff finds that the measures listed above provide reasonable assurance of adequate protection of the public health and safety for storing fuel in the Unit 2 SFP for 4 years beyond the expiration of the Unit 2 license. If all spent fuel has not been removed from the Unit 2 SFP prior to August 26, 2029, the licensee will submit a new aging management program prior to that date for NRC staff approval. The NRC staff will determine at that time if the new aging management program provides reasonable assurance of safety for the duration of the time the fuel remains in the SFP. The NRC staff finds that the actions described above are sufficient to ensure safe storage of spent fuel in the SFP, and therefore, the proposed new license condition is acceptable.

3.2.2.22 New License Condition 2.C.(14)

The licensee proposes to add License Condition 2.C.(14) for Diablo Canyon, Unit 2, to read:

> Restriction on Handling Spent Nuclear Fuel
>
> Handling of spent nuclear fuel in the spent fuel pool and heavy loads over the spent fuel pool will not be permitted following implementation of the Permanently Defueled Technical Specifications until a minimum of 45 days following permanent shutdown.

The licensee proposes this license condition to prevent movement of SNF until 45 days after shutdown as assumed in the post shutdown FHA analysis.

The FHA analysis for Diablo Canyon, Units 1 and 2, shows that, following 45 days of decay time after reactor shutdown and provided the SFP water level requirements of TS 3.7.15 are met, the dose consequences for the control room, the EAB, and the LPZ remain below the regulatory limits, without relying on active components remaining functional for accident mitigation during and following the event. To preclude the possibility of an FHA until after the assumed 45-day SNF decay period, the licensee proposes a new license condition for Diablo Canyon, Unit 2, to prohibit movement of SNF after implementation of the PDTSs until 45 days after shutdown. In

addition, as an added safety measure, the licensee will prohibit movement of heavy loads over the SFP during this timeframe.

The NRC staff finds the proposed new license condition acceptable because it ensures that the assumptions in the FHA analysis are met, thus ensuring dose consequences are within limits if an FHA were to occur.

3.2.2.23 License Condition 2.D

Currently, License Condition 2.D for Diablo Canyon, Unit 2, addresses an exemption from certain requirements of Appendix J to 10 CFR Part 50. The licensee proposes to delete License Condition 2.D in its entirety. The licensee indicates that once Diablo Canyon, Unit 1, has permanently ceased operation and PG&E has certified that fuel has been permanently removed from the reactor, Appendix J to 10 CFR Part 50 is no longer applicable, and therefore, the associated exemption is not necessary. The NRC staff finds that it is acceptable to delete this license condition because 10 CFR Part 50, Appendix J is not applicable following submission of the certifications required by 10 CFR 50.82(a)(1).

3.2.2.24 License Condition 2.J

Currently, License Condition 2.J for Diablo Canyon, Unit 2, reads:

> Term of License
>
> This License is effective as of the date of issuance and shall expire at midnight on August 26, 2025.

The licensee proposes License Condition 2.J to read:

> Term of License
>
> This License is effective as of the date of issuance and is effective until the Commission notifies the licensee in writing that the license is terminated.

The proposed change would modify this license condition to reflect the permanently shutdown and defueled condition of the facility. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 license for Diablo Canyon, Unit 2, will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel, pursuant to 10 CFR 50.82(a)(2). The proposed change would revise License Condition 2.J to conform with 10 CFR 50.51(b), in that the license authorizes ownership and possession by PG&E until the Commission notifies the licensee in writing that the license is terminated.

The NRC staff reviewed the proposed change to License Condition 2.J. The current License Condition 2.J, which documents the date of the expiration of the license for Diablo Canyon, Unit 2, is no longer necessary for the permanently shutdown and defueled condition of the plant in the process of decommissioning. The revised License Condition 2.J is consistent with the provisions of 10 CFR 50.51(b) as applied to a facility that has permanently ceased operations. Therefore, the NRC staff finds the proposed change to License Condition 2.J acceptable.

3.2.2.25 Attachments

Currently, the list of attachments for Diablo Canyon, Unit 2, reads:

> Attachments:
> 1. Appendix A – Technical Specifications (NUREG-1151)
> 2. Appendix B – Environmental Protection Plan
> 3. Appendix C – Deleted
> 4. Appendix D – Additional Conditions

The licensee proposes the list of attachments to read:

> Attachments:
> 1. Appendix A – Permanently Defueled Technical Specifications
> 2. Appendix B – Environmental Protection Plan
> 3. Appendix C – Deleted
> 4. Appendix D – Deleted

The licensee proposes to revise the list of attachments to reflect proposed changes to the license. The NRC staff evaluations of the proposed title change of the TSs and deletion of appendix D for Diablo Canyon, Unit 2, are discussed in sections 3.2.2.10 and 3.2.2.26 of this SE, respectively. The changes to the list of attachments are editorial and do not change any technical content. The NRC staff finds the proposed changes to the list of attachments acceptable.

3.2.2.26 Attachment 4. Appendix D – Additional Conditions

3.2.2.26.1 Amendment Number 118

Amendment No. 118 for Diablo Canyon, Unit 2, authorized the licensee to relocate certain TS requirements to the equipment control guidelines as referenced in the UFSAR. By letter dated May 28, 1998, the licensee notified the NRC that the license amendment had been implemented according to the license condition (ML16342E116). The licensee is therefore proposing to delete this condition because it is historical. The NRC staff reviewed the licensee's proposal, and because the amendment was implemented according to the condition and is historical, the NRC staff agrees with the deletion and finds it acceptable.

3.2.2.26.2 Amendment Number 135

Amendment No. 135 for Diablo Canyon, Unit 2, authorized the licensee to relocate certain TS requirements to licensee-controlled documents. It also authorized changes to the schedule for the performance of new and revised SRs. By letter dated June 30, 2000, the licensee notified the NRC that the license amendment had been implemented (ML003729396). The licensee is therefore proposing to delete this condition because it is historical. The NRC staff reviewed the licensee's proposal, and because the amendment was implemented and is historical, the NRC staff agrees with the deletion and finds it acceptable.

3.2.2.26.3 Amendment Number 202

Amendment No. 202 for Diablo Canyon, Unit 2, addressed the control room envelope unfiltered air in-leakage. The NRC staff finds that PG&E completed implementation of this historical license amendment, and therefore, finds the deletion of this condition acceptable.

3.2.2.26.4 Amendment Number 232

Amendment No. 232 for Diablo Canyon, Unit 2, addressed the AST. The NRC staff finds that PG&E completed implementation of this historical license amendment, and therefore, finds the deletion of this condition acceptable.

3.3 Changes to Appendix A, Technical Specifications

3.3.1 TS Section 1.1, “Definitions”

The licensee proposes to add the definitions of a CERTIFIED FUEL HANDLER and a NON-CERTIFIED OPERATOR to TS section 1.1. The NRC staff reviewed the TS definitions proposed for addition and concludes that the definitions are meaningful for the PDTSs and adding the definitions will ensure that these positions are consistently utilized throughout the Diablo Canyon PDTSs. Therefore, the NRC staff finds the addition of the definitions in the TSs acceptable.

The licensee proposes to delete the following definitions and table 1.1-1, “MODES” from TS section 1.1:

- ACTUATION LOGIC TEST
- AXIAL FLUX DIFFERENCE
- CHANNEL CALIBRATION
- CHANNEL CHECK
- CHANNEL FUNCTIONAL TEST (CFT)
- CHANNEL OPERATIONAL TEST (COT)
- CORE ALTERATION
- CORE OPERATING LIMITS REPORT (COLR)
- DOSE EQUIVALENT I-131 [IODINE-131]
- DOSE EQUIVALENT XE-133 [XENON-133]
- ENGINEERED SAFETY FEATURE (ESF) RESPONSE TIME
- LEAKAGE
- MASTER RELAY TEST
- MODE
- OPERABLE-OPERABILITY
- PHYSICS TESTS
- PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)
- QUADRANT POWER TILT RATIO (QPTR)
- RATED THERMAL POWER (RTP)
- REACTOR TRIP SYSTEM (RTS) RESPONSE TIME
- SHUTDOWN MARGIN (SDM)
- SLAVE RELAY TEST

- THERMAL POWER
- TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT)

The licensee indicated that these terms are not applicable in the permanently defueled condition and are not used in any of the PDTSs.

The NRC staff reviewed the TS definitions proposed for deletion and concludes that all the terms listed above are only meaningful for a reactor authorized to operate. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, and Diablo Canyon, Units 1 and 2, are permanently shut down and defueled, these definitions will no longer be applicable and/or necessary. Therefore, the NRC staff finds the deletion of the definitions from the TSs acceptable.

3.3.2 TS Section 1.3, “Completion Times”

The licensee proposes to revise the “BACKGROUND” subsection by replacing the phrase “operation of the unit” with “handling and storage of nuclear fuel.” The licensee proposes to revise the “DESCRIPTION,” subsections by removing references to inoperable equipment; replacing “unit” with “facility”; removing the discussion of modes and discussion of entries into more than one condition, or alternating between conditions; and removing the discussion related to completion time extensions. The license proposes to delete the subsection Examples 1.3-1, 1.3-2, 1.3-3, 1.3-4, 1.3-5, 1.3-6, and 1.3-7, from the Diablo Canyon, Units 1 and 2, TS section 1.3.

The NRC staff reviewed the licensee’s proposed revisions to the “BACKGROUND” subsection and concludes that the revisions appropriately reflect the permanently shutdown and defueled condition. Therefore, the NRC staff finds these revisions acceptable.

The NRC staff reviewed the licensee’s proposed revisions to the “DESCRIPTION” subsection and finds that the revision to remove reference to inoperable equipment is acceptable because PDTSs do not have LCOs for equipment to be operable or in operation. The NRC staff also finds that the revision to replace “unit” with “facility” more accurately reflects the permanently shutdown and defueled condition and is therefore acceptable. The NRC staff also finds that the removal of modes is acceptable because the term is not applicable to a permanently defueled facility. The NRC staff also finds that the removal of discussion for entries into more than one condition, or alternating between conditions is acceptable because the three remaining PDTSs only contain a single condition in each PDTS. Further, the NRC staff finds that the removal of the completion time extension is acceptable since it is no longer applicable because the remaining PDTSs have a completion time of immediately.

The NRC staff reviewed the licensee’s proposed removal of Examples 1.3-1 through 1.3-7 and concludes that these examples illustrate the use of completion times with different types of conditions and changing conditions that are no longer applicable to the three remaining PDTSs that specify a completion time. Therefore, the NRC staff finds these revisions acceptable.

3.3.3 TS Section 1.4, “Frequency”

The licensee proposes to revise the “EXAMPLES” subsection of TS section 1.4 to remove the references to MODES 1, 2, and 3 and reference the PDTS. The NRC staff reviewed the licensee’s proposed revision and concludes that the term “MODES” will not be applicable to a

permanently defueled facility, and is therefore, an acceptable revision. Referencing the PDTS is appropriate given the change from TS to PDTS. Therefore, this change is acceptable.

The licensee proposes to revise Example 1.4-1 surveillance to align with the surveillances in the PDTSs. The licensee also proposes to revise the discussion of Example 1.4-1 to replace the reference to TS with PDTS, and replace, delete, or update “MODE,” “operational,” and “unit” with PDTS-appropriate terms. The NRC staff reviewed the licensee’s proposed changes and concludes that they are appropriate for a permanently defueled facility with PDTSs. Therefore, the NRC staff finds the revisions acceptable.

The licensee proposes to delete the reference to equipment being inoperable. The licensee also proposes to delete the reference to Example 1.4-3, as well as the example, and revise Example 1.4-2 for applicability to the permanently defueled condition and use of a one-time performance frequency. The NRC staff reviewed the licensee’s proposed changes and concludes that they are appropriate for a permanently defueled facility. Therefore, the NRC staff finds the revisions acceptable.

3.3.4 TS Section 2.0, “Safety Limits (SLs)”

The licensee proposes to delete TS section 2.0 in its entirety because the SLs do not apply to a reactor that is in a permanently defueled condition. These TSs do not apply to the safe storage and handling of spent fuel in the SFP. The NRC staff reviewed the proposed changes for deletion and concludes that all the SLs listed in this section are only meaningful for a reactor authorized to operate. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, and Diablo Canyon, Units 1 and 2, are permanently shut down and defueled, these TS SLs will no longer be applicable or necessary. Therefore, the NRC staff finds the deletion of TS section 2.0 in its entirety, acceptable.

3.3.5 TS Section 3.0, “Limiting Conditions for Operation (LCO) Applicability”

The licensee proposes to delete the term “MODES” from LCO 3.0.1 and delete the reference to LCOs 3.0.7 and 3.0.8 from LCO 3.0.1, because they are proposed for deletion. The NRC staff reviewed the licensee’s proposed change to remove the term “MODES” from LCO 3.0.1 and concludes that the term will not be applicable to a permanently defueled facility. The NRC staff also reviewed the deletion of reference to LCOs 3.0.7 and 3.0.8 from LCO 3.0.1. Since LCOs 3.0.7 and 3.0.8 are proposed for deletion, the reference to them in LCO 3.0.1 is no longer applicable. The NRC staff finds that the licensee’s proposed changes to LCO 3.0.1 are acceptable.

The licensee proposes to delete the statement regarding LCOs 3.0.5 and 3.0.6 from LCO 3.0.2 because LCOs 3.0.5 and 3.0.6 are proposed for deletion. The licensee also proposes to delete the discussion related to meeting the LCO prior to expiration of the specified completion time. The NRC staff reviewed these proposed revisions, and because LCOs 3.0.5 and 3.0.6 are proposed for deletion, and the only completion time applicable in the PDTSs is “immediately,” the NRC staff finds these changes acceptable.

The licensee proposes to delete LCOs 3.0.3, 3.0.4, 3.0.5, 3.0.6, 3.0.7, and 3.0.8 in their entirety. The NRC staff reviewed the proposed deletions and concludes that these LCOs are only applicable for a reactor authorized to operate. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, and Diablo Canyon, Units 1 and 2, are permanently shut down and defueled, these LCOs will no longer be applicable or necessary. Therefore, the NRC

staff finds that the deletion of LCOs 3.0.3, 3.0.4, 3.0.5, 3.0.6, 3.0.7, and 3.0.8 in their entirety is acceptable.

3.3.6 TS Section 3.0, “Surveillance Requirement (SR) Applicability”

The licensee proposes to delete the term “MODES” from SRs 3.0.1 and 3.0.4. The NRC staff reviewed the licensee’s proposed change and concludes that the term “MODES” will not be applicable to a permanently defueled facility. Therefore, the NRC staff finds the deletion of the term “MODES” from SRs 3.0.1 and 3.0.4, acceptable.

The licensee proposes to remove references to inoperable equipment from SR 3.0.1. The NRC staff reviewed the licensee’s proposed changes and concludes that they are appropriate for a permanently defueled facility because PDTSs do not have LCOs for equipment to be operable or in operation. Therefore, the NRC staff finds the revisions acceptable.

The licensee proposes to revise SR 3.0.2 to remove conditions for frequencies that do not exist in PDTS LCOs. The licensee also proposes to delete the discussion related to completion times that require periodic performance and the reference to exceptions to this SR. The NRC staff reviewed this proposed revision, and because frequencies do not exist in PDTS LCOs, the only completion time applicable in the PDTSs is “immediately,” and exceptions are not included in the PDTSs. Therefore, the NRC staff finds this revision acceptable.

The licensee proposes to remove the discussion from SR 3.0.4 pertaining to LCO 3.0.4 since LCO 3.0.4 is proposed for deletion, as discussed above. The licensee also removed language from SR 3.0.4 pertaining to shut down of the unit. The NRC staff reviewed the licensee’s proposed changes and concludes that they are appropriate for a permanently defueled facility. Therefore, the NRC staff finds the revisions acceptable.

3.3.7 TS Section 3.1, “Reactivity Control Systems”

TS section 3.1, in the Diablo Canyon, Units 1 and 2, TSs, contains requirements to assure and verify operability of reactivity control systems. A description of each of the specifications the licensee has proposed for deletion is provided as follows:

- TS 3.1.1, “Shutdown Margin (SDM),” requires sufficient reactivity margin to ensure that acceptable fuel design limits will not be exceeded for normal shutdown and anticipated operational occurrences. TS 3.1.1 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.1.2, “Core Reactivity,” establishes a reactivity balance, which is used as a measure of the predicted versus measured core reactivity during power operation. This periodic confirmation of core reactivity is necessary to ensure that DBA and transient safety analyses remain valid. TS 3.1.2 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.1.3, “Moderator Temperature Coefficient (MTC),” requires the MTC to be maintained within the limits specified by the COLR. The MTC relates to a change in core reactivity as a result of a change in reactor coolant temperature. TS 3.1.3 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.1.4, “Rod Group Alignments Limits,” requires all shutdown and control rods to be operable, and individual indicated rod positions to be within 12 steps of their group step counter demand position. Control rod alignment and operability are related to core operation in design power peaking limits and the core design requirement of a minimum SDM. TS 3.1.4 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.1.5, “Shutdown Bank Insertion Limits,” requires each shutdown bank to be within insertion limits specified in the COLR. The shutdown banks affect core power and burnup distribution and add negative reactivity to shut down the reactor upon receipt of a reactor trip signal. The insertion limits are established to ensure that a sufficient amount of negative reactivity is available to shut down the reactor and maintain the required SDM following a reactor trip from full power. TS 3.1.5 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.1.6, “Control Bank Insertion Limits,” requires control banks to be within insertion, sequence, and overlap limits specified in the COLR. The control banks are used for precise reactivity control of the reactor. TS 3.1.6 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.1.7, “Rod Position Indication,” requires the digital rod position indication system and the demand position indication system to be operable. Operability of the rod position indicators is required to determine rod positions and thereby ensure compliance with the rod alignment and insertion limits. Control and shutdown rod position accuracy is essential during power operation. TS 3.1.7 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.1.8, “PHYSICS TEST Exceptions – MODE 2,” permits relaxations of existing LCOs to allow certain physics tests to be performed. The physics tests requirements for reload fuel cycles ensure that the operating characteristics of the core are consistent with the design predictions, and that the core can be operated as designed. TS 3.1.8 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

The NRC staff reviewed the TSs proposed for deletion in this section, as well as the associated bases, to ensure that they are no longer needed to satisfy the 10 CFR 50.36 criteria for inclusion in TSs. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 licenses for Diablo Canyon, Units 1 and 2, will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2). TS section 3.1 pertains to reactivity control, but once the fuel is permanently removed from the reactor core, there is no longer any fissile material to control the reactivity. Therefore, the NRC staff finds the proposed deletion of TS section 3.1 acceptable.

3.3.8 TS Section 3.2, “Power Distribution Limits”

TS section 3.2, in the Diablo Canyon, Units 1 and 2, TSs, contains power distribution limits that provide assurance that fuel design criteria are not exceeded and the accident analysis assumptions remain valid. A description of each of the specifications the licensee has proposed for deletion is provided as follows:

- TS 3.2.1, “Heat Flux Hot Channel Factor ($F_Q(Z)$),” requires the heat flux hot channel factor to be within the limits specified within the COLR. The heat flux hot channel factor is a measure of the peak fuel pellet power within the reactor core. The purpose of the limits on the heat flux hot channel factor is to limit the local (i.e., pellet) peak power density. TS 3.2.1 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.2.2, “Nuclear Enthalpy Rise Hot Channel Factor ($F^N_{\Delta H}$),” requires the nuclear enthalpy rise hot channel factor to be within the limits specified in the COLR. Control of the core power distribution with respect to these factors ensures that local conditions in the fuel rods and coolant channels do not challenge core integrity at any location during normal operation, operational transients, and any transient condition arising from events of moderate frequency analyzed in the safety analyses. TS 3.2.2 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.2.3, “Axial Flux Difference (AFD),” requires the AFD in percent flux difference units to be maintained within the limits specified in the COLR. The purpose of this LCO is to establish limits on the values of the AFD in order to limit the amount of axial power distribution skewing to either the top or bottom of the core. TS 3.2.3 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.2.4, “Quadrant Power Tilt Ratio (QPTR),” ensures that the gross radial power distribution within the core remains consistent with the design values used in the safety analyses. TS 3.2.4 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

The NRC staff reviewed the TSs proposed for deletion in this section, as well as the associated bases, to ensure that they are no longer needed to satisfy the 10 CFR 50.36 criteria for inclusion in TSs. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 licenses for Diablo Canyon, Units 1 and 2, will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2). TS section 3.2 pertains to power distribution limits in the reactor core, but once the plant becomes permanently defueled, there is no more power being produced in the reactor core. Therefore, the NRC staff finds the proposed deletion of TS section 3.2 acceptable.

3.3.9 TS Section 3.3, “Instrumentation”

TS section 3.3, in the Diablo Canyon, Units 1 and 2, TSs, contains requirements to assure and verify operability of instrumentation. A description of each of the specifications the licensee has proposed for deletion is provided as follows:

- TS 3.3.1, “Reactor Trip System (RTS) Instrumentation,” requires RTS instrumentation for certain functions to be operable. The RTS initiates a unit shutdown, based on the values of selected unit parameters, to protect against violating the core fuel design limits and RCS pressure boundary during anticipated operational occurrences and to assist the ESF systems in mitigating accidents. TS 3.3.1 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.3.2, “Engineered Safety Feature Actuation System (ESFAS) Instrumentation,” initiates necessary safety systems, based on the values of selected unit parameters, to

protect against violating core design limits and the RCS pressure boundary and to mitigate accidents. TS 3.3.2 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.3.3, “Post Accident Monitoring (PAM) Instrumentation,” displays unit variables that provide information required by the control room operators during accident situations. TS 3.3.3 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.3.4, “Remote Shutdown System,” provides the control room operator with sufficient instrumentation and control to place and maintain the unit in a safe shutdown condition from a location other than the control room. TS 3.3.4 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.3.5, “Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation,” requires one channel per bus of loss of voltage DG start function. The DGs provide a source of emergency power when offsite power is either unavailable or is degraded below a point that would allow safe unit operation. Undervoltage protection will generate a LOP start if a loss of voltage or degraded voltage condition occurs. TS 3.3.5 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.3.6, “Containment Ventilation Isolation Instrumentation,” is applicable in MODES 1, 2, 3, and 4, and during movement within containment of recently irradiated fuel assemblies (i.e., fuel that has occupied part of a critical reactor core within the previous 100 hours). The licensee indicates that once in a permanently shutdown and defueled condition, the operability of containment ventilation system isolation instrumentation functions in MODES 1, 2, 3, and 4 will no longer be applicable and that the mode of applicability associated with moving recently irradiated fuel in containment will no longer occur. TS 3.3.6 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.3.7, “Control Room Ventilation System (CRVS) Actuation Instrumentation,” requires CRVS actuation instrumentation for specific functions to be operable in MODES 1, 2, 3, 4, 5, and 6, and during movement of recently irradiated fuel assemblies (i.e., fuel that has occupied part of a critical reactor core within the previous 100 hours). The licensee indicates that once in a permanently shutdown and defueled condition, the operability of CRVS actuation instrumentation for specific functions in MODES 1 through 6 and during movement of recently irradiated fuel will no longer be necessary. Additionally, CRVS is not credited for mitigation in the revised FHA calculation. TS 3.3.7 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.3.8, “Fuel Building Ventilation System (FBVS) Actuation Instrumentation,” requires the FBVS actuation instrumentation associated with specific functions to be operable during movement in the FHB of recently irradiated fuel assemblies (i.e., fuel that has occupied part of a critical reactor core within the previous 100 hours). The licensee indicates that once in a permanently shutdown and defueled condition, the operability of the FBVS actuation instrumentation associated with specific functions during movement of recently irradiated fuel assemblies in the FHB will no longer be required to be operable. Additionally, operability of the FBVS is not credited in the revised FHA

calculation. TS 3.3.8 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.3.9, “Boron Dilution Protection System (BDPS),” is not used in the current TS; therefore, the TS is proposed to be deleted.

The NRC staff reviewed the TSs proposed for deletion in this section, as well as the associated bases, to ensure that they are no longer needed to satisfy the 10 CFR 50.36 criteria for inclusion in TSs. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 licenses for Diablo Canyon, Units 1 and 2, will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2). TS section 3.3 pertains to instrumentation. With the Diablo Canyon, Units 1 and 2, reactors not authorized to operate, emplace, or retain fuel in the reactor vessels, the only DBA remaining is the FHA in the FHB. The FHA analysis does not rely on the operability of sensing and controlling instrumentation for accident mitigation. Therefore, the NRC staff finds the proposed deletion of TS section 3.3 acceptable.

3.3.10 TS Section 3.4, “Reactor Coolant System (RCS)”

TS section 3.4, in the Diablo Canyon, Units 1 and 2, TSs, contains requirements that provide for appropriate control of process variables, design features, or operating restrictions needed for appropriate functional capability of RCS equipment required for safe operation of the facility. A description of each of the specifications the licensee has proposed for deletion is provided as follows:

- TS 3.4.1, “RCS Pressure, Temperature, and Flow Departure from Nucleate Boiling (DNB) Limits,” provides limits for RCS DNB parameters for pressurizer pressure, RCS average temperature, and RCS flow rate. The limits on pressurizer pressure, RCS coolant average temperature, and RCS flow rate must be maintained during steady-state operation in order to ensure the DNB ratio criteria will be met in the event of an unplanned loss of forced coolant flow or other DNB limited transient. TS 3.4.1 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.2, “RCS Minimum Temperature for Criticality,” requires each operating RCS loop average temperature to be within specified limits. This LCO ensures that the reactor will not be made or maintained critical with an operating loop temperature less than a small band below the hot zero power temperature, which is assumed in the safety analysis. TS 3.4.2 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.3, “RCS Pressure and Temperature (P/T) Limits,” requires RCS pressure, RCS temperature, and RCS heatup and cooldown rates to be maintained within the limits specified in the PTLR. This specification limits the pressure and temperature changes during RCS heatup and cooldown, within the design assumptions and the stress limits for cyclic operation. TS 3.4.3 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.4, “RCS Loops–MODES 1 and 2,” requires four RCS loops to be operable and in operation during the specified modes. The purpose of this specification is to require an

adequate forced flow rate for core heat removal. TS 3.4.4 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.5, “RCS Loops–MODE 3,” specifies the requirements for how many RCS Loops need to be operable in the specified mode. The required number of RCS loops in operation ensures that the SL criteria will be met for all of the postulated accidents. TS 3.4.5 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.6, “RCS Loops-MODE 4,” requires two loops consisting of any combination of RCS loops and residual heat removal (RHR) loops to be operable, and one loop shall be in operation in the specified mode. Any one loop in operation provides enough flow to remove the decay heat from the core with forced circulation. An additional loop is required to be operable to provide redundancy for heat removal. TS 3.4.6 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.7, “RCS Loops–MODE 5, Loops Filled,” requires one RHR loop to be operable and in operation, and either:

    a. one additional RHR loop shall be operable; or
    b. the secondary side water level of at least two SGs shall be greater than or equal to 15 percent.

  The purpose of this specification is to provide forced flow from at least one RHR loop for decay heat removal and transport. The flow provided by one RHR loop is adequate for decay heat removal. The other purpose of this LCO is to require that a second path be available to provide redundancy for heat removal. TS 3.4.7 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.8, “RCS Loops–MODE 5, Loops Not Filled,” requires two RHR loops to be operable, and one RHR loop to be in operation in the specified mode with RCS loops not filled. In the specified mode with the RCS loops not filled, the primary function of the reactor coolant is the removal of decay heat generated in the fuel and the transfer of this heat to the component cooling water via the RHR heat exchangers. The secondary function of the reactor coolant is to act as a carrier for the soluble neutron poison, boric acid. TS 3.4.8 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.9, “Pressurizer,” ensures the capability to establish and maintain pressure control for steady-state operation and to minimize the consequences of potential overpressure transients. The pressurizer provides a point in the RCS where liquid and vapor are maintained in equilibrium under saturated conditions for pressure control purposes to prevent bulk boiling in the remainder of the RCS. TS 3.4.9 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.10, “Pressurizer Safety Valves,” ensures overpressure protection for the RCS, in conjunction with the reactor protection system. The safety valves are designed to prevent the system pressure from exceeding the system SL, which is 110 percent of the design pressure. TS 3.4.10 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.11, “Pressurizer Power Operated Relief Valves (PORVs),” requires each PORV and associated block valve to be operable. The PORVs are air-operated valves that are controlled to open when the pressurizer pressure increases above their actuation setpoint and to close when the pressurizer pressure decreases. The PORVs are required to be operable to mitigate an SGTR and spurious operation of the safety injection system at power event and the main feedwater line break event. In addition, the block valves are required to be operable to limit the potential for a small-break LOCA through the flow path. TS 3.4.11 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.12, “Low Temperature Overpressure Protection (LTOP) System,” requires the LTOP system to be operable during certain conditions. The LTOP system controls RCS pressure at low temperatures so the integrity of the reactor coolant pressure boundary is not compromised by violating the P/T limits. TS 3.4.12 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.13, “RCS Operational Leakage,” provides limits on RCS operational leakage. The purpose of this specification is to limit system operation in the presence of leakage from the RCS to amounts that do not compromise safety. TS 3.4.13 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.14, “RCS Pressure Isolation Valve (PIV) Leakage,” limits leakage from each RCS PIV. The purpose of this specification is to prevent overpressure failure of the low-pressure portions of systems that connect to the RCS. TS 3.4.14 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.15, “RCS Leakage Detection Instrumentation,” specifies which RCS leakage detection instrumentation shall be operable. The licensee states that the leakage detection systems must have the capability to detect significant reactor coolant pressure boundary degradation as soon after occurrence, as practical, to minimize the potential for propagation to a gross failure. The RCS leakage detection instrumentation provides an early indication or warning signal to permit proper evaluation of all unidentified leakage. TS 3.4.15 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.16, “RCS Specific Activity,” limits RCS dose equivalent Iodine-131 (I-131) and dose equivalent xenon-133 (XE-133) specific activity. The limits on the specific activity of the reactor coolant ensures that the resulting offsite and control room doses meet the appropriate acceptance criteria following a steam line break or an SGTR accident. TS 3.4.16 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.4.17, “Steam Generator (SG) Tube Integrity,” requires that SG tube integrity be maintained and tubes satisfying the tube repair criteria be plugged. Maintaining SG tube integrity ensures that the tubes are capable of performing the intended reactor coolant pressure boundary safety function consistent with the licensing basis, including applicable regulatory requirements. The SGTR accident is the limiting DBA for SG tubes, and therefore, avoiding this accident is the basis for this specification. TS 3.4.17 does

not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

The NRC staff reviewed the TSs proposed for deletion in this section, as well as the associated bases, to ensure that they are no longer needed to satisfy the 10 CFR 50.36 criteria for inclusion in TSs. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 licenses for Diablo Canyon, Units 1 and 2, will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2). TS section 3.4 pertains to RCS, but once the fuel is permanently removed from the reactor core, no significant heat source exists in the core, which would require a coolant system to remove heat. Therefore, the NRC staff finds the proposed deletion of TS section 3.4 acceptable.

3.3.11 TS Section 3.5, “Emergency Core Cooling Systems (ECCS)”

TS section 3.5, in the Diablo Canyon, Units 1 and 2, TSs, contains requirements that provide for appropriate functional capability of ECCS equipment required for mitigation of DBAs or transients so as to protect the integrity of a fission product barrier. A description of each of the specifications the licensee has proposed for deletion is provided as follows:

- TS 3.5.1, “Accumulators,” establishes the minimum conditions required to ensure that the accumulators are available to accomplish their core cooling safety function following a LOCA. TS 3.5.1 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.5.2, “ECCS - Operating,” helps ensure that the acceptance criteria for the ECCS will be met following a LOCA. In addition, it limits the potential for a post-trip return to power following a main steam line break event and ensures that containment temperature limits are met. TS 3.5.2 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.5.3, “ECCS - Shutdown,” requires one ECCS train to be operable in MODE 4. One operable ECCS high head and low head train is acceptable without single failure consideration on the basis of the stable reactivity of the reactor and the limited core cooling requirements. TS 3.5.3 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.5.4, “Refueling Water Storage Tank (RWST),” ensures that an adequate supply of borated water is available to cool and depressurize the containment in the event of a DBA, to cool and cover the core in the event of a LOCA, to maintain the reactor subcritical following a DBA, and to ensure adequate level in the containment recirculation sump to support ECCS pump operation in the recirculation mode. TS 3.5.4 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.5.5, “Seal Injection Flow,” ensures that the seal injection flow resistance remains within limit. This in turn assures that flow through the reactor coolant pump (RCP) seal injection line during an accident is restricted. The seal injection flow is restricted by the injection line hydraulic flow resistance, which is adjusted through positioning of the

manual seal injection throttle valves. TS 3.5.5 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

The NRC staff reviewed the TSs proposed for deletion in this section, as well as the associated bases, to ensure that they are no longer needed to satisfy the 10 CFR 50.36 criteria for inclusion in TSs. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 licenses for Diablo Canyon, Units 1 and 2, will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2). TS Section 3.5 pertains to ECCS, but once the fuel is permanently removed from the reactor core, no system is necessary to cool the reactor core since no significant heat source exists. Therefore, the NRC staff finds that the proposed deletion of TS section 3.5 is acceptable.

3.3.12 TS Section 3.6, “Containment Systems”

TS section 3.6, in the Diablo Canyon, Units 1 and 2, TSs, contains requirements that assure the integrity of the containment systems to provide a barrier against uncontrolled release of fission products to the environment and shielding from the fission products that may be present in the containment during an accident. A description of each of the specifications the licensee has proposed for deletion is provided as follows:

- TS 3.6.1, “Containment,” requires the containment to be operable in MODES 1, 2, 3, and 4. TS 3.6.1 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.6.2, “Containment Air Locks,” ensures the structural integrity and leak tightness of the air locks to maintain the pressure boundary and mitigate DBAs that could cause a release of radioactive material to containment. TS 3.6.2 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.6.3, “Containment Isolation Valves,” requires each containment isolation valve to be operable In MODES 1, 2, 3, and 4, to minimize the loss of reactor coolant inventory, and establish the containment boundary during accidents. TS 3.6.3 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.6.4, “Containment Pressure,” maintains containment pressure within the containment design pressure limits in the event of a DBA. TS 3.6.4 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.6.5, “Containment Air Temperature,” ensures the temperature profile resulting from an accident will be maintained below the containment design temperature. TS 3.6.5 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.6.6, “Containment Spray and Cooling Systems,” provides containment atmosphere cooling to limit post-accident pressure and temperature in containment to less than the design values. TS 3.6.6 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.6.7, “Spray Additive System,” assists in reducing the iodine fission product inventory in the containment atmosphere resulting from a DBA LOCA. TS 3.6.7 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

The NRC staff reviewed the TSs proposed for deletion in this section, as well as the associated bases, to ensure that they are no longer needed to satisfy the 10 CFR 50.36 criteria for inclusion in TSs. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 licenses for Diablo Canyon, Units 1 and 2, will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2). The licensee states that these TS do not apply to the safe storage and handling of spent fuel in the SFPs. The licensee also states that all TSs in section 3.6 are related to assuring the appropriate functional capability of plant equipment associated with containment systems required for safe operation of the facility and accident mitigation only when the reactor is in MODES 1 through 4. The NRC staff finds that TS section 3.6 will not be required in a permanently shutdown and defueled condition and the deletion of section 3.6 in its entirety is acceptable.

3.3.13 TS Section 3.7, “Plant Systems”

3.3.13.1 TS 3.7.1, “Main Steam Safety Valves (MSSVs)”; TS 3.7.2, “Main Steam Isolation Valves (MSIVs)”; TS 3.7.3, “Main Feedwater Isolation Valves (MFIVs), Main Feedwater Regulating Valves (MFRVs), MFRV Bypass Valves, and Main Feedwater Pump (MFWP) Turbine Stop Valves”

TS 3.7.1 requires five MSSVs per SG to be operable in MODES 1, 2, and 3. TS 3.7.2 requires four MSIVs to be operable in MODE 1 and MODES 2 and 3 except when all MSIVs are closed and deactivated. TS 3.7.3 requires four MFIVs, four MFRVs, four MFRV bypass valves and four MFWP turbine stop valves to be operable in MODES 1, 2, and 3 (except under specific configurations as described in the TS). The licensee proposes the deletion of TSs 3.7.1, 3.7.2, and 3.7.3. The licensee states that since PG&E will no longer be authorized to operate the Diablo Canyon, Units 1 and 2, reactors in MODES 1 through 3 or emplace or retain fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2), the above listed TS will no longer be applicable. Therefore, the NRC staff finds the deletion of TS 3.7.1, 3.7.2, and 3.7.3 acceptable.

3.3.13.2 TS 3.7.4, “10% Atmospheric Dump Valves (ADVs)”; TS 3.7.5, “Auxiliary Feedwater (AFW) System”; TS 3.7.6, “Condensate Storage Tank (CST)”; TS 3.7.7, “Vital Component Cooling Water (CCW) System”; TS 3.7.8, “Auxiliary Saltwater (ASW) System”; and TS 3.7.9, “Ultimate Heat Sink (UHS)”

TS 3.7.4 requires four ADV lines to be operable in MODES 1, 2, and 3 and in MODE 4 when the SG is relied upon for heat removal. TS 3.7.5 requires three AFW trains to be operable in MODES 1, 2 and 3 and in MODE 4 when the SG is relied upon for heat removal. TS 3.7.6 requires the CST to be operable in MODES 1, 2, and 3 and in MODE 4 when the SG is relied upon for heat removal. TS 3.7.7 requires two vital CCW loops to be operable in MODES 1, 2, 3, and 4. TS 3.7.8 requires two ASW trains to be operable in MODES 1, 2, 3, and 4. TS 3.7.9 requires the UHS to be operable in MODES 1, 2, 3, and 4. The licensee proposes the deletion of TSs 3.7.4, 3.7.5, 3.7.6, 3.7.7, 3.7.8, and 3.7.9. The licensee states that since PG&E will no longer be authorized to operate the Diablo Canyon, Units 1 and 2, reactors in MODES 1 through 4 or emplace or retain fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2), the

above listed TSs will no longer be applicable. Therefore, the NRC staff finds the deletion of TSs 3.7.4, 3.7.5, 3.7.6, 3.7.7, 3.7.8, and 3.7.9 acceptable.

3.3.13.3 TS 3.7.10, “Control Room Ventilation System (CRVS)”

The licensee proposes the deletion of TS 3.7.10, which requires two CRVS trains to be operable in MODES 1, 2, 3, 4, 5, and 6, and during movement of recently irradiated fuel assemblies (i.e., fuel that has occupied part of a critical reactor core within the previous 100 hours). The licensee states that since PG&E will no longer be authorized to operate the Diablo Canyon, Unit 1 and Unit 2, reactors or emplace or retain fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2), requiring two CRVS trains to be operable in MODES 1 through 6 and during movement of recently irradiated fuel (i.e., fuel that has occupied part of a critical reactor core within the previous 100 hours), will no longer be applicable. Additionally, the revised FHA calculation does not credit operability of the CRVS trains and PG&E will implement the revised FHA and the PDTSs 45 days after both Diablo Canyon units have shutdown. Therefore, the NRC staff finds the deletion of TS 3.7.10 acceptable.

3.3.13.4 TS 3.7.11, “Control Room Emergency Air Temperature Control System (CREATCS)”

The licensee states that this specification is not used in the current TSs and therefore is proposed for deletion. The NRC staff finds the administrative deletion of 3.7.11 acceptable.

3.3.13.5 TS 3.7.12, “Auxiliary Building Ventilation System (ABVS)”

TS 3.7.12 requires two trains of the ABVS to be operable in MODES 1, 2, 3, and 4 and is being proposed for deletion. The licensee states that since PG&E will no longer be authorized to operate the Diablo Canyon, Units 1 and 2, reactors in MODES 1 through 4 or emplace or retain fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2), TS 3.7.12 will no longer be applicable. Therefore, the NRC staff finds the deletion of TS 3.7.12 acceptable.

3.3.13.6 TS 3.7.13, “Fuel Handling Building Ventilation System (FHBVS)”

The licensee proposes the deletion of TS 3.7.13, which requires two FHBVS trains to be operable during movement of recently irradiated fuel assemblies in the FHB. The licensee states that since PG&E will no longer be authorized to operate the Diablo Canyon, Units 1 and 2, reactors or emplace or retain fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2), requiring two FHBVS trains to be operable during movement of recently irradiated fuel (i.e., fuel that has occupied part of a critical reactor core within the previous 100 hours), will no longer be applicable. Additionally, the revised FHA calculation does not credit operability of the FHBVS trains, and PG&E will implement the revised FHA and the PDTSs 45 days after both Diablo Canyon units have shutdown. Therefore, the NRC staff finds the deletion of TS 3.7.13 acceptable.

3.3.13.7 TS 3.7.14, “Penetration Room Exhaust Air Cleanup System (PREACS)”

The licensee states that TS 3.7.14 is not used in the current TSs, and therefore, is proposed for deletion. The NRC staff finds the administrative deletion of TS 3.7.14 acceptable.

3.3.13.8 TS 3.7.15, “Spent Fuel Pool Water Level”

The licensee proposes to maintain TS 3.7.15 in the PDTSs with modifications. The licensee states that TS 3.7.15 ensures the minimum water level in the SFP meets the assumptions of iodine decontamination factors following an FHA. The specified water level shields and minimizes the general area dose when the storage racks are filled to their maximum capacity. The water also provides shielding during the movement of spent fuel.

The licensee proposes to delete the Note in Required Action A.1, which states “LCO 3.0.3 is not applicable,” to conform with the deletion of LCO 3.0.3 via this LAR.

Additionally, the licensee proposes a revision to SR 3.7.15.1 to remove the reference to the Surveillance Frequency Control Program (SFCP) since TS 5.5.18, “Surveillance Frequency Control Program,” is proposed for deletion via this LAR. Also, the surveillance frequency is revised to reflect 7 days, which is consistent with the current frequency requirements included in the SFCP.

The NRC staff finds the retention, with proposed modifications, of TS 3.7.15 acceptable.

3.3.13.9 TS 3.7.16, “Spent Fuel Pool Boron Concentration”

The licensee proposes to maintain TS 3.7.16 in the PDTSs with modifications. The licensee states that TS 3.7.16 ensures that the concentration of dissolved boron in the fuel storage pool preserves the assumptions used in the analyses of the potential criticality accident scenarios. The licensee also states that the specified boron concentration of 2,000 ppm ensures that the SFP k_{eff} will remain ≤ 0.95 at a 95 percent probability, 95 percent confidence level, for a postulated reactivity insertion accident or boron dilution event.

The licensee proposes to delete the Note in Required Action A.1, which states “LCO 3.0.3 is not applicable,” to conform with the deletion of LCO 3.0.3 via this LAR.

Additionally, the licensee proposes a revision to SR 3.7.16.1 to remove the reference to the SFCP since TS 5.5.18 is proposed for deletion via this LAR. Also, the surveillance frequency is revised to reflect 7 days, which is consistent with the current frequency requirements included in the SFCP.

The NRC staff finds the retention, with proposed modifications, of TS 3.7.16 acceptable.

3.3.13.10 TS 3.7.17, “Spent Fuel Assembly Storage”

The licensee proposes to maintain TS 3.7.17 in the PDTSs with modifications. The licensee states that TS 3.7.17 places restrictions on the placement of fuel assemblies within the SFP to ensure the k_{eff} of the spent fuel storage pool will always remain ≤ 0.95 at a 95 percent, 95 percent confidence level, for a postulated reactivity insertion accident or a boron dilution event.

The licensee states that TS 3.7.17 is applicable when any fuel assembly is stored in the SFP and proposes to retain the TS in the PDTSs (including Figures 3.7.17-1, 3.7.17-2, and 3.7.17-3) with the following changes:

- Delete the Note in Required Action A.1, which states, “LCO 3.0.3 is not applicable,” to conform with the deletion of LCO 3.0.3 via this LAR.

- TSs 3.7.17.b, 3.7.17.c, and the associated figure 3.7.17-4 are being proposed for deletion. TSs 3.7.17.b, 3.7.17.c, and the associated Figure 3.7.17-4 were added to the Diablo Canyon, Units 1 and 2, TSs via License Amendment Nos. 183 and 185 approved by the NRC on November 21, 2005 (ML052970270). These amendments allowed the installation and use of a temporary cask pit spent fuel storage rack for Units 1 and 2 during Cycles 14-16. This TS LCO is historical in nature and will not be applicable during decommissioning. Therefore, TSs 3.7.17.b, 3.7.17.c, and the associated figure 3.7.17-4 are proposed for deletion.

The NRC staff finds the retention, with proposed modifications, of TS 3.7.17 acceptable.

3.3.13.11 TS 3.7.18, “Secondary Specific Activity”

The licensee proposes to delete TS 3.7.18, which requires the specific activity of the secondary coolant to be ≤ 0.10 microcuries Dose Equivalent I-131 in MODES 1, 2, 3, and 4. The licensee states that since PG&E will no longer be authorized to operate the Diablo Canyon, Units 1 and 2, reactors or emplace or retain fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2), limits on specific activity of the secondary coolant in MODES 1 through 4 will no longer be applicable. Therefore, the NRC staff finds the deletion of TS 3.7.18 acceptable.

3.3.14 TS Section 3.8, “Electrical Power Systems”

TS section 3.8, in the Diablo Canyon, Units 1 and 2, TSs, contains operability requirements for alternating current (AC) and direct current (DC) electrical systems. These requirements have the purpose of ensuring the availability of necessary power to ESF systems so that the fuel, RCS, and containment design limits are not exceeded. A description of each of the specifications the licensee has proposed for deletion is provided as follows:

- TS 3.8.1, “AC Sources - Operating,” identifies the AC electrical power sources that are required to be operable in MODES 1, 2, 3, and 4. TS 3.8.1 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.8.2, “AC Sources - Shutdown,” identifies the AC electrical power sources that are required to be operable in MODES 5 and 6 and during movement of recently irradiated fuel assemblies (i.e., fuel that has occupied part of a critical reactor core within the previous 100 hours). TS 3.8.2 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.8.3, “Diesel Fuel Oil, Lube Oil, Starting Air, and Turbocharger Air Assist,” ensures specific limits are met for the stored diesel fuel oil, lube oil, starting air, and turbocharger air assist subsystems for each required emergency (DG). The requirements are applicable when the associated emergency DG is required to be operable. TS 3.8.3

does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.8.4, “DC Sources - Operating,” requires three Class 1E DC electrical power subsystems to be operable in MODES 1, 2, 3, and 4. TS 3.8.4 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.8.5, “DC Sources - Shutdown,” requires the Class 1E DC electrical power subsystems to be operable to support the DC electrical power distribution subsystems and is applicable in MODES 5 and 6 and during movement of recently irradiated fuel assemblies (i.e., fuel that has occupied part of a critical reactor core within the previous 100 hours). TS 3.8.5 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.8.6, “Battery Parameters,” requires the parameters for the three Class 1E batteries to be within limits. The requirement is applicable when the associated DC electrical power subsystems are required to be operable. TS 3.8.6 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.8.7, “Inverters-Operating,” requires four Class 1E vital 120 volts (V) uninterruptible power supply inverters to be operable in MODES 1, 2, 3, and 4. TS 3.8.7 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.8.8, “Inverters-Shutdown,” requires the Class 1E uninterruptible power supply inverters to be operable to support onsite Class 1E 120 volt AC (VAC) vital bus electrical power distribution subsystems. The requirement is applicable in MODES 5 and 6 and during movement of recently irradiated fuel assemblies (i.e., fuel that has occupied part of a critical reactor core within the previous 100 hours). TS 3.8.8 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.8.9, “Distribution Systems-Operating,” requires certain Class 1E AC, DC, and 120 VAC vital bus electrical power distribution subsystems to be operable in MODES 1, 2, 3, and 4. TS 3.8.9 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.8.10, “Distribution Systems–Shutdown,” requires the necessary portion of the Class 1E AC, DC, and 120 VAC vital bus electrical power distribution subsystems to be operable to support equipment that is required to be operable. The requirement is applicable in MODE 5 and 6 and during movement of recently irradiated fuel assemblies (i.e., fuel that has occupied part of a critical reactor core within the previous 100 hours). TS 3.8.10 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

The NRC staff reviewed the TSs proposed for deletion in this section, as well as the associated bases, to ensure that they are no longer needed to satisfy the 10 CFR 50.36 criteria for inclusion in TSs. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 licenses for Diablo Canyon, Units 1 and 2, will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2). TS section 3.8 pertains to the electrical power systems. With the Diablo Canyon, Units 1 and 2, reactors not authorized to operate, emplace, or retain fuel in the reactor

vessels, the only DBA remaining is the FHA in the FHB. The FHA does not rely on electrical power distribution systems for accident mitigation. The NRC staff determined that maintaining the AC and DC electrical power sources (and support systems) and associated distribution systems operable will no longer be applicable because these systems will no longer be required during facility operation and shutdown to mitigate postulated DBAs. Therefore, the NRC staff finds the proposed deletion of TS section 3.8 acceptable.

3.3.15 TS Section 3.9, “Refueling Operations”

TS section 3.9, in the Diablo Canyon, Units 1 and 2, TSs, contains requirements that provide for appropriate functional capability of parameters and equipment that are required for mitigation of DBAs during refueling operations (moving irradiated fuel to or from the reactor core). A description of each of the specifications the licensee has proposed for deletion is provided as follows:

- TS 3.9.1, “Boron Concentration,” requires the boron concentration of all filled portions of the RCS, refueling canal, and the refueling cavity that have direct access to the reactor vessel, to be maintained within the limit specified in the COLR. Refueling boron concentration is the soluble boron concentration in the coolant in each of these volumes having direct access to the reactor core during refueling. TS 3.9.1 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.9.3, “Nuclear Instrumentation,” requires two source range neutron flux monitors to be operable in MODE 6. The source range neutron flux monitors are used during refueling operations to monitor the core reactivity condition. These detectors are located external to the reactor vessel and detect neutrons leaking from the core. TS 3.9.3 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.9.4, “Containment Penetrations,” requires the containment penetrations to be in a specific status and is applicable during core alterations and during movement of irradiated fuel assemblies within containment. The licensee states that since PG&E will no longer be authorized to operate the Diablo Canyon, Units 1 and 2, reactors, or emplace or retain fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2), the FHA inside containment is no longer possible, and this specification for containment penetrations will no longer be applicable; therefore, the TS is proposed to be deleted.

- TS 3.9.5, “Residual Heat Removal (RHR) and Coolant Circulation – High Water Level,” requires one RHR loop to be operable and in operation in MODE 6 with the water level greater than or equal to 23 feet above the top of the reactor vessel flange. The purpose of the RHR system in MODE 6 is to remove decay heat and sensible heat from the RCS to provide mixing of borated coolant and to prevent boron stratification. TS 3.9.5 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.9.6, “Residual Heat Removal (RHR) and Coolant Circulation – Low Water Level,” requires two RHR loops to be operable and one RHR loop to be in operation in MODE 6 with the water level less than 23 feet above the top of the reactor vessel flange. The purpose of the RHR system in MODE 6 is to remove decay heat and sensible heat from the RCS, to provide mixing of borated coolant, and to prevent boron stratification.

TS 3.9.6 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

- TS 3.9.7, “Refueling Cavity Water Level,” ensures the refueling cavity water level is ≥ 23 feet above the top of the reactor vessel flange during movement of irradiated fuel assemblies within containment. The licensee states that since PG&E will no longer be authorized to operate the Diablo Canyon, Units 1 and 2, reactors or emplace or retain fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2), maintaining water level in the refueling cavity during movement of irradiated fuel assemblies within containment, will no longer be applicable; therefore, the TS is proposed to be deleted.

The NRC staff reviewed the TSs proposed for deletion in this section, as well as the associated bases, to ensure that they are no longer needed to satisfy the 10 CFR 50.36 criteria for inclusion in TSs. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the 10 CFR Part 50 licenses for Diablo Canyon, Units 1 and 2, will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2). TS section 3.9 pertains to refueling operations, but once the fuel is permanently removed from the reactor core, the reactor core will not be refueled again. Therefore, the NRC staff finds the proposed deletion of TS section 3.9 acceptable.

3.3.16 TS Section 4.0, “Design Features”

TS section 4.0, in the Diablo Canyon, Units 1 and 2, TSs, provides information and design requirements associated with plant systems. The licensee proposes to delete TS 4.2, “Reactor Core.” The licensee also proposes to modify TS 4.3, “Fuel Storage.” A description and evaluation of each of the specifications the licensee has proposed for deletion or modification is provided as follows:

- TS 4.2, “Reactor Core”

  TS 4.2 contains TS 4.2.1, “Fuel Assemblies,” which specifies the number and material of the fuel assemblies in the reactor core, and TS 4.2.2, “Control Rod Assemblies,” which specifies the number and material for the control rod assemblies in the reactor core. TS 4.2 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted. The NRC staff reviewed the proposal to delete the reactor core fuel and control rod assemblies design features description from the TSs. After Diablo Canyon, Units 1 and 2, are permanently shut down and defueled, 10 CFR 50.82(a)(2) prohibits the licensee from operating the reactors or emplacing or retaining fuel in the reactor vessels; therefore, the design features related to the reactor core fuel assemblies and control rods will no longer be relevant at Diablo Canyon, Units 1 and 2. Therefore, the NRC staff finds the proposed deletion of TS 4.2 acceptable.

- TS 4.3, “Fuel Storage”

  - TS 4.3.1.1. The licensee proposes to replace “FSAR” with “Final Safety Analysis Report (FSAR)” in TS section 4.3.1.1.b. The NRC staff finds the editorial change to TS 4.3.1.1 acceptable.

  - TS 4.3.1.2. This TS is for the new fuel storage racks. The licensee states that once the certifications required by 10 CFR 50.82(a)(1) are docketed, for Diablo

Canyon, Units 1 and 2, the 10 CFR Part 50 licenses will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2). Accordingly, PG&E will not be receiving or storing new fuel in the permanently defueled condition. Therefore, TS 4.3.1.2 is not applicable in a permanently defueled condition and is proposed for deletion. The NRC staff finds the deletion of TS 4.3.1.2 acceptable.

- TS 4.3.1.3. The licensee states that this TS is historical and is not applicable in the permanently defueled condition. Therefore, TS 4.3.1.3 is proposed for deletion. The NRC staff finds the deletion of this historical TS acceptable because it applied only to the cask pit storage rack for past operating cycles 14-16.

- TS 4.3.3. The licensee states the proposed revision removes the historical discussion related to cycles 14-16 when PG&E was approved to use the cask pit storage rack to temporarily expand the storage capacity for the SFP. This discussion is historical and is not applicable in the permanently defueled condition. The NRC staff finds the deletion of the historical discussion in TS 4.3.3 acceptable.

3.3.17 TS Section 5.1, “Responsibility”

3.3.17.1 TS Section 5.1.1

Currently, TS 5.1.1 reads:

> The plant manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.
>
> The plant manager or his designee shall approve, prior to implementation, each proposed test, experiment, or modification to systems or equipment that affect nuclear safety.

The licensee proposes TS 5.1.1 to read:

> The plant manager shall be responsible for overall facility operation and shall delegate in writing the succession to this responsibility when absent.
>
> The plant manager or designee shall approve, prior to implementation, each proposed test, experiment, or modification to systems or equipment that affect the safe handling and storage of nuclear fuel.

TS 5.1.1 describes the responsibility of the plant manager. The licensee proposes to make the following changes to Diablo Canyon TS 5.1.1: the term “unit” will be changed to “facility,” and the term “nuclear safety” is replaced with “the safe handling and storage of nuclear fuel.” These changes will better reflect a permanently shutdown and defueled condition. The licensee also proposes to delete the term “his” in order to reflect that the position is gender neutral.

The NRC staff finds the proposed changes acceptable because once the certifications required by 10 CFR 50.82(a)(1)(i and ii) are docketed, for Diablo Canyon, Units 1 and 2, the 10 CFR Part 50 licenses will no longer authorize operation of the reactors or emplacement or

retention of fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2). Therefore, the administrative controls that do not apply in a defueled condition are being proposed for deletion or revised to reflect a permanently defueled condition. Additionally, the NRC staff finds the proposed changes acceptable because the overall management and staff responsibilities and the description of the facility are unchanged, and the replacement terms will reflect Diablo Canyon as a facility that is permanently shut down and in a defueled condition.

3.3.17.2 TS Section 5.1.2

Currently, TS 5.1.2 reads:

> The Shift Foreman (SFM) shall be responsible for the control room command function. During any absence of the SFM from the control room while the unit is in MODE 1, 2, 3, or 4, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the SFM from the control room while the unit is in MODE 5 or 6, an individual with an active SRO license or Reactor Operator license shall be designated to assume the control room command function.

The licensee proposes TS 5.1.2 to read:

> The Shift Supervisor shall be responsible for the shift command function.

TS 5.1.2 discusses the individual who has the command function. The licensee proposes to eliminate the description of the plant modes because modes are applicable to an operating plant, and once the certifications required by 10 CFR 50.82(a)(1)(i and ii) are docketed, for Diablo Canyon, Units 1 and 2, the 10 CFR Part 50 licenses will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels, pursuant to 10 CFR 50.82(a)(2). The licensee also proposes to replace the SFM with a shift supervisor, as the individual responsible for the shift command function. This is because delegation of command is no longer applicable once Diablo Canyon, Units 1 and 2, are permanently defueled.

The NRC staff finds the proposed changes to TS 5.1.2 acceptable because it designates the shift supervisor as the responsible person for the shift command function, and because the delegation of command is unnecessary once Diablo Canyon, Units 1 and 2, are in a permanently defueled condition with fuel in the SFP. Also, any event involving loss of SFP cooling would evolve slowly enough that no immediate response would be required to protect the health and safety of the public. Furthermore, the NRC staff finds the replacement terms proposed by PG&E acceptable because they are administrative in nature and will reflect Diablo Canyon, Units 1 and 2, as a facility that is permanently shut down and in a defueled condition.

3.3.18 TS Section 5.2, “Organization”

3.3.18.1 TS Section 5.2.1, “Onsite and Offsite Organizations”

Currently, TS 5.2.1 states:

> Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting safety of the nuclear power plant.

a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all operating organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements, including the plant-specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications, shall be documented in the FSAR Update;

b. The plant manager shall be responsible for overall safe operation of the plant and shall have control over those onsite activities necessary for safe operation and maintenance of the plant;

c. A specified corporate officer shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety; and

d. The individuals who train the operating staff carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their independence from operating pressures.

The licensee proposes TS 5.2.1 to state:

Onsite and offsite organizations shall be established for facility staff and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safe storage and handling of spent nuclear fuel. The primary role of all nuclear workers is to protect the health and safety of the public.

a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all facility organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements, including the plant-specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications, shall be documented in the FSAR Update;

b. The plant manager shall be responsible for overall safe operation of the facility and shall have control over those onsite activities necessary for safe storage and handling of the nuclear fuel;

c. A specified corporate officer shall have corporate responsibility for the safe storage and handling of nuclear fuel and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the facility to ensure safe storage and handling of nuclear fuel; and

d. The individuals who train the CERTIFIED FUEL HANDLERs, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their ability to perform their assigned functions.

TS 5.2.1 discusses the onsite and offsite organization, the cognizant personnel, and their responsibilities. The licensee proposes to replace the terms that are applicable to an operating plant (i.e., unit operation, plant, nuclear safety, operating organization, and operating staff) with terms that reflects Diablo Canyon, Units 1 and 2, as permanently shutdown and in a defueled condition (i.e., facility, facility staff, facility organization, the safe storage and handling of SNF, and certified fuel handler (CFH)).

The NRC staff finds the proposed changes acceptable because the overall management and staff responsibilities and the description of the facility are unchanged. Additionally, the replacement terms will reflect Diablo Canyon, Units 1 and 2, as a facility that is permanently shut down and in a defueled condition.

3.3.18.2 TS Section 5.2.2, “Unit Staff”

Currently, TS 5.2.2 reads:

TS 5.2.2 Unit Staff

The unit staff organization shall include the following:

a. A non-licensed operator shall be assigned to each reactor containing fuel with a total of three non-licensed operators required for both units.

b. Shift crew composition may be one less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.f for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.

c. A health physics technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provide immediate action is taken to fill the required position.

d. Not used.

e. The operations manager shall either hold a senior reactor operator license, have at one time held a senior reactor operator license for a pressurized water reactor, or be certified to a senior reactor operator equivalent level of knowledge. If the operations manager does not hold a senior reactor operator license, the person assigned to the Operations middle manager position shall hold a senior reactor operator license.

f. An individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This position shall be manned in MODES 1, 2, 3, and 4 unless an individual with a SRO license meets the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.

The licensee proposes TS 5.2.2 to read:

TS 5.2.2 Facility Staff

The facility staff organization shall include the following:

a. Each on duty shift shall be composed of at least one Shift Supervisor shared between Units 1 and 2, and one NON-CERTIFIED OPERATOR per unit. The NON-CERTIFIED OPERATOR position may be filled by a CERTIFIED FUEL HANDLER.

b. Except for the Shift Supervisor, shift crew composition may be less than the minimum requirement of 5.2.2.a for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements and all of the following conditions are met:

(1) No fuel movements are in progress;
(2) No movement of loads over fuel are in progress; and
(3) No unmanned shift positions during shift turnover shall be permitted while the shift crew is less than the minimum.

c. A health physics technician shall be on site during fuel handling operations and during movement of heavy loads over the fuel storage racks. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.

d. Not used.

e. The Shift Supervisor shall be a CERTIFIED FUEL HANDLER.

f. At least one person qualified to stand watch in the control room (NON-CERTIFIED OPERATOR or CERTIFIED FUEL HANDLER) shall be present in the control room when nuclear fuel is stored in a spent fuel pool.

g. Oversight of fuel handling operations shall be provided by a CERTIFIED FUEL HANDLER.

TS section 5.2.2 discusses the Diablo Canyon staff organization. The subsections discuss the cognizant personnel, their duties, and the minimum number of staff.

The licensee proposes to make the following administrative changes that reflects Diablo Canyon, Units 1 and 2, as permanently shutdown and in a defueled condition: change the TS section title from “unit” staff organization to “facility” staff organization; replace operators with CFHs and non-certified operators; and change duty descriptions so that they are more relevant to the safe storage and handling of SNF. Once the certifications required by 10 CFR 50.82(a)(1)(i) and (ii) are docketed, the staffing requirements in 10 CFR 50.54(m) will no longer be applicable. The licensee proposes a minimum crew composition that is appropriate for the safe management of SNF at a permanently defueled facility and similar to crew compositions that have previously been approved by the NRC.

The NRC staff finds the proposed changes acceptable because the licensee has proposed acceptable numbers and types of staff for the safe management of SNF at a permanently defueled facility, and the terminology and duty description changes proposed by PG&E are acceptable because they are administrative in nature and will reflect Diablo Canyon as a facility that is permanently shut down and in a defueled condition.

3.3.19 TS Section 5.3 – Unit Staff Qualifications

Currently, TS 5.3 reads:

> TS 5.3 Unit Staff Qualifications
>
> 5.3.1 Each member of the plant staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the updated FSAR, Chapter 17, Quality Assurance.

The licensee proposes TS 5.3 to read:

> TS 5.3 Facility Staff Qualifications
>
> 5.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Quality Assurance Program.
>
> 5.3.2 A training and retraining program for CERTIFIED FUEL HANDLERs shall be maintained.

TS 5.3 discusses the qualifications for the Diablo Canyon staff. The licensee proposes to make the following administrative changes that reflects Diablo Canyon as permanently shutdown and in a defueled condition: TS section title from “unit” staff qualifications to “facility” staff qualifications; and “plant” staff to “facility” staff.

The licensee also proposes to change TS 5.3.1 by replacing “updated FSAR, Chapter 17, Quality Assurance” with “Quality Assurance Program” and to add new TS 5.3.2, which states that “A training and retraining program for CERTIFIED FUEL HANDLERs shall be maintained.” By letter dated September 11, 2020 (ML20218A276), the NRC staff approved Amendment Nos. 237 and 239 for Diablo Canyon, Units 1 and 2, respectively, to relocate Diablo Canyon TS section 5.3, “Unit Staff Qualifications,” to the Diablo Canyon UFSAR. However, Diablo Canyon TS 5.3 was not moved to the Quality Assurance Program Description (QAPD) in its entirety, consistent with Administrative Letter (AL) 95-06, dated December 12, 1995 (ML03110271). By letter dated May 13, 2021, the licensee provided responses to the NRC

staff's requests for additional information (RAIs). In response to RAI-2, the licensee stated it is planning to remove the Quality Assurance Program (QAP) from the Diablo Canyon UFSAR to establish a separate program document prior to the transition to decommissioning. The UFSAR Chapter 17, "Quality Assurance" (ML21305A106), will continue to provide high level guidance regarding Quality Assurance upon completing the transition. When the SNF has been transferred to the ISFSI, the licensee stated it plans on submitting an LAR to propose the removal of the administrative controls from the TS, consistent with AL 95-06. Moreover, the licensee responded to RAI-3 to clarify why the requirements of proposed TS 5.3.2 were not located in UFSAR Chapter 17. The licensee stated that the staff qualification requirements will continue to reside within Chapter 17 until implementation of the PDTSs.

As part of the implementation, those qualification requirements would transition to the QAP. Diablo Canyon UFSAR Chapter 17 describes, in part, the personnel that are required to meet and exceed the minimum qualification specified in American National Standards Institute/American Nuclear Society (ANSI/ANS) 3.1, 1978, "Selection, Qualification and Training of Personnel for Nuclear Power Plants," for comparable positions, with exceptions for certain positions (i.e., radiation protection manager, operations manager, reactor operators, and SROs). These positions and/or duties will no longer be applicable once PG&E submits the certifications required by 10 CFR 50.82(a)(1). As discussed in sections 3.3.17.2 and 3.3.18.2 of this SE, the Shift Supervisor shall be responsible for the shift command function and the Shift Supervisor must be a CFH. Furthermore, the CFHs will be required to meet or exceed the minimum applicable qualification currently required for licensed SROs and reactor operators. The licensee further discusses the minimum qualification requirements for CFHs in response to RAI-4. The licensee stated that the training program will implement the requirements of 10 CFR 50.120, "Training and qualification of nuclear power plant personnel," such that a Systems Approach to Training (SAT) will be applied to the training and qualification for a CFH. Moreover, the licensee stated that it is tracking industry activities related to the proposed rulemaking titled, "Regulatory Improvements for Production and Utilization Facilities Transitioning to Decommissioning," and PG&E will submit a CFH Training and Retraining Program for NRC approval, if required. Since making this statement, by letter dated February 23, 2022 (ML22054A318), the licensee submitted a CFH Training and Retraining Program for NRC approval.

The NRC staff asked for clarification in RAI-5 on whether the licensee was planning to submit a request for staff evaluation of the QAP that would be implemented during the decommissioning phase of Diablo Canyon, Units 1 and 2. The NRC staff asked this question because the requirements in 10 CFR 50.54(a)(4) would be applicable to the QAPD developed for the decommissioning phase since the existing QAPD in Diablo Canyon UFSAR Chapter 17 is not the same as any other license facility that has undergone decommissioning. In response, the licensee stated that it planned minimal changes to the QAP to support the transition to decommissioning. All changes to the QAP will be evaluated against the previously accepted QAP and reductions in commitments will be submitted for NRC review and approval in accordance with the requirements of 10 CFR 50.54(a). However, the licensee further stated, that "at this time, PG&E does not believe the changes will require NRC review and approval prior to implementation."

Based on the above, the NRC staff finds the proposed changes acceptable because the CFH will be trained in accordance with 10 CFR 50.120. An SAT for the CFH provides confidence that the CFH can adequately perform expected duties. Furthermore, PG&E will maintain the minimum staff qualifications in the QAP regardless of where the program is located (i.e., UFSAR or the separate program document that PG&E plans to establish prior to the transition to

decommissioning). Finally, the NRC staff finds the revised terminology proposed by the licensee acceptable because the changes are administrative in nature and will reflect Diablo Canyon as a facility that is permanently shut down and in a defueled condition.

3.3.20 TS Section 5.4, “Procedures”

Currently, TS 5.4.1 reads:

> Written procedures shall be established, implemented, and maintained covering the following activities:
>
> a. The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978;
>
> b. The emergency operating procedures required to implement the applicable requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33 and responses to the subject NUREGs;

The licensee proposes TS 5.4.1 to read:

> Written procedures shall be established, implemented, and maintained covering the following activities:
>
> a. The procedures applicable to the safe storage of spent nuclear fuel, recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978;
>
> b. Not Used;

The licensee proposes no changes to TS 5.4.1.c, TS 5.4.1.d, or TS 5.4.1.e.

TS 5.4 provides a description and the requirements regarding administration of written procedures. The licensee proposes to revise the applicability for this TS to procedures applicable to the safe storage of SNF recommended in appendix A of RG 1.33, Revision 2, “Quality Assurance Program Requirements (Operation).” Specifically, procedures governing fuel handling operations will provide the necessary guidance to ensure the safe handling of spent fuel in the SFP and the eventual transfer from the SFP to dry fuel storage casks. The procedures governing the responses to FHAs, personnel injuries, SFP events, and external events will provide the necessary guidance to mitigate the consequences of such events. The licensee proposes to delete TS section 5.4.1.b, which requires emergency operating procedures that “implement the applicable requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33 and responses to the subject NUREGs” because Generic Letter 82-33 was only addressed to operating reactors, applicants for operating licenses, and holders of construction permits and is not applicable to a plant in a permanently defueled condition.

The NRC staff finds the proposed changes acceptable because the relevant procedures, drawings and instructions will continue to be controlled per 10 CFR Part 50, Appendix B, “Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants,” Criterion VI, “Document Control,” and the activities involving security and emergency and

preparedness will continue to be controlled by procedure. Additionally, the revisions will reflect Diablo Canyon as a facility that is permanently shut down and in a defueled condition.

3.3.21 TS Section 5.5, “Programs and Manuals”

TS section 5.5, in the Diablo Canyon, Units 1 and 2, TSs, provides information and requirements associated with plant programs and manuals. The licensee proposes to revise TS 5.5.4 and 5.5.14 and delete TS 5.5.2, 5.5.5, 5.5.7, 5.5.8, 5.5.9, 5.5.10, 5.5.11, 5.5.13, 5.5.15, 5.5.16, 5.5.17, 5.5.18, and 5.5.19. A description and evaluation of each of the specifications the licensee has proposed for deletion or modification is provided as follows:

- TS 5.5.2, “Primary Coolant Sources Outside Containment,” is for a program that was established to minimize leakage from portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident. The licensee proposes to delete TS 5.5.2 in its entirety. The NRC staff reviewed the licensee’s proposal. Once the plant is permanently shut down and defueled, there will no longer be any transient or accident conditions associated with primary coolant sources, and therefore TS 5.5.2 is no longer applicable. Therefore, the NRC staff finds this deletion acceptable.

- TS 5.5.4, “Radioactive Effluent Control Program,” is for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as is reasonably achievable. The licensee proposes to revise TS 5.5.4 by replacing “unit” with “facility.” The NRC staff reviewed the licensee’s proposal and finds that the revision to replace “unit” with “facility” more accurately reflects the permanently shutdown and defueled condition and is therefore acceptable.

- TS 5.5.5, “Component Cyclic or Transient Limit,” is for a program that was established to provide controls to track the cyclic and transient occurrences to ensure that the reactor vessel is maintained within design limits. The licensee proposes to delete TS 5.5.5 in its entirety. The NRC staff reviewed the licensee’s proposal. Once the certifications required by 10 CFR 50.82(a)(1) are docketed for Diablo Canyon, Units 1 and 2, the licenses will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels. The components monitored will no longer be subjected to cycles or transients after permanent shutdown, and therefore TS 5.5.5 is no longer applicable. Therefore, the NRC staff finds the deletion acceptable.

- TS 5.5.7, “Reactor Coolant Pump Flywheel Inspection Program,” was established for the inspections of each RCP flywheel. The licensee proposes to delete TS 5.5.7 in its entirety. The NRC staff reviewed the licensee’s proposal. Once the certifications required by 10 CFR 50.82(a)(1) are docketed for Diablo Canyon, Units 1 and 2, the licenses will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels. The RCPs pertain to reactor support systems only and do not apply in a permanently defueled condition, and therefore TS 5.5.7 is no longer applicable. Therefore, the NRC staff finds this deletion acceptable.

- TS 5.5.8, “Inservice Testing Program,” applies to American Society of Mechanical Engineers Code Class 1, 2, and 3 components. These Code Class components are used to mitigate the consequences of accidents. The licensee proposes to delete TS 5.5.8 in its entirety. The NRC staff reviewed the licensee’s proposal. Once the

certifications required by 10 CFR 50.82(a)(1) are docketed, for Diablo Canyon, Units 1 and 2, the licenses will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels. The only remaining accident in a permanently defueled condition does not credit any Code Class 1, 2, or 3 components, and therefore TS 5.5.8 is no longer applicable. Therefore, the NRC staff finds this deletion acceptable.

- TS 5.5.9, "Steam Generator (SG) Tube Inspection Program," was established to ensure that SG tube integrity is maintained. The licensee proposes to delete TS 5.5.9 in its entirety. The NRC staff reviewed the licensee's proposal. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, for Diablo Canyon, Units 1 and 2, the licenses will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels. The SGs pertain only to reactor support systems that are not used in a permanently defueled condition, and therefore TS 5.5.9 is no longer applicable. Therefore, the NRC staff finds this deletion acceptable.

- TS 5.5.10, "Secondary Water Chemistry Program," was established to provide controls for monitoring secondary water chemistry to inhibit SG tube degradation. The licensee proposes to delete TS 5.5.10 in its entirety. The NRC staff reviewed the licensee's proposal. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, for Diablo Canyon, Units 1 and 2, the licenses will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels. The components the program was established to protect are associated with reactor operation and do not apply in a permanently defueled condition, and therefore TS 5.5.10 is no longer applicable. Therefore, the NRC staff finds this deletion acceptable.

- TS 5.5.11, "Ventilation Filter Testing Program (VFTP)," was established to implement the required testing of the ESF filter ventilation systems (for the control room, auxiliary building, and FHB). The licensee proposes to delete TS 5.5.11 in its entirety. Since the accident analysis applicable to the permanently defueled condition does not rely on ventilation filters for accident mitigation and the corresponding TSs 3.7.10, 3.7.12 and 3.7.13 are acceptably proposed for deletion via this LAR, the NRC staff finds this deletion acceptable

- TS 5.5.13, "Diesel Fuel Oil Testing Program," was established to implement the required testing of both new fuel oil and stored fuel oil used to supply the emergency DGs. The licensee proposes to delete TS 5.5.13 in its entirety. Since the TS that provided operability requirements for the emergency DGs are acceptably proposed for deletion via this LAR, the NRC staff finds this deletion acceptable.

- TS 5.5.15, "Safety Function Determination Program (SFDP)," was established to ensure a loss of safety function is detected and appropriate actions taken. The licensee proposes to delete TS 5.5.15 in its entirety, as well as LCO 3.0.6, which was discussed earlier in this SE. The NRC staff reviewed the licensee's proposal. Once the plant is permanently shut down and defueled, the only DBA remaining is the FHA in the FHB. Since there are no active systems credited as part of the initial conditions of the analysis or as part of the primary success for mitigation of the FHA in the FHB in a permanently defueled condition, the SFDP is no longer required. Therefore, the NRC staff finds this deletion acceptable.

- TS 5.5.16, “Containment Leakage Rate Testing Program,” was established to implement the leakage rate testing of containment as required by 10 CFR 50.54(o) and 10 CFR Part 50, Appendix J, Option B, as modified by approved exemptions. The licensee proposes to delete TS 5.5.16 in its entirety. Since this program pertains to verifying the operability of the containment systems and the requirements for containment systems (TS section 3.6) are acceptably proposed for deletion via this LAR, the NRC staff finds this deletion acceptable.

- TS 5.5.17, “Battery Monitoring and Maintenance Program,” was established to provide battery restoration and maintenance. The licensee proposes to delete TS 5.5.17 in its entirety. The NRC staff reviewed the licensee’s proposal. Once the plant is permanently shut down and defueled, the only accident analysis applicable to the defueled condition does not rely on batteries for accident mitigation, and therefore TS 5.5.17 is no longer applicable. Therefore, the NRC staff finds this deletion acceptable.

- TS 5.5.18, “Surveillance Frequency Control Program,” provides controls for surveillance frequencies. The licensee proposes to delete TS 5.5.18 in its entirety. The licensee stated that the remaining TS LCOs proposed in the PDTS contain two SRs included in the SFCP and therefore there is no need to maintain this program and TS 5.5.18 is proposed for deletion. The NRC staff reviewed the licensee’s proposal. The NRC staff noted that once the plant is permanently shut down and defueled, no SRs will remain in the SFCP and the three SRs remaining in the PDTS will have a defined frequency. Since the remaining three SRs will have a defined frequency, there will be no need to maintain the SFCP program and TS 5.5.18 is no longer applicable. Therefore, the NRC staff finds this deletion acceptable.

- TS 5.5.19, “Control Room Envelope Habitability Program,” was established and implemented to ensure that control room envelope habitability is maintained such that, with an operable CRVS, control room envelope occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The licensee states that with both units in a permanently defueled condition, the only postulated accident that remains applicable is the FHA in the FHB. The licensee proposes to delete TS 5.5.19 in its entirety. The revised FHA analysis does not credit or require the use of the control room for mitigation, which supports the elimination of TS 3.7.10 as discussed earlier. Therefore, the NRC staff finds this deletion acceptable.

3.3.22 TS Section 5.6, “Reporting Requirements”

The licensee proposes to change the term “unit” to “facility” in TSs 5.6.2 and 5.6.3. The licensee stated that this is an administrative change, which reflects that Diablo Canyon, Units 1 and 2, will be permanently shut down and defueled. The term “facility” is a more appropriate description of a site that is undergoing decommissioning. The NRC staff reviewed the licensee’s proposal and finds that the revision to replace “unit” with “facility” more accurately reflects the permanently shutdown and defueled condition and is therefore acceptable.

The licensee proposes to delete TS 5.6.5, “Core Operating Limits Report (COLR),” in its entirety. TS 5.6.5 discusses the COLR, which was recently modified in Amendment Nos. 239 and 240 for Diablo Canyon, Units 1 and 2, respectively (ML21160A174). TS 5.6.5 does not

apply once the reactor is permanently defueled; therefore, the NRC staff finds the proposed deletion acceptable.

The licensee proposes to delete TS 5.6.6, “Reactor Coolant System (RCS) Pressure and Temperature Limits Report (PTLR),” in its entirety. This report is required to be provided to the NRC upon issuance for each reactor vessel fluence period and for any revision or supplement thereto. The NRC staff reviewed the licensee’s proposal. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, for Diablo Canyon, Units 1 and 2, the licenses will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels. The report does not apply in a permanently defueled condition, and therefore TS 5.6.6 is no longer applicable. Therefore, the NRC staff finds the proposed deletion acceptable.

The licensee proposes to delete TS 5.6.8, “PAM Report,” in its entirety. This report is required to be provided to the NRC following entry into Condition B or F of LCO 3.3.3. The NRC staff reviewed the licensee’s proposal. Once the plant is permanently shut down and defueled, this TS will no longer be required. Since LCO 3.3.3 is acceptably proposed for deletion, TS 5.6.8 is no longer applicable. Therefore, the NRC staff finds the proposed deletion acceptable.

The licensee proposes to delete TS 5.6.10, “Steam Generator (SG) Tube Inspection Report,” in its entirety. This report is required to be provided to the NRC following completion of an inspection performed in accordance with TS 5.5.9, which is being deleted. The NRC staff reviewed the licensee’s proposal. Once the certifications required by 10 CFR 50.82(a)(1) are docketed for Diablo Canyon, Units 1 and 2, the licenses will no longer authorize operation of the reactors or emplacement or retention of fuel in the reactor vessels. Since the SG tubes will not be subjected to the effects that the SG Program and associated inspection were put in place to monitor and assess, TS 5.6.6 is no longer applicable. Therefore, the NRC staff finds the proposed deletion acceptable.

3.3.23 TS Section 5.7, “High Radiation Area”

The licensee proposes a change in TS section 5.7.2.a.1, to change “shift manager” to “shift supervisor.” There are no other changes proposed for this section. The NRC staff finds this change acceptable because it is administrative in nature and changing the term will ensure that “shift supervisor” is used consistently throughout the Diablo Canyon TS.

3.3.24 Technical Evaluation Conclusion

Regulation 10 CFR 50.36(c)(6) applies in part, to nuclear power reactor facilities that have submitted the certifications required by 10 CFR 50.82(a)(1), and states that technical specifications involving safety limits, limiting safety system settings, and limiting control system settings; limiting conditions for operation; surveillance requirements; design features; and administrative controls will be developed on a case-by-case basis. Based on the above evaluation, the NRC staff determines that the proposed amended technical specifications meet 10 CFR 50.36(c)(6).

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 August 16, 2021, and July 21, 2022. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of facility components located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. 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 18, 2021 (86 FR 26955), and there has been no public comment on such finding. The amendments also relate to changes in recordkeeping, reporting, or administrative procedures or requirements; to the position, or title of an officer of the licensee; and to the format of the license, or otherwise makes editorial, corrective or other minor revisions. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and 51.22(c)(10). 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: December 21, 2022

SUBJECT: DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2 - ISSUANCE OF AMENDMENT NOS. 243 AND 244 RE: TECHNICAL SPECIFICATIONS AND REVISED LICENSE CONDITIONS FOR THE PERMANENTLY DEFUELED CONDITION (EPID L-2020-LLA-0261) DATED DECEMBER 21, 2022

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