

April 1, 2021

PG&E Letter DCL-21-019

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

10 CFR 50.90

Diablo Canyon Units 1 and 2
Docket No. 50-275, OL-DPR-80
Docket No. 50-323, OL-DPR-82
Supplement to License Amendment Request 20-03
Proposed Technical Specifications and Revised License Conditions for the
Permanently Defueled Condition

References:

1. PG&E Letter DCL-20-092, "License Amendment Request 20-03, 'Proposed Technical Specifications and Revised License Conditions for the Permanently Defueled Condition,'" dated December 3, 2020 (ML20338A546)

Dear Commissioners and Staff:

In Reference 1, Pacific Gas and Electric Company (PG&E) submitted License Amendment Request (LAR) 20-03 to revise the Facility Operating Licenses (FOLs), including Appendix D, "Additional Conditions," and Appendix A, "Technical Specifications," to reflect a permanently shutdown and defueled condition, for Diablo Canyon Power Plant (DCPP) Units 1 and 2. The purpose of this submittal is to supplement LAR 20-03 to include the following additional proposed changes:

- Delete the Fire Protection License Conditions from the DCPP Unit 1 (Condition 2.C.5) and Unit 2 (Condition 2.C.4) FOLs;
- Propose new license conditions for DCPP Units 1 and 2 to restrict handling of spent nuclear fuel and heavy loads over the spent fuel pool during the required 45-day decay period following permanent shutdown needed to meet the dose limit for the Fuel Handling Accident; and
- Revise the markup of Technical Specification (TS) 5.6.5b to remove the changes proposed in LAR 20-02 currently under review by the NRC.

The Enclosure provides a detailed description and evaluation of the proposed changes. Attachment 1 contains updated markups of the current FOLs, and

replaces Attachment 1 in Reference 1 in its entirety. Attachment 2 contains an updated clean copy of the FOLs and replaces Attachment 5 in Reference 1 in its entirety. Attachment 3 contains a replacement page for the markup of TS 5.6.5b and replaces the markup included in Attachment 3 in Reference 1 (the clean version of the TS in Attachment 6 of Reference 1 is not impacted). No other Attachments included in Reference 1 are impacted by the proposed changes included in this supplement.

As discussed further in the Enclosure, PG&E is updating the conditions required for the amendments to become effective, and requests that the approved amendments become effective after the following conditions have been met:

- docketing of the certifications required by 10 CFR 50.82(a)(1)(i and ii) for DCPD Units 1 and 2;
- and a Certified Fuel Handler Training and Retraining Program has been implemented in accordance with 10 CFR 50.2.

The previously requested conditions for the proposed amendments to become effective included both Units being shutdown for at least 45 days. As a result of the proposed changes in this supplement, PG&E is requesting to delete this requirement based on the new proposed license conditions for DCPD Units 1 and 2. PG&E requests a 180-day implementation period from the effective date of the amendment and NRC approval by June 30, 2022, in support of pre-shutdown decommissioning planning activities.

As a result of the proposed changes included in this supplement, the Enclosure includes an updated No Significant Hazards Determination.

Pursuant to 10 CFR 50.91, PG&E is notifying the State of California of this supplement to LAR 20-03 by transmitting a copy of this letter and enclosure to the California Department of Public Health.

There are no new or revised regulatory commitments (as defined by NEI 99-04) in this submittal.

If you have any questions or require additional information, please contact Mr. Philippe Soenen at 805-459-3701.

I state under penalty of perjury that the foregoing is true and correct.

Executed on April 1, 2021.

Sincerely,

A handwritten signature in black ink, appearing to be 'MZ', with a horizontal line extending to the right.

Maureen R. Zawalick
Vice President, Generation Business and Technical Services

Enclosure

cc: Diablo Distribution
cc/enc: Samson S. Lee, NRR Senior Project Manager
Scott A. Morris, NRC Region IV Administrator
Donald R. Krause, NRC Senior Resident Inspector
Gonzalo L. Perez, Branch Chief, California Dept of Public Health

**Evaluation of Proposed Changes
Supplement to LAR 20-03**

EVALUATION

SUMMARY DESCRIPTION

On November 27, 2018, Pacific Gas and Electric Company (PG&E) notified the U.S. Nuclear Regulatory Commission (NRC) that it would permanently cease power operations at Diablo Canyon Power Plant (DCPP) Units 1 and 2 upon expiration of the Facility Operating License(s) (FOL) (Reference 1). The FOL for DCPP Unit 1 expires on November 2, 2024, and the FOL for DCPP Unit 2 expires on August 26, 2025.

In Reference 2, PG&E submitted License Amendment Request (LAR) 20-03 to revise the FOLs, including Appendix D, "Additional Conditions," and Appendix A, "Technical Specifications," to reflect a permanently shutdown and defueled condition, for DCPP Units 1 and 2. The purpose of this submittal is to supplement LAR 20-03 to include the following additional proposed changes:

- Delete the Fire Protection License Conditions from the DCPP Unit 1 (Condition 2.C.5) and Unit 2 (Condition 2.C.4) FOLs;
- propose new license conditions for DCPP Units 1 and 2, to restrict handling of spent nuclear fuel (SNF) and heavy loads over the spent fuel pool (SFP) during the required 45-day decay period following permanent shutdown needed to meet the dose limit for the Fuel Handling Accident (FHA); and
- revise the markup of Technical Specification (TS) 5.6.5b to remove the changes proposed in LAR 20-02 (Reference 7) currently under review by the NRC.

As discussed further below, PG&E is updating the conditions required for the amendments to become effective, and requests that the approved amendments become effective after the following conditions have been met:

- docketing of the certifications required by 10 CFR 50.82(a)(1)(i and ii) for DCPP Units 1 and 2;
- and a Certified Fuel Handler Training and Retraining Program has been implemented in accordance with 10 CFR 50.2.

The previously requested conditions for the proposed amendments to become effective included both units being shutdown for at least 45 days. As a result of the proposed changes in this supplement, PG&E is requesting to delete this requirement based on the new proposed license conditions for DCPP Units 1 and 2.

In the development of these additional proposed changes, PG&E reviewed the NRC safety evaluation report for Duane Arnold Energy Center (Reference 3) and the submittal from Byron Station, Units 1 and 2 (Reference 4).

In the Related Licensing Actions section of Reference 2, PG&E listed LAR 20-02 titled, "Non-Voluntary License Amendment Request to Revise Technical Specifications 3.2.1, F_Q(Z), to Implement Methodology from WCAP-17661, Revision 1, 'Improved RAOC and CAOC F_Q Surveillance Technical Specifications'" dated August 31, 2020 (Reference 7). The proposed changes in LAR 20-02 impact TS 3.2.1 and 5.6.5b. As discussed in Reference 2, the markups in LAR 20-02 do not impact the proposed deletions of TS 3.2.1 and 5.6.5b in LAR 20-03. The markups included in Reference 2 assumed approval of LAR 20-02 and included the changes in the markups for TS 5.6.5b. Per a discussion with the NRC, the markups of TS 5.6.5b have been revised to remove the changes proposed in LAR 20-02. As discussed in Reference 2, TS 3.1 through 3.9 that were deleted in their entirety were only reflected in the table of contents and therefore no changes to the markups are required for TS 3.2.1. Attachment 3 contains a replacement page for the markup of TS 5.6.5b and replaces the markup included in Attachment 3 in Reference 2 (the clean version of the TS in Attachment 6 of Reference 2 is not impacted).

This supplement provides a discussion and description of the additional proposed changes to the DCPD Units 1 and 2 FOLs, and updated information supporting a finding of No Significant Hazards Consideration.

DETAILED DESCRIPTION AND BASIS FOR CHANGES

Fire Protection License Conditions

License Condition 2.C.(5) for DCPD Unit 1 and License Condition 2.C.(4) for DCPD Unit 2 requires PG&E to implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c) as specified in the LAR dated June 26, 2013, (Reference 5) as supplemented and approved in the NRC safety evaluation report dated April 14, 2016 (Reference 6). Additionally, the license condition includes criteria for making changes to the approved program without NRC approval.

These current Fire Protection License Conditions are applicable to an operating reactor as the requirements of 10 CFR 50.48(a) and 10 CFR 50.48(c) apply to holders of operating licenses issued under 10 CFR Part 50. The conditions specified in the license conditions for DCPD Units 1 and 2 include consideration of risk metrics for core damage frequency and large early release frequency, which are associated with power operation.

Once PG&E has permanently ceased operation of DCPD Units 1 and 2, and certified that fuel has been permanently removed from the reactors in accordance with 10 CFR 50.82(a)(1)(i) and (ii) respectively, and pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 licenses will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessels. As a result, License Conditions 2.C.(5) for DCPD Unit 1 and 2.C.(4) for DCPD Unit 2 will no longer apply and can be deleted.

Following submittal of the certifications required under 10 CFR 50.82(a)(1), a fire protection program is required by 10 CFR 50.48(f) to address the potential for fires that could result in a radiological hazard. This regulation is applicable regardless of whether a requirement for a fire protection program is included in the FOL. Fire protection program aspects that relate to a permanently defueled condition are specifically and adequately addressed by 10 CFR 50.48(f). Therefore, PG&E will maintain a fire protection program in accordance with 10 CFR 50.48(f). As a result, the fire protection program will be revised to take into account the decommissioning facility conditions and activities.

The proposed changes to the FOLs for DCPD Units 1 and 2 are consistent with the changes submitted by Duane Arnold Energy Center and approved by the NRC in Reference 3. The proposed changes are shown in the tables below.

DCPD Unit 1, Operating License DPR-80, License Condition 2.C.(5)
<p><u>Current License Condition 2.C.(5)</u></p> <p>(5) Fire Protection</p> <p>a. PG&E shall implement and maintain all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the PG&E amendment request dated June 26, 2013, as supplemented by letters dated October 3, 2013, September 29, 2014, October 27, 2014, October 29, 2014, November 26, 2014, and December 31, 2014; February 25, 2015 (two letters), May 7, 2015, October 15, 2015, and December 31, 2015; and January 28, 2016, and as approved in the safety evaluation dated April 14, 2016. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, PG&E may make changes to the Fire Protection Program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.</p> <p>b. Risk-Informed Changes that May Be Made Without Prior NRC Approval</p> <p>A risk assessment of a change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at DCPD. Acceptable methods to</p>

assess the risk of the change may include methods that have been used in the peer-reviewed Fire Probabilistic Risk Assessment model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact:

(1) Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

(2) Prior NRC review and approval is not required for individual changes that result in a risk increase less than 1×10^{-7} /year (yr) for CDF and less than 1×10^{-8} /yr for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

c. Other Changes that May Be Made Without Prior NRC Approval

(1) Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program

Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental Fire Protection Program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent or adequate for the hazard. PG&E may use an engineering evaluation to demonstrate that a change to an NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change will not affect the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard.

PG&E may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is "adequate for the hazard." Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change will not affect the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:

- "Fire Alarm and Detection Systems" (Section 3.8);

- "Automatic and Manual Water-Based Fire Suppression Systems" (Section 3.9);
- "Gaseous Fire Suppression Systems" (Section 3.10); and,
- "Passive Fire Protection Features" (Section 3.11).

This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.

(2) Fire Protection Program Changes that Have No More than Minimal Risk Impact

Prior NRC review and approval are not required for changes to PG&E's Fire Protection Program that have been demonstrated to have no more than a minimal risk impact. PG&E may use its screening process as approved in the NRC safety evaluation dated April 14, 2016, to determine that certain Fire Protection Program changes meet the minimal criterion. PG&E shall ensure that fire protection defense-in-depth and safety margins are maintained when changes are made to the Fire Protection Program.

This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.

d. Transition License Conditions:

(1) Before achieving full compliance with 10 CFR 50.48(c), as specified by (2) and (3) below, risk-informed changes to PG&E's Fire Protection Program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in c.(2) above.

(2) PG&E shall implement the modifications described in Attachment-S, Table S-2, "Plant Modifications Committed," of PG&E Letter DCL-16-014, dated January 28, 2016, by the end of the Units 1 and 2 refueling outages currently scheduled for April/May 2017 (1R20) and February/March 2018 (2R20). PG&E shall maintain appropriate compensatory measures in place until completion of the modifications delineated above.

(3) PG&E shall implement the items as listed in Attachment-S, Table S-3, "Implementation Items," of PG&E Letter DCL-16-014, dated January 28, 2016, within 365 days after receipt of the safety evaluation/license amendment with the exception of Implementation Item S-3.24, which will be completed for each unit within 90 days after all modifications for the respective unit are operable (as listed in Attachment S, Table S-2).

Proposed License Condition 2.C.(5)

Deleted per Amendment No. ###.

DCPP Unit 2, Operating License DPR-82, License Condition 2.C.(4)

Current License Condition 2.C.(4)

(4) Fire Protection

a. PG&E shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the PG&E amendment request dated June 26, 2013, as supplemented by letters dated October 3, 2013, September 29, 2014, October 27, 2014, October 29, 2014, November 26, 2014, and December 31, 2014, February 25, 2015 (two letters), May 7, 2015, October 15, 2015, and December 31, 2015; and January 28, 2016, and as approved in the safety evaluation dated April 14, 2016. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, PG&E may make changes to the Fire Protection Program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.

b. Risk-Informed Changes that May Be Made Without Prior NRC Approval

A risk assessment of a change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at DCPP. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed Fire Probabilistic Risk Assessment model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact:

(1) Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

(2) Prior NRC review and approval is not required for individual changes that result in a risk increase less than 1×10^{-7} /year (yr) for CDF and less than 1×10^{-8} /yr for LERF. The proposed change must also be consistent with the defense-in-depth

philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

c. Other Changes that May Be Made Without Prior NRC Approval

(1) Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program

Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental Fire Protection Program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent or adequate for the hazard. PG&E may use an engineering evaluation to demonstrate that a change to an NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change will not affect the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard.

PG&E may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is "adequate for the hazard." Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change will not affect the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:

- "Fire Alarm and Detection Systems" (Section 3.8);
- "Automatic and Manual Water-Based Fire Suppression Systems" (Section 3.9);
- "Gaseous Fire Suppression Systems" (Section 3.10); and,
- "Passive Fire Protection Features" (Section 3.11).

This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.

(2) Fire Protection Program Changes that Have No More than Minimal Risk Impact

Prior NRC review and approval are not required for changes to PG&E's Fire Protection Program that have been demonstrated to have no more than a minimal risk impact. PG&E may use its screening process as approved in the NRC safety evaluation dated April 14, 2016, to determine that certain Fire Protection Program changes meet the minimal criterion. PG&E shall ensure that fire protection

defense-in-depth and safety margins are maintained when changes are made to the Fire Protection Program.

This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.

d. Transition License Conditions:

(1) Before achieving full compliance with 10 CFR 50.48(c), as specified by (2) and (3) below, risk-informed changes to PG&E's Fire Protection Program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in c.(2) above.

(2) PG&E shall implement the modifications described in Attachment-S, Table S-2, "Plant Modifications Committed," of PG&E Letter DCL-16-014, dated January 28, 2016, by the end of the Units 1 and 2 refueling outages currently scheduled for April/May 2017 (1R20) and February/March 2018 (2R20). PG&E shall maintain appropriate compensatory measures in place until completion of the modifications delineated above.

(3) PG&E shall implement the items as listed in Attachment-S, Table S-3, "Implementation Items," of PG&E Letter DCL-16-014, dated January 28, 2016, within 365 days after receipt of the safety evaluation/license amendment with the exception of Implementation Item S-3.24, which will be completed for each unit within 90 days after all modifications for the respective unit are operable (as listed in Attachment S, Table S-2).

Proposed License Condition 2.C.(4)

~~Deleted per Amendment No. ###.~~

New Proposed License Conditions

In Reference 2, PG&E submitted LAR 20-03 which requested to revise the FOLs, including Appendix D, "Additional Conditions," and Appendix A, "Technical Specifications," to reflect a permanently shutdown and defueled condition, for DCPD Units 1 and 2. Based on PG&E's current plans, DCPD Unit 1 will shutdown prior to DCPD Unit 2; however, the changes described in LAR 20-03 for DCPD Units 1 and 2 FOLs, including Appendix D, "Additional Conditions," and Appendix A, "Technical Specifications," were proposed to become effective at the same time, after the following conditions had been met:

- certifications required by 10 CFR 50.82(a)(1)(i and ii) have been docketed for both Units,

- both Units have been shutdown for at least 45 days, and
- a Certified Fuel Handler Training and Retraining Program has been implemented in accordance with 10 CFR 50.2.

As described in Reference 2, the above condition for both Units being shutdown for at least 45 days is the required SNF decay time for implementation of the post shutdown FHA analysis. The FHA analysis for DCPD Units 1 and 2 shows that, following 45 days of decay time after reactor shutdown and provided the spent fuel pool (SFP) water level requirements of TS 3.7.15¹ are met, the dose consequences for the Control Room, the Exclusion Area Boundary, and the Low Population Zone 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, PG&E is proposing new license conditions for DCPD Units 1 and 2, to prohibit movement of SNF after implementation of the Permanently Defueled Technical Specifications (PDTS) until 45 days after shutdown. In addition, as an added safety measure, PG&E will prohibit movement of heavy loads over the SFP during this timeframe.

In Reference 2, the 45-day decay period prior to implementation of the PDTS was discussed in support of deleting multiple TS. The proposed new license conditions will allow PG&E to implement the PDTS prior to the 45-day decay time assumed in the post shutdown FHA analysis. The new license conditions effectively prevents an FHA from occurring until after the 45-day decay period has elapsed. While the PDTS implementation date has been revised, the conclusions and bases for deletion of the TS in Reference 2 that discussed implementation 45 days after shutdown remain valid, as the new license condition prevents movement of SNF until 45 days after shutdown.

The new proposed license conditions for DCPD Units 1 and 2 are similar to the proposed license conditions submitted by Byron Station for SNF restrictions in Reference 4. The proposed changes are shown in the tables below:

DCPD Unit 1, Operating License DPR-80, New Proposed License Condition 2.C.(14)
<p><i><u>(14) Restriction on Handling Spent Nuclear Fuel</u></i></p> <p><i>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.</i></p>

¹ TS 3.7.15, "Spent Fuel Pool Water Level," requires the spent fuel pool water level to be greater than or equal to 23 feet over the top of irradiated fuel assemblies seated in the storage racks. TS 3.7.15 is applicable during movement of irradiated fuel assemblies in the spent fuel pool.

**DCPP Unit 2, Operating License DPR-82,
New Proposed License Condition 2.C.(14)**

(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.

Attachment 1 contains updated markups of the current FOLs incorporating the proposed changes described above, and replaces Attachment 1 in Reference 2 in its entirety. Attachment 2 contains an updated clean copy of the FOLs incorporating the proposed changes described above, and replaces Attachment 5 in Reference 2 in its entirety.

UPDATED NO SIGNIFICANT HAZARDS CONSIDERATION

As a result of the changes included in this supplement to LAR 20-03, PG&E is providing an updated significant hazards consideration which includes the original evaluation updated to reflect the changes included in this submittal. The evaluation focuses on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

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

Response: No.

The proposed changes would not take effect until PG&E has docketed the certifications required by 10 CFR 50.82(a)(1) for both Units 1 and 2, and a Certified Fuel Handler Training and Retraining Program has been implemented in accordance with 10 CFR 50.2. Because the 10 CFR Part 50 Facility Operating Licenses (FOLs) for DCPP Units 1 and 2 will no longer authorize operation of the reactors, or emplacement or retention of fuel into the reactor vessels, as specified in 10 CFR 50.82(a)(2), the occurrence of postulated accidents associated with reactor operation are no longer credible.

The remaining postulated design basis accident (DBA) events that could potentially occur at a permanently defueled facility are a fuel handling accident (FHA) in the Fuel Handling Building (FHB), and tank ruptures. The FHA analysis for DCPP Units 1 and 2, shows that after 45 days of decay time after the reactors have shutdown and provided the spent fuel pool (SFP) water level requirements of Limiting Condition for Operation 3.7.15 are met, the dose consequences are acceptable without relying on active structures, systems, and Components (SSCs) to remain 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, PG&E proposes to prohibit movement of

spent nuclear fuel (SNF) after implementation of the Permanently Defueled Technical Specifications (PDTS) until a minimum of 45 days after permanent shutdown. In addition, handling of heavy loads over the SFP will not be permitted during this timeframe to prevent the possibility of dropping a heavy load on the SNF. The remaining DBAs that support the permanently shutdown and defueled condition do not rely on any active safety systems for mitigation.

The probability of occurrence of previously evaluated accidents is not increased, because safe storage and handling of SNF will be the only operations performed, and these activities are bounded by the existing analyses. Additionally, the occurrence of postulated accidents associated with reactor operation will no longer be credible with permanently defueled reactors. This significantly reduces the scope of applicable accidents.

The deletion of TS definitions and rules of usage and application requirements that will not be applicable in a defueled condition has no impact on facility SSCs or the methods of operation of such SSCs. The deletion of design features and safety limits not applicable when DCPD Units 1 and 2 are permanently shutdown and defueled has no impact on the remaining applicable DBAs.

The removal of Limiting Conditions for Operation and Surveillance Requirements that relate only to the operation of the nuclear reactors or the prevention, diagnosis, or mitigation of reactor-related transients or accidents do not affect the applicable DBAs previously evaluated because these accidents will no longer be applicable in the permanently defueled condition.

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

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

Response: No.

The proposed changes to delete or modify the FOLs, additional conditions, TS, and licensing basis have no impact on facility SSCs affecting the safe storage of SNF, or on the methods of operation of such SSCs, or on the handling and storage of SNF. The removal of TS that are related only to the operation of the nuclear reactors, or only to the prevention, diagnosis, or mitigation of reactor-related transients and accidents, cannot result in different or more adverse failure modes or accidents than previously evaluated because the reactors will be permanently shutdown and defueled.

The proposed modifications and deletion of requirements in the DCPD Units 1 and 2 FOLs, additional conditions, TS, and licensing basis do not affect systems credited in the accident analysis for the remaining credible accidents. The proposed license and PDTS will continue to require proper control and monitoring of safety significant

parameters and activities. The TS regarding SFP water level, boron concentration, and SNF storage configurations are retained to preserve the current requirements for safe storage of SNF. The proposed amendment does not result in any new mechanisms that could initiate damage to the remaining relevant safety barriers for defueled plants. Since safe storage and handling of SNF will be the only operations allowed, and these activities are bounded by the existing analyses, the proposed changes do not create the possibility of a new or different kind of accident.

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

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

Response: No.

The proposed changes include deleting or modifying the FOLs, additional conditions, TS, and licensing basis requirements once DCPD Units 1 and 2 have permanently shutdown and defueled. Because the 10 CFR Part 50 FOLs for DCPD Units 1 and 2 will no longer authorize operation of the reactors, or emplacement or retention of fuel into the reactor vessels, the occurrence of postulated accidents associated with reactor operation will no longer be credible. The remaining postulated DBA events that could potentially occur at a permanently defueled facility would be an FHA in the FHB, and tank ruptures. The proposed amendment does not adversely affect the inputs or assumption of any of the design basis analyses.

The proposed changes are limited to those portions of the FOLs, additional conditions, TS, and licensing basis that are not related to the safe storage and handling of SNF. The requirements proposed to be revised or deleted from the FOLs, additional conditions, TS, and licensing basis are not credited in the updated applicable accident analyses for the remaining applicable postulated accidents, and as such, do not contribute to the margin of safety associated with the accident analysis. Postulated DBAs involving the reactors will no longer be possible because the reactors will be permanently shutdown and defueled, and operation of DCPD Units 1 and 2 reactors will no longer be authorized. To preclude the possibility of an FHA until after the assumed 45 day SNF decay period, PG&E proposes to prohibit movement of SNF after implementation of the PDTS until a minimum of 45 days after permanent shutdown. In addition, handling of heavy loads over the SFP will not be permitted during this timeframe to prevent the possibility of dropping a heavy load on the SNF.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

Based on the above evaluation, PG&E concludes that the proposed amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of “no significant hazards consideration” is justified.

PRECEDENT

The NRC has reviewed or is currently reviewing license changes for other facilities, similar to those being proposed in this supplement to LAR 20-03, for the following facilities:

- Duane Arnold Energy Center (Reference 3)
- Byron Station, Units 1 and 2 (Reference 4)

REFERENCES

1. PG&E Letter DCL-18-096, "Certification of Permanent Cessation of Power Operations," dated November 27, 2018 (ML18331A553)
2. PG&E Letter DCL-20-092, "License Amendment Request 20-03, Proposed Technical Specifications and Revised License Conditions for the Permanently Defueled Condition," dated December 3, 2020 (ML20338A546)
3. NRC Letter, "Duane Arnold Energy Center – Issuance of Amendment No. 312 RE: Removal of License Condition 2.C.(3), Fire Protection Program (EPID L-2019-LLA-0211)," dated July 30, 2020 (ML20184A003)
4. Exelon Letter, "License Amendment Request – Proposed Defueled Technical Specifications and Revised License Conditions for Permanently Defueled Condition," dated October 29, 2020 (ML20303A323, ML20303A325, ML20303A326, ML20303A327, ML20303A328)
5. PG&E Letter, "License Amendment Request 13-03, License Amendment Request to Adopt NFPA 805 Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants (2001 Edition)," dated June 26, 2013 (ML13196A139 and ML13196A264)
6. NRC Letter, "Diablo Canyon Power Plant, Unit Nos. 1 and 2 – Issuance of Amendments Regarding Transition to a Risk-Informed, Performance-Based Fire Protection Program in Accordance with 10 CFR 50.48(c) (CAC Nos. MF2333 and MF2334)," dated April 14, 2016 (ML16035A441)
7. PG&E Letter DCL-20-063, "License Amendment Request 20-02, Non-Voluntary License Amendment Request to Revise Technical Specifications 3.2.1, F_Q(Z), to Implement Methodology from WCAP-17661, Revision 1, 'Improved RAOC and CAOC F_Q Surveillance Technical Specifications,'" dated August 31, 2020 (ML20244A192)

Proposed Facility Operating License Changes (DPR-80 and DPR-82) – Markups

(22 Pages)

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. ~~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;~~ Deleted per Amendment No. ###.
 - C. The facility will ~~operate~~ be maintained 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;~~
 - 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, ~~except as exempted from compliance in Section 2.D below;~~
 - 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 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~~Defueled 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, ~~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;
 - (2) Pursuant to the Act and 10 CFR Part 70, to ~~receive~~, possess, ~~and use~~ at any time special nuclear material that was used as reactor fuel, in accordance with the limitations for storage ~~and amounts required for reactor operation~~, as described in the Defueled~~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 ~~calibration~~, and as fission detectors in amounts as required;
 - (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 ~~as may be~~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) Maximum Power Level

~~The Pacific Gas and Electric Company is authorized to operate the facility at reactor core power levels not in excess of 3411 megawatts thermal (100% rated power) in accordance with the conditions specified herein. Deleted per Amendment No. ###.~~

(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. 237###, are hereby incorporated in the license. Pacific Gas and Electric Company shall ~~operate~~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) Initial Test Program

~~The Pacific Gas and Electric Company shall conduct the post-fuel-loading initial test program (set forth in Section 14 of Pacific Gas and Electric Company's Final Safety Analysis Report, as amended), without making any major modifications of this program unless modifications have been identified and have received prior NRC approval. Major modifications are defined as:~~

~~a. — Elimination of any test identified in Section 14 of PG&E's Final Safety Analysis Report as amended as being essential;~~

~~b. — Modification of test objectives, methods, or acceptance criteria for any test identified in section 14 of PG&E's Final Safety Analysis Report, as amended, as being essential;~~

~~c. — Performance of any test at a power level different from that described in the program; and~~

~~d. — Failure to complete any test included in the described program (planned or scheduled for power levels up to the authorized power level).~~

~~Deleted per Amendment No. ###.~~

(4) Special Tests

~~PG&E is authorized to perform steam generator moisture carryover studies and turbine performance tests at the Diablo Canyon Nuclear Power Plant, Unit 1. These studies involve the use of an aqueous tracer solution of three (3) curies of sodium-24. PG&E's personnel shall be in charge of conducting these studies and be knowledgeable in the procedures. PG&E shall impose personnel exposure limits, posting, and survey requirements in conformance with those in 10 CFR Part 20 to minimize personnel exposure and contamination during the studies. Radiological controls shall be established in the areas of the chemical feed, feedwater, steam, condensate and sampling systems where the presence of the radioactive tracer is expected to warrant such controls. PG&E shall take special precautions to minimize radiation exposure and contamination during both the handling of the radioactive tracer prior to injection and the taking of system samples following injection of the tracer. PG&E shall ensure that all regulatory requirements for liquid discharge are met during disposal of all sampling effluents and when re-establishing continuous blowdown from the steam generators after completion of the studies.~~[Deleted per Amendment No. ###.](#)

(5) Fire Protection

a. ~~PG&E shall implement and maintain all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the PG&E amendment request dated June 26, 2013, as supplemented by letters dated October 3, 2013, September 29, 2014, October 27, 2014, October 29, 2014, November 26, 2014, and December 31, 2014; February 25, 2015 (two letters), May 7, 2015, October 15, 2015, and December 31, 2015; and January 28, 2016, and as approved in the safety evaluation dated April 14, 2016. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, PG&E may make changes to the Fire Protection Program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.~~

b. ~~Risk Informed Changes that May Be Made Without Prior NRC Approval~~

~~A risk assessment of a change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be~~

~~appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at DCPP. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed Fire Probabilistic Risk Assessment model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact:~~

- ~~(1) Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.~~
- ~~(2) Prior NRC review and approval is not required for individual changes that result in a risk increase less than 1×10^{-7} /year (yr) for CDF and less than 1×10^{-8} /yr for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.~~

~~e. Other Changes that May Be Made Without Prior NRC Approval~~

~~(1) Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program~~

~~Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental Fire Protection Program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent or adequate for the hazard. PG&E may use an engineering evaluation to demonstrate that a change to an NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change will not affect the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard.~~

~~PG&E may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is "adequate for the hazard." Prior NRC review and approval would not be~~

~~required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change will not affect the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:~~

- ~~• "Fire Alarm and Detection Systems" (Section 3.8);~~
- ~~• "Automatic and Manual Water-Based Fire Suppression Systems" (Section 3.9);~~
- ~~• "Gaseous Fire Suppression Systems" (Section 3.10);~~
~~and,~~
- ~~• "Passive Fire Protection Features" (Section 3.11).~~

~~This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.~~

~~(2) Fire Protection Program Changes that Have No More than Minimal Risk Impact~~

~~Prior NRC review and approval are not required for changes to PG&E's Fire Protection Program that have been demonstrated to have no more than a minimal risk impact. PG&E may use its screening process as approved in the NRC safety evaluation dated April 14, 2016, to determine that certain Fire Protection Program changes meet the minimal criterion. PG&E shall ensure that fire protection defense in depth and safety margins are maintained when changes are made to the Fire Protection Program.~~

~~This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.~~

~~d. Transition License Conditions:~~

- ~~(1) Before achieving full compliance with 10 CFR 50.48(c), as specified by (2) and (3) below, risk-informed changes to PG&E's Fire Protection Program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in c.(2) above.~~
- ~~(2) PG&E shall implement the modifications described in Attachment S, Table S-2, "Plant Modifications Committed," of PG&E Letter DCL-16-014, dated January 28, 2016, by the end of the Units 1 and 2 refueling outages currently~~

~~scheduled for April/May 2017 (1R20) and February/March 2018 (2R20). PG&E shall maintain appropriate compensatory measures in place until completion of the modifications delineated above.~~

~~(3) PG&E shall implement the items as listed in Attachment S, Table S-3, "Implementation Items," of PG&E Letter DCL-16-014, dated January 28, 2016, within 365 days after receipt of the safety evaluation/license amendment with the exception of Implementation Item S-3.24, which will be completed for each unit within 90 days after all modifications for the respective unit are operable (as listed in Attachment S, Table S-2). Deleted per Amendment No. ###.~~

(6) NUREG-0737 Conditions

~~Each of the following conditions shall be completed to the satisfaction of the NRC as indicated below. Each of the following conditions references the appropriate Section in SER Supplements No. 10 and/or No. 12.~~

~~a. Shift Technical Advisor (Section I.A.1.1)~~

~~PG&E shall provide a fully trained, on-shift technical advisor to the Shift Foreman.~~

~~b. Shift Staffing (Section I.A.1.3)~~

~~Until the plant has completed its startup test program, licensed personnel who are not regularly assigned members of the shift staff, including but not limited to the Operations Supervisor, shall not be assigned shift duties to satisfy the minimum staffing requirements for operation in Modes 1, 2, 3 and 4 except for cases of emergencies such as unexpected illness. Exceptions to this requirement may be made only after prior consultation with and approval by the NRC.~~

~~c. Management of Operations (Section I.B.1)~~

~~The Pacific Gas and Electric Company shall augment the plant staff to provide on each shift an individual experienced in comparable size pressurized water reactor operation. These individuals shall have at least one year of experience in operation of large pressurized water reactors or shall have participated in the startup of at least three pressurized water reactors. At least one such experienced individual shall be on duty on each shift through the startup test program whenever the reactor is not in a cold shutdown condition for at least the first year of operation or until the plant has attained a nominal 100% power level, whichever occurs first.~~

d. ~~Procedures for Verifying Correct Performance of Operating Activities (Section I.C.6)~~

~~Procedures shall be available to verify the adequacy of the operating activities.~~

e. ~~Deleted.~~

f. ~~Relief and Safety Valve Test Requirements (Section II.D.1)~~

~~PG&E shall implement the results of the EPRI test program.~~

g. ~~Containment Isolation Dependability (Section II.E.4.2)~~

~~PG&E shall limit the 12-inch vacuum/overpressure relief valve opening to less than or equal to 50 degrees.~~

h. ~~Calculations for Small-Break LOCAs (Sections II.K.3.30 and II.K.3.31)~~

~~PG&E is participating in the Westinghouse Owners Group effort for this item and shall conform to the results of this effort. Within one year of staff approval of the Westinghouse generic methodology for calculating small break LOCAs (II.K.3.30), PG&E shall submit a plant specific calculation (II.K.3.31) for staff review and approval.~~

i. ~~Long Term Emergency Preparedness (Section III.A.2)~~

~~(1) PG&E shall submit a detailed control room design review summary report by December 31, 1984.~~

~~(2) PG&E shall complete operator training on the Safety Parameter Display System and emergency operating procedures by March 28, 1985.~~

~~(3) PG&E shall implement emergency operating procedures based upon Westinghouse Owners Group guidelines by March 28, 1985. Deleted per Amendment No. ###.~~

(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) ~~Control of Heavy Loads (SSER 27, Section IV.6)~~

~~Prior to startup following the first refueling outage, the licensee shall submit commitments necessary to implement changes and modifications as required to satisfy the guidelines of Section 5.1.2 through 5.1.6 of NUREG-0612 (Phase II: 9-month responses to the NRC Generic Letter dated December 22, 1980).~~ Deleted per Amendment No. ###.

(9) ~~Emergency Preparedness (SSER 27, Section IV.3)~~

~~In the event that the NRC finds that the lack of progress in completion of the procedures in the Federal Emergency Management Agency's final rule, 44 CFR Part 350, is an indication that a major substantive problem exists in achieving or maintaining an adequate state of preparedness, the provisions of 10 CFR Section 50.54(s)(2) will apply.~~ Deleted per Amendment No. ###.

(10) Masonry Walls (SSER-27, Section IV.4; Safety Evaluation of November 2, 1984)

~~Prior to start-up following the first refueling outage, the licensee shall (1) evaluate the differences in margins between the staff criteria as set forth in the Standard Review Plan and the criteria used by the licensee, and (2) provide justification acceptable to the staff for those cases where differences exist between the staff's and the licensee's criteria. Deleted per Amendment No. ###.~~

(11) Spent Fuel Pool Modification

~~The licensee is authorized to modify the spent fuel pool as described in the application dated October 30, 1985 (LAR 85-13) as supplemented. Amendment No. 8 issued on May 30, 1986 and stayed by the U.S. Court of Appeals for the Ninth Circuit pending completion of NRC hearings is hereby reinstated.~~

~~Prior to final conversion to the modified rack design, fuel may be stored, as needed, in either the modified storage racks described in Technical Specification 5.6.1.1 or in the unmodified storage racks (or both) which are designed and shall be maintained with a nominal 21-inch center-to-center distance between fuel assemblies placed in the storage racks. Deleted per Amendment No. ###.~~

(12) Additional Conditions

~~The Additional Conditions contained in Appendix D, as revised through Amendment No. 230, are hereby incorporated into this license. Pacific Gas and Electric Company shall operate the facility in accordance with the Additional Conditions. Deleted per Amendment No. ###.~~

(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 Defueled 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. Exemption

~~Exemption from certain requirements of Appendix J to 10 CFR Part 50 is described in the Office of Nuclear Reactor Regulation's Safety Evaluation Report, Supplement No. 9. This exemption is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest. Therefore, this exemption, previously granted in Facility Operating License No. DPR-76, is hereby reaffirmed. The facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission. Deleted per Amendment No. ###.~~

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 ~~shall expire at midnight on November 2, 2024~~ is effective until the Commission notifies the licensee in writing that the license is terminated.

Attachments:

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

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. ~~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;~~Deleted per Amendment No. ###.
 - C. The facility will ~~operate~~ be maintained 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;~~
 - 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, ~~except as exempted from compliance in Section 2.D below;~~
 - 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 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~~Defueled 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, ~~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;
 - (2) Pursuant to the Act and 10 CFR Part 70, to ~~receive~~, possess, ~~and use~~ at any time special nuclear material that was used as reactor fuel, in accordance with the limitations for storage ~~and amounts required for reactor operation~~, as described in the Defueled~~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 ~~calibration~~, and as fission detectors in amounts as required;
 - (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 ~~as may be~~ 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) Maximum Power Level

~~The Pacific Gas and Electric Company is authorized to operate the facility at reactor core power levels not in excess of 3411 megawatts thermal (100% rated power) in accordance with the conditions specified herein. Deleted per Amendment No. ###.~~

(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. ~~###~~239, are hereby incorporated in the license. Pacific Gas and Electric Company shall ~~operate~~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) Initial Test Program (SSER 31, Section 4.4.1)

~~Any changes to the Initial Test Program described in Section 14 of the FSAR made in accordance with the provisions of 10 CFR 50.59 shall be reported in accordance with 50.59(b) within one month of such change. Deleted per Amendment No. ###.~~

(4) Fire Protection

a. ~~PG&E shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the PG&E amendment request dated June 26, 2013, as supplemented by letters dated October 3, 2013, September 29, 2014, October 27, 2014, October 29, 2014, November 26, 2014, and December 31, 2014, February 25, 2015 (two letters), May 7, 2015, October 15, 2015, and December 31, 2015; and January 28, 2016, and as approved in the safety evaluation dated April 14, 2016. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, PG&E may make changes to the Fire Protection Program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.~~

~~b. Risk-Informed Changes that May Be Made Without Prior NRC Approval~~

~~A risk assessment of a change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at DCGP. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed Fire Probabilistic Risk Assessment model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact:~~

~~(1) Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.~~

~~(2) Prior NRC review and approval is not required for individual changes that result in a risk increase less than 1×10^{-7} /year (yr) for CDF and less than 1×10^{-8} /yr for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.~~

~~c. Other Changes that May Be Made Without Prior NRC Approval~~

~~(1) Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program~~

~~Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental Fire Protection Program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent or adequate for the hazard. PG&E may use an engineering evaluation to demonstrate that a change to an NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change will not affect the functionality of the component,~~

~~system, procedure, or physical arrangement, using a relevant technical requirement or standard.~~

~~PG&E may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is "adequate for the hazard." Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change will not affect the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:~~

- ~~• "Fire Alarm and Detection Systems" (Section 3.8);~~
- ~~• "Automatic and Manual Water-Based Fire Suppression Systems" (Section 3.9);~~
- ~~• "Gaseous Fire Suppression Systems" (Section 3.10); and,~~
- ~~• "Passive Fire Protection Features" (Section 3.11).~~

~~This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.~~

~~(2) Fire Protection Program Changes that Have No More than Minimal Risk Impact~~

~~Prior NRC review and approval are not required for changes to PG&E's Fire Protection Program that have been demonstrated to have no more than a minimal risk impact. PG&E may use its screening process as approved in the NRC safety evaluation dated April 14, 2016, to determine that certain Fire Protection Program changes meet the minimal criterion. PG&E shall ensure that fire protection defense in depth and safety margins are maintained when changes are made to the Fire Protection Program.~~

~~This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.~~

~~d. Transition License Conditions:~~

~~(1) Before achieving full compliance with 10 CFR 50.48(c), as specified by (2) and (3) below, risk-informed changes to PG&E's Fire Protection Program may not be made without prior NRC review and approval unless the change has been~~

~~demonstrated to have no more than a minimal risk impact, as described in c.(2) above.~~

~~(2) PG&E shall implement the modifications described in Attachment S, Table S-2, "Plant Modifications Committed," of PG&E Letter DCL-16-014, dated January 28, 2016, by the end of the Units 1 and 2 refueling outages currently scheduled for April/May 2017 (1R20) and February/March 2018 (2R20). PG&E shall maintain appropriate compensatory measures in place until completion of the modifications delineated above.~~

~~(3) PG&E shall implement the items as listed in Attachment S, Table S-3, "Implementation Items," of PG&E Letter DCL-16-014, dated January 28, 2016, within 365 days after receipt of the safety evaluation/license amendment with the exception of Implementation Item S-3.24, which will be completed for each unit within 90 days after all modifications for the respective unit are operable (as listed in Attachment S, Table S-2). Deleted per Amendment No. ###.~~

(5) NUREG-0737 Items

~~Each of the following conditions shall be completed to the satisfaction of the NRC as indicated below. Each condition references the appropriate Section in SER Supplements.~~

~~a. I.D.1 Detailed Control Room Design Review (SSER 31, Section 4.13)~~

~~PG&E shall comply with the requirements of Supplement 1 to NUREG-0737 for the conduct of a Detailed Control Room Design Review (DCRDR) in accordance with a schedule acceptable to the NRC staff.~~

~~b. II.E.4.2 Containment Isolation Dependability (SSER 31, Section 4.21)~~

~~PG&E shall limit the 12-inch vacuum/overpressure relief valve opening to less than or equal to 50 degrees. Deleted per Amendment No. ###.~~

(6) Emergency Preparedness (SSER 31, Section 4.23.2 and SSER 32, Section 7)

~~In the event that the NRC finds that the lack of progress in completion of the procedures in the Federal Emergency Management Agency's final rule, 44 CFR Part 350, is an indication that a major substantive problem exists in achieving or maintaining an adequate state of preparedness, the~~

provisions of 10 CFR Section 50.54(s)(2) will apply. [Deleted per Amendment No. ###.](#)

(7) Masonry Walls (SSER 31, Section 4.7)

~~Prior to start-up following the first refueling outage, PG&E shall (1) evaluate the differences in margins between the staff criteria as set forth in the Standard Review Plan and the criteria used by the licensee, and (2) provide justification acceptable to the staff for those cases where differences exist between the staff's and PG&E's criteria.~~ [Deleted per Amendment No. ###.](#)

(8) Reactor Trip System Reliability – Generic Letter 83-28 (SSER 31, Section 4.8)

~~PG&E shall submit responses to and implement the requirements of Generic Letter 83-28 on a schedule which is consistent with that given in the PG&E letters dated January 24, and March 13, 1985.~~ [Deleted per Amendment No. ###.](#)

(9) Steam Generator Tube Rupture Analysis (SSER 31, Section 4.25)

~~By April 1988, PG&E shall submit for NRC review and approval an analysis which demonstrates that the steam generator tube rupture (SGTR) analysis presented in the FSAR is the most severe case with respect to the release of fission products and calculated doses. Consistent with the analytical assumptions, PG&E shall propose all necessary changes to the Technical Specifications (Appendix A) to this license.~~ [Deleted per Amendment No. ###.](#)

(10) Pipeway Structure DE and DDE Analysis (SSER 32, Section 4)

~~Prior to start-up following the first refueling outage PG&E shall complete a confirmatory analysis for the pipeway structure to further demonstrate the adequacy of the pipeway structure for load combinations that include the design earthquake (DE) and double design earthquake (DDE).~~ [Deleted per Amendment No. ###.](#)

(11) Spent Fuel Pool Modification

~~The licensee is authorized to modify the spent fuel pool as described in the application dated October 30, 1985 (LAR 85-13) as supplemented. Amendment No. 6 issued on May 30, 1986 and stayed by the U.S. Court of Appeals for the Ninth Circuit pending completion of NRC hearings is reinstated.~~

~~Prior to final conversion to the modified rack design, fuel may be stored, as needed, in either the modified storage racks described in Technical Specification 5.6.1.1 or in the unmodified storage racks (or both) which are designed and shall be maintained with a nominal 21-inch center-to-center~~

~~distance between fuel assemblies placed in the storage racks. Deleted per Amendment No. ###.~~

(12) Additional Conditions

~~The Additional Conditions contained in Appendix D, as revised through Amendment No. 232, are hereby incorporated into this license. Pacific Gas and Electric Company shall operate the facility in accordance with the Additional Conditions. Deleted per Amendment No. ###.~~

(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 Defueled 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. Exemption (SSER 31, Section 6.2.6)

~~An exemption from certain requirements of Appendix J to 10 CFR Part 50 is described in the Office of Nuclear Reactor Regulation's Safety Evaluation Report, Supplement No. 9. This exemption is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest. Therefore, this exemption previously granted in Facility Operating License No. DPR-81 pursuant to 10 CFR 50.12 is hereby reaffirmed. The facility will operate, with the exemption authorized, in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission. Deleted per Amendment No. ###.~~

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

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 ~~shall expire at midnight on August 26, 2025~~ is effective until the Commission notifies the licensee in writing that the license is terminated.

Attachments:

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

**Proposed Facility Operating License Changes (DPR-80 and DPR-82) – Clean
(11 Pages)**

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. ###.
 - C. The facility will be maintained 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 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 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 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 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 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 Defueled 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 Defueled 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;
 - (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. ###.

(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. ###, are hereby incorporated in the license. Pacific Gas and 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. ###.

(4) Deleted per Amendment No. ###.

(5) Deleted per Amendment No. ###.

(6) Deleted per Amendment No. ###.

(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. ###.

(9) Deleted per Amendment No. ###.

(10) Deleted per Amendment No. ###.

(11) Deleted per Amendment No. ###.

(12) Deleted per Amendment No. ###.

(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 Defueled 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. ###.

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.

Attachments:

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

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. ###.
 - C. The facility will be maintained 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 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 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 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 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 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 Defueled 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 Defueled 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;
 - (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. ###.

(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. ###, are hereby incorporated in the license. Pacific Gas and 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. ###.

(4) Deleted per Amendment No. ###.

(5) Deleted per Amendment No. ###.

(6) Deleted per Amendment No. ###.

(7) Deleted per Amendment No. ###.

(8) Deleted per Amendment No. ###.

(9) Deleted per Amendment No. ###.

(10) Deleted per Amendment No. ###.

(11) Deleted per Amendment No. ###.

(12) Deleted per Amendment No. ###.

(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 Defueled 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. ###.

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.

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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

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- (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.

Attachments:

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

Replacement Page Markup for Technical Specification 5.6.5b

(1 page)

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (COLR) (continued)

b. ~~The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:~~

1. ~~WCAP-10216-P-A, Relaxation of Constant Axial Offset Control F_Q Surveillance Technical Specification, (Westinghouse Proprietary);~~
2. ~~WCAP-9272-P-A, Westinghouse Reload Safety Evaluation Methodology, (Westinghouse Proprietary);~~
3. ~~WCAP-8385, Power Distribution Control and Load Following Procedures, (Westinghouse Proprietary);~~
4. ~~WCAP-16996-P-A, Revision 1, "Realistic LOCA Evaluation Methodology Applied to the Full Spectrum of Break Sizes (FULL SPECTRUM LOCA Methodology);"~~
5. ~~Not used.~~
6. ~~Not used.~~
7. ~~Not used.~~
8. ~~Not used.~~
9. ~~WCAP-8567-P-A, "Improved Thermal Design Procedure,"~~
10. ~~WCAP-16045-P-A, "Qualification of the Two Dimensional Transport Code PARAGON," and~~
11. ~~WCAP-16045-P-A, Addendum 1-A, "Qualification of the NEXUS Nuclear Data Methodology."~~

(continued)
