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PG&E Letter DCL-12-122

10 CFR 50.90

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

Diablo Canyon Units 1 and 2
Docket No. 50-275, OL-DPR-80
Docket No. 50-323, OL-DPR-82
License Amendment Request 12-04
Emergency Revision to Technical Specification 3.7.10, "Control Room Ventilation System (CRVS)"

Dear Commissioners and Staff:

Pursuant to 10 CFR 50.90, Pacific Gas and Electric Company (PG&E) hereby requests approval of the enclosed proposed emergency amendment to Facility Operating License Nos. DPR-80 and DPR-82 for Units 1 and 2 of the Diablo Canyon Power Plant respectively. The enclosed license amendment request (LAR) proposes to revise the Operating Licenses for a one-time change to the Technical Specification (TS) 3.7.10, control room ventilation system (CRVS), completion time for required action A.1, from 7 days to 13 days.

This change will allow completion of a modification and required testing to restore the CRVS actuation relays and both CRVS trains to OPERABLE status. TS 3.7.10 Condition A Required Action A.1 was entered on November 27, 2012, at 20:38 PST, due to the inoperable CRVS actuation relays and the associated completion time will expire on December 4, 2012, at 20:38 PST.

The changes in this LAR are required to address an immediate safety concern. PG&E requests approval of this LAR no later than December 4, 2012. PG&E requests the license amendments be made effective upon NRC issuance, to be implemented prior to the expiration of the 7 day completion time.

The enclosure to this letter contains the evaluation of the proposed change.

This communication contains new commitments to be implemented following NRC approval of the LAR. The commitments are contained in the Attachment 3 to the Enclosure.

In accordance with site administrative procedures and the Quality Assurance Program, the proposed amendment has been reviewed by the Plant Staff Review Committee.

Pursuant to 10 CFR 50.91, PG&E is sending a copy of this proposed amendment to the California Department of Public Health.

If you have any questions or require additional information, please contact Tom Baldwin at 805-545-4720.

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

Executed on December 2, 2012.

Sincerely,

Barry S. Allen
Site Vice President

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Evaluation of the Proposed Change

License Amendment Request 12-04
Emergency Revision to Technical Specification 3.7.10, "Control Room Ventilation System (CRVS)"

ATTACHMENTS:

1. Proposed Technical Specification Change(s)
2. Revised Technical Specification Page(s)
3. List of Regulatory Commitment(s)

EVALUATION

1. SUMMARY DESCRIPTION

This letter is an emergency request to amend Operating Licenses DPR-80 and DPR-82 for Units 1 and 2 of the Diablo Canyon Power Plant (DCPP), respectively.

The proposed changes would revise the Operating Licenses for a one-time change to the Technical Specification (TS) 3.7.10, control room ventilation system (CRVS), completion time for required action A.1, from 7 days to 13 days. This change will allow completion of a modification and required testing to restore the CRVS actuation relays and both CRVS trains to OPERABLE status. TS 3.7.10 Condition A Required Action A.1 was entered on November 27, 2012, at 20:38 PST, due to the inoperable CRVS actuation relays and the associated completion time will expire on December 4, 2012, at 20:38 PST.

2. DETAILED DESCRIPTION

The proposed change is to revise the TS 3.7.10 completion time for required action A.1 to add the following new footnote:

(1) The Completion Time that one CRVS train can be inoperable as specified by Required Action A.1 may be extended beyond the 7 day completion time up to 13 days to support repair and restoration of the CRVS actuation instrumentation which required TS 3.7.10 Condition A entry per TS 3.3.7 Required Action B.1.2. Upon completion of the repair and restoration, this footnote is no longer applicable and will expire at 20:38 PST on December 10, 2012.

The proposed TS change markup is provided in Attachment 1. The revised retyped TS page(s) are provided in Attachment 2.

Background

On November 20, 2012, during the performance of STP I-118A, "Functional Test of Control Room Pressurization Rad Monitor RM-54," an unexpected change in CRVS modes occurred. When the Unit 2 CRVS mode select switches were changed from pressurization mode back to normal mode, in accordance with the procedure, the pressurization fan S-96 turned off and Dampers 1B and 1C closed unexpectedly. These components actually returned to their pre-test configuration with the CRVS shifting to recirculation mode.

The initial event that occurred on November 20, 2012 concluded that damaged contacts on two separate relays had caused the failure of the Unit 2 CRVS to remain in pressurization mode, when selected to Bus H. This conclusion was based on voltage and continuity checks of the circuit with the system in the

unanticipated alignment during the re-performance of the radiation monitor functional test. Relay and contact states were also checked during the re-performance. Failure of the contacts to fully open, due to the degraded condition, provided a reasonable explanation of a high contact resistance that shifted the CRVS back to recirculation mode.

The results of this first troubleshooting effort were factored into the investigation of the second (discussed below), duplicate event when selected to the opposite Bus (F). It was this second investigation that determined the pressurization fan pressure switches were energizing due to an increased duct static pressure and impacting the seal-in circuit. This was missed in the first troubleshooting due to the timing of when some of the checks were made with respect to fan start and shutdown (increasing or decreasing fan discharge (duct) pressure). Knowing the time-based nature of the pressure switches energizing and deenergizing and the fact that the duct pressure had been recently increased due to a recent system flow balance allowed the information of this first troubleshooting effort to support the results of the second effort.

A problem with the pressure switches was further discounted in the first troubleshooting effort due to the design verification testing and flow balance that had occurred following the installation of a new backdraft damper in the Units 1 and 2 CRVS, supported by continuity checks of the circuit. The results were satisfactory indicating the system instrumentation was functioning correctly.

Purpose for Change

During performance of surveillance test procedure (STP) I-118A, "Functional Test of Control Room Pressurization Rad Monitor RM-54," on November 27, 2012, an unexpected change in CRVS modes occurred. When the Unit 2 CRVS mode select switches were changed from the pressurization mode to the normal mode, in accordance with the procedure, the pressurization fan S-97 turned off and Dampers 1 and 1A closed unexpectedly. These components returned to their pre-test configuration with the CRVS shifting to the recirculation mode.

It was determined the CRVS actuation relays were not capable of properly maintaining the CRVS operation in the pressurization mode when actuated from a high radiation or Containment Phase A Isolation signal. TS 3.3.7, CRVS actuation instrumentation, Condition B (one or more Functions with two channels or two trains inoperable) was entered on November 27, 2012. Required action B.1.1, to place one CRVS train in pressurization mode, and Required Action B.1.2, to enter the applicable conditions and required actions for one CRVS train made inoperable by inoperable CRVS actuation instrumentation were entered immediately. To meet TS 3.3.7 Required Action B.1.2, TS 3.7.10 Condition A Required Action A.1 was entered on November 27, 2012, at 20:38 PST. The associated completion time will expire on December 4, 2012, at 20:38 PST, after

which the shutdown of both units is required by TS 3.7.10 Condition C. Since TS 3.3.7 Required Actions B.1.1 and B.1.2 are immediate actions that have been completed, the allowable time with the inoperable CRVS actuation instrumentation is limited by the TS 3.7.10 Required Action A.1 completion time. Both DCPP Unit 1 and Unit 2 are currently operating in TS MODE 1.

DCPP Units 1 and 2 are currently in TS 3.7.10 Required Action B.3, which expires on December 30, 2012, at 04:00 PST. This action was entered to implement the design change that installed backdraft dampers in the Unit 1 and 2 CRVS trains. TS 3.7.10 Condition B will be exited when the dose analysis has been updated and an associated prompt operability assessment has been revised to reflect the system modifications and modifications to the analyses. Additionally, a commitment was made in PG&E Letter DCL-12-091 dated September 27, 2012, to submit a revised control room dose analysis of record for NRC approval following analyses.

Placing one CRVS train in pressurization mode accomplishes the actuation instrumentation function that is lost and places the unit in a conservative mode of operation. In the event of any accident condition which would challenge the CRVS function, having one CRVS train in pressurization mode ensures that the system function is accomplished. The second available standby CRVS train can also be manually aligned in the event of an accident in this configuration. Therefore, all design basis accident requirements continue to be met, even assuming a single failure, by the pre-existing alignment of one CRVS train in pressurization mode and by operator action to manually start the available standby CRVS train, if necessary. Only one CRVS train is normally placed in the pressurization mode at any time, with the other train in the recirculation mode.

With one CRVS train manually placed in the pressurization mode, if an automatic actuation due to a high radiation or Containment Phase A Isolation signal occurs, the CRVS train will remain in the pressurization mode and will not change to the recirculation mode. In addition, the other CRVS train will not go into pressurization mode since the control system logic will not allow it. The pressure switch interlocks (indicating a running fan on the opposite unit) prevent the opposite unit from starting either of its pressurization fans.

An operations shift order has been put in place to ensure the CRVS train placed in the pressurization mode to meet TS 3.3.7 Required Action B.1.1 is maintained in the pressurization mode. This shift order will remain in place, except as required for restoration testing, until the completion of the modification and required testing to restore the CRVS actuation relays and both CRVS trains to OPERABLE status.

With the one CRVS train placed in the pressurization mode manually, via the mode selector switch, a subsequent pressurization system inlet high radiation signal will not result in an automatic start of an opposite unit pressurization fan

and coincident shift of pressurization source. However, the high radiation condition would bring in a control room alarm requiring operators to manually align the pressurization system intake to the unit with the lowest radiation.

To restore the TS 3.3.7 CRVS actuation instrumentation to OPERABLE status, a modification to the pressurization fan discharge pressure logic is required. The time to perform the modification, perform the required post-modification and surveillance testing, and to return the instrumentation to service is expected to be completed by December 10, 2012, at 20:38 PST. This exceeds the TS 3.7.10 Required Action A.1, 7 day completion time that will expire on December 4, 2012, at 20:38 PST, by 6 days. The proposed change will allow completion of the modification and required testing to restore the CRVS actuation relays and both CRVS trains to OPERABLE status.

The cause of the inoperability of the CRVS actuation circuitry was determined to be due to a recent CRVS modification, which included system flow balancing, that added backflow dampers on October 4 and October 6, 2012, and re-balanced the system, which increased the operating pressure of the CRVS. Specifically, when a high radiation or Containment Phase A Isolation signal automatic actuation signals occurs, the required unit's CRVS will shift to the pressurization mode, but will shortly thereafter change mode to the recirculation mode. The change to the recirculation mode will occur due to the actuation of pressurization fan discharge pressure switches on high pressure that causes the pressurization mode seal-in circuit to de-energize, resulting in shutdown of the required pressurization fan. Manually placing one CRVS train in pressurization mode accomplishes the actuation instrumentation function.

The identification that the CRVS actuation relays are not capable of properly maintaining the CRVS operation in the pressurization mode when automatically actuated is an emergent condition identified on November 27, 2012. A review of the history since the last successful performance of the CRVS automatic actuation relay surveillance identified that the installation of backdraft dampers in the CRVS along with a rebalance of the system flows resulted in an increase in the static pressure of the pressurization fan discharge header and an unintended adverse impact on the operation of the pressurization fan discharge pressure switches.

Due to the complexity of the design change which will be performed on energized circuits, and included time for extensive post modification testing prior to restoration to OPERABLE, additional time is required.

Activities to prepare for and perform repairs to the CRVS actuation instrumentation are currently in progress and are being worked on a 24 hour schedule until completion.

3. TECHNICAL EVALUATION

CRVS

The CRVS provides a protected environment from which occupants can control the units from the common control room following an uncontrolled release of radioactivity, hazardous chemicals, or smoke.

The CRVS consists of two independent, redundant trains that recirculate and filter the air in the control room envelope (CRE) and a CRE boundary that limits the inleakage of unfiltered air (one train from each unit). Each CRVS train consists of a heater, a prefilter, a high efficiency particulate air (HEPA) filter, an activated charcoal adsorber section for removal of gaseous activity (principally iodines), and one pressurization supply fan, one filter booster fan, and one main supply fan. Ductwork, valves or dampers, doors, barriers, and instrumentation also form part of the system.

The CRVS is an emergency system, parts of which may also operate during normal unit operations. Upon receipt of an actuating signal, the normal air supply to the CRE is isolated, and the stream of outside ventilation air from the pressurization system and recirculated control room air is passed through the system filter. The pressurization system draws outside air from either the north end or the south end of the turbine building based upon either the unit with the SI signal or radiation conditions at the pressurization duct inlets. The prefilters remove any large particles in the air, to prevent excessive loading of the HEPA filters and charcoal adsorbers. The heaters are important to the effectiveness of the charcoal adsorbers but are not required for CRVS operability.

The CRE is the area within the confines of the CRE boundary that contains the spaces that control room occupants inhabit to control the unit during normal and accident conditions. This area encompasses the control room, and may encompass other non-critical areas to which frequent personnel access or continuous occupancy is not necessary in the event of an accident. The CRE is protected during normal operation, natural events, and accident conditions. The CRE boundary is the combination of walls, floor, roof, ducting, doors, penetrations and equipment that physically form the CRE. The operability of the CRE boundary must be maintained to ensure that the inleakage of unfiltered air into the CRE will not exceed the inleakage assumed in the licensing basis analysis of design basis accident (DBA) consequences to CRE occupants. The CRE and its boundary are defined in the Control Room Envelope Habitability Program.

Manual or automatic actuation of the CRVS places the system in pressurization mode. Manual actuation places the system in recirculation (mode, or smoke removal mode. The CRVS is normally maintained in normal mode.

Pressurization mode is the only required mode for the CRVS to be considered OPERABLE. The other modes of operation are useful for certain emergency situations, such as control room smoke removal; but they are not required for CRVS operability. Actuation of the system to the recirculation mode closes the unfiltered outside air intake and unfiltered exhaust dampers, and aligns the system for recirculation of the air within the CRE through the redundant trains of HEPA and the charcoal filters. The pressurization mode adds pressurization and filtered ventilation of the air supply to the CRE. When one units CRVS train is in pressurization mode, the other CRVS train switches to recirculation. Additional information on the CRVS modes of operation is contained in Final Safety Analysis Report Update (FSARU) Section 12.2.2.2.

Outside air is filtered, diluted via pressure equalization with air from the mechanical equipment room, and added to the air being recirculated from the CRE. Pressurization of the CRE minimizes infiltration of unfiltered air through the CRE boundary from all the surrounding areas adjacent to the CRE boundary.

The air entering the CRE is continuously monitored by radiation detectors. One normal air intake radiation detector output above the setpoint will cause actuation of the pressurization mode.

A single train CRVS will pressurize the CRE to about 0.125 inches water gauge relative to external areas adjacent to the CRE boundary. The CRVS operation in maintaining the CRE habitable is discussed in the FSARU, Section 9.4.1.

Redundant supply and recirculation trains provide the required filtration should an excessive pressure drop develop across the other filter train. Normally open isolation dampers are arranged in series pairs so that the failure of one damper to shut will not result in a breach of isolation. The CRVS is designed in accordance with Seismic Category I requirements.

The CRVS is designed to maintain a habitable environment in the CRE for the duration of the most severe DBA without exceeding a 5 rem whole body dose or its equivalent to any part of the body. This basis is consistent with 1971 General Design Criterion 19.

FSARU Section 15.5.17.10 discusses the post-accident control room exposure calculations. Exposures to control room personnel have been estimated for a design basis loss-of-coolant accident to evaluate the adequacy of the control room shielding, the adequacy of the control room ventilation system, and the adequacy of the control room administration in limiting exposures to the specified limits. As previously discussed, a commitment was made in PG&E Letter DCL-12-091 dated September 27, 2012, to submit a revised control room dose analysis of record for NRC approval following analyses.

CRVS Actuation Instrumentation

The CRVS provides an enclosed control room environment from which both units can be operated following an uncontrolled release of radioactivity. Upon receipt of an actuation signal, the CRVS shifts from normal operation and initiates filtered ventilation and pressurization of the control room.

The CRVS actuation Instrumentation system is common to both units and consists of two trains of automatic actuation relays (one train in each unit) and two channels of control room radiation atmosphere air intakes (two intake systems). One channel of control room radiation atmosphere air intakes (normal air intake) consists of at least one of two redundant radiation monitors in a respective air intake to the control room areas. These channels therefore, have two detectors in each of the two normal control room air intakes. Since they take suction from a common area, the north and south sides of the mechanical equipment room, only one detector per unit is required in each air intake to provide protection against a single failure. Therefore, the total required detectors is two for the common control room area (one in each intake). One train of automatic actuation relays consists of two sets of actuation relay logic. Each set receives an input from its respective radiation monitor and a Phase A/safety injection signal from a train of the solid state protection system (SSPS). Only one relay logic set in each unit is necessary to satisfy a TS train requirement. A Phase A containment isolation signal or a high radiation signal from either of the required detectors in the normal air intake will initiate CRVS pressurization from the opposite unit pressurization system (the system selects the opposite unit assuming that pressurization would be the lowest radiation level). A subsequent high radiation signal from the pressurization intake that is not in operation (each pressurization intake, one on the north end of the turbine building and one on the south, has two additional radiation monitors) will swap the operating pressurization intake. Only the actuation of the pressurization system via a safety injection signal directly is processed through the SSPS. The actuation of the pressurization system via an atmosphere intake monitor (normal air intake) directly actuates the CRVS actuation relays independent of the SSPS. The control room operator can also initiate CRVS pressurization by manual switches in the control room.

The CRVS has two additional manually selected emergency operating modes; smoke removal and recirculation. Neither of these modes are required for the CRVS to be OPERABLE, but they are useful for certain non-DBA circumstances.

The control room must be kept habitable for the operators stationed there during accident recovery and post-accident operations. The CRVS acts to terminate the supply of unfiltered outside air to the control room, initiate filtration, and pressurize the control room. These actions are necessary to ensure the control room is kept habitable for the operators stationed there during accident recovery

and post-accident operations by minimizing the radiation exposure of control room personnel.

In TS MODES 1, 2, 3, and 4, the radiation monitor actuation of the CRVS is a backup for the Phase A signal actuation. This ensures initiation of the CRVS pressurization mode during a loss of coolant accident or steam generator tube rupture involving a release of radioactive materials. Additionally, the CRVS actuation instrumentation must be OPERABLE in TS MODES 5 and 6 for a waste gas decay tank rupture accident, or a fuel handling accident or core alteration accident.

The TS 3.3.7 Limiting Condition for Operation (LCO) requires two trains of actuation relays OPERABLE to ensure that no single random failure can prevent automatic actuation of the pressurization system. Since each unit has one train of actuation relays consisting of two sets of actuation logic, each unit must have at least one logic set for both trains to be considered OPERABLE. In addition, the LCO specifies two required channels of control room normal air intake radiation monitors to ensure that the radiation monitoring instrumentation necessary to initiate the CRVS pressurization system remains OPERABLE. One channel consists of two radiation monitors per intake, however, only one monitor is necessary for the channel to be OPERABLE.

The TS 3.3.7 LCO requirements ensure that four types of instrumentation necessary to initiate the CRVS pressurization system are OPERABLE. These are described below.

1. Manual Initiation

The LCO requires two trains of manual initiation instrumentation to be OPERABLE. The operator can initiate the CRVS pressurization mode at any time by using either of two switches in the control room. This action will cause actuation of all components in the same manner as any of the automatic actuation signals.
The LCO for manual initiation ensures the proper amount of redundancy is maintained in the manual actuation circuitry to ensure the operator has manual initiation capability.

2. Automatic Actuation Relays

The LCO requires two trains of actuation relays OPERABLE to ensure that no single random failure can prevent automatic actuation of the pressurization system. Since each unit has one train of actuation relays consisting of two sets of actuation logic, each unit must have at least one logic set for both trains to be considered OPERABLE.

If one or more of the safety injection or Phase A functions becomes inoperable in such a manner that only the CRVS function is affected (such as a Phase A slave relay output to the CRVS logic), the conditions applicable to their safety injection or Phase A functions need not be entered. The less restrictive TS actions specified for inoperability of the CRVS functions specify sufficient compensatory measures for this case.

3. Control Room Radiation Atmosphere Air Intakes (normal air intake)

The LCO specifies two required channels of control room normal air intake radiation monitors to ensure that the radiation monitoring instrumentation necessary to initiate the CRVS pressurization system remains OPERABLE. One channel consists of two radiation monitors per intake, however, only one monitor is necessary for the channel to be OPERABLE.

4. Safety Injection

A safety injection signal does not directly initiate CRVS pressurization, but a Containment Phase A signal does and Phase A is initiated by a safety injection.

Change to TS 3.7.10 Required Action A.1 Completion Time

Although there are two trains of CRVS automatic actuation relays inoperable, one CRVS train is in pressurization mode which accomplishes the CRVS automatic actuation instrumentation function and results in the CRVS being capable to perform its accident mitigation function.

The CRVS is required to maintain a habitable environment in the CRE for the duration of the most severe DBA without exceeding a 5 rem whole body dose or its equivalent to any part of the body. The requested change will not result in an increase in dose to the operators because the redundant CRVS train remains OPERABLE and in the pressurization mode. The pressurization mode is the only required mode for the CRVS to be considered OPERABLE. The increase in the completion time for one inoperable CRVS train does not affect the types or amounts of radionuclides released following an accident, or the initiation and duration of their release. With the change in completion time, there continues to be a low probability of an accident occurring during the time one CRVS train is inoperable and therefore there is no significant increase in the consequences of DBAs.

In the event that the CRVS train that is OPERABLE and in the pressurization mode becomes inoperable, the control room operator can place the other CRVS train, that is available but declared inoperable, in the pressurization mode by use of manual switches in the control room.

Probabilistic Risk Assessment (PRA) Impact

The potential risk increase to the plant due to maintaining the CRVS with one CRVS train in pressurization mode beyond the current allowed TS 3.7.10 Required Action A.1 completion time of 7 days up to 13 days while restoring the inoperable CRVS train to OPERABLE status is not significant. The failure of CRVS does not cause an initiating event, and does not directly mitigate core damage or large early releases. The CRVS does perform functions which impact other PRA functions and fire mitigation, and risk insights of the impact of the CRVS status on these functions are discussed below.

The CRVS system provides cooling to the SSPS room. As noted above, the current status of the CRVS system is such that it is functionally available with one train in operation. The second train can be manually started and aligned if necessary, and is therefore also functionally available. Therefore, the cooling function of the CRVS remains available from both trains of the CRVS in the current configuration of the system.

In the event of a control room fire, the CRVS can be manually aligned to the smoke removal mode or be secured to minimize the recirculation of smoke in the control room. If the smoke removal mode is assumed to be unavailable due to the requirement to maintain the pressurization mode while the system is inoperable, then there is a small risk impact to the mitigation of control room fires because without smoke removal, there is an increased likelihood of control room abandonment due to environmental conditions from the fire. Based on a PRA assessment performed as part of the ongoing Diablo Canyon National Fire Protection Association 805 transition project, the increase in the Control Room abandonment frequency between operating with the CRVS in smoke removal mode and without the CRVS is estimated to be on the order of 1E-07/year. This corresponds to an increase of the Incremental Conditional Core Damage Probability of approximately 2E-09 for a 7 day extension (bounds the requested 6 day Completion Time extension) of the TS 3.7.10 Required Action A.1 completion time, which is considered a very small increase based on Regulatory Guide 1.174 guidance.

The failure of the CRVS pressurization function does not impact mitigation of any of the initiators modeled in the PRA and thus a failure of the pressurization function does not directly contribute to an increase of the core damage frequency (CDF) or Large Early Release Frequency (LERF). The failure of the CRVS pressurization function will not result in a new type of accident sequence.

Based on the above qualitative and quantitative risk insights above, the proposed 6 day extension of the CRVS TS 3.7.10 ACTION A.1 COMPLETION TIME has a very minimal risk impact on CDF and LERF.

Risk Reduction Actions

Activities to prepare for and perform repairs to the CRVS actuation instrumentation are currently in progress and are being worked on a 24 hour schedule until completion per DCPP Administrative Procedure AD7.ID4, "On-line Maintenance Scheduling." In addition, the following compensatory actions are being taken and will continue until the maintenance and post-maintenance testing are complete, in order to minimize the increase in risk during the 13 day period when one CRVS train is inoperable.

- During the repair of the CRVS actuation circuitry, no other planned maintenance or testing will be performed that would render the CRVS or associated support systems inoperable.

- Any planned CRVS maintenance and surveillance testing will be suspended until the repair and testing of the CRVS actuation circuitry is completed and both CRVS trains are returned to service.

- No planned increased PRA risk configuration (yellow risk or higher) will be allowed during the repair of the CRVS actuation circuitry.

- Emergent increased PRA risk configuration (yellow risk or higher) will require additional risk mitigation actions.

- A standing order will be prepared for the control room operators to provide a written instruction to place the standby CRVS train in the pressurization mode in the event that the running CRVS train becomes inoperable.

4. REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

DCPP was designed to the 1967 10 CFR 50, Appendix A, "General Design Criteria for Nuclear Power Plants," and was licensed to meet the intent of the 1971 GDC. 10 CFR 50, Appendix A, "General Design Criteria for Nuclear Power Plants," states:

"Criterion 19--Control room. A control room shall be provided from which actions can be taken to operate the nuclear power unit safely under normal conditions and to maintain it in a safe condition under accident

conditions, including loss-of-coolant accidents. Adequate radiation protection shall be provided to permit access and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of 5 rem whole body, or its equivalent to any part of the body, for the duration of the accident. Equipment at appropriate locations outside the control room shall be provided (1) with a design capability for prompt hot shutdown of the reactor, including necessary instrumentation and controls to maintain the unit in a safe condition during hot shutdown, and (2) with a potential capability for subsequent cold shutdown of the reactor through the use of suitable procedures."

With the changes proposed in this LAR, DCPP continues to meet the intent of GDC 19-1971.

4.2 Significant Hazards Consideration

PG&E has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

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

Response: No.

The requested change does not physically alter any plant structures, systems, or components, and does not affect or create new accident initiators or precursors. The completion time (CT) to perform a required action is not an accident initiator; therefore, there is no effect on the probability of accidents previously evaluated.

The control room ventilation system (CRVS) is required to maintain a habitable environment in the control room envelope for the duration of the most severe Design Basis Accident (DBA) without exceeding a 5 rem whole body dose or its equivalent to any part of the body. The requested change to allow one CRVS train to be inoperable for up to 13 days does not significantly increase the consequences of those accidents due to the low probability of an accident occurring during the time of CRVS train inoperability. Additionally, the redundant CRVS train remains OPERABLE and in the pressurization mode required to perform its required function. The requested change does not affect the types or amounts of radionuclides released following an accident, or the initiation and duration of their release.

Therefore, the proposed change does 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 change to allow one CRVS train to be inoperable for up to 13 days does not introduce new failure modes or mechanisms associated with plant operation. Furthermore, the 13 day CT associated with the restoration of the CRVS train would not create a new accident type.

Therefore, the proposed change does 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 change to completion time requirement for one inoperable CRVS train in TS 3.7.10 does not affect any safety limits, other operational parameters, or setpoints in the TS, nor does it affect any margins assumed in the accident analyses. The redundant CRVS train is OPERABLE and can perform the required design function.

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

Based on the above evaluation, PG&E concludes that the proposed change 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.

4.3 Conclusions

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

5. ENVIRONMENTAL CONSIDERATION

PG&E has evaluated the proposed amendment and has determined that the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6. REFERENCES

1. CFR 50, Appendix A, “General Design Criteria for Nuclear Power Plants,” 1967 and 1971 versions
2. Diablo Canyon Power Plant Final Safety Analysis Report Update, November, 2011
3. Regulatory Guide 1.174, Revision 2, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions On Plant-Specific Changes to the Licensing Basis," May 2011

Proposed Technical Specification Change(s)

3.7 PLANT SYSTEMS

3.7.10 Control Room Ventilation System (CRVS)

LCO 3.7.10 Two CRVS trains shall be OPERABLE.

----------NOTE----------
The control room envelope (CRE) boundary may be opened intermittently under administrative controls.

APPLICABILITY: MODES 1, 2, 3, 4, 5, and 6.
During movement of recently irradiated fuel assemblies.

ACTIONS

----------NOTE----------
ACTIONS apply simultaneously to both units.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CRVS train inoperable for reasons other than Condition B.	A.1 Restore CRVS train to OPERABLE status.	7 days (1)
B. One or more CRVS trains inoperable due to inoperable CRE boundary in MODE 1, 2, 3, or 4.	B.1 Initiate action to implement mitigating actions.	Immediately
	AND	
	B.2 Verify mitigating actions ensure CRE occupant exposures to radiological hazards will not exceed limits, and CRE occupants are protected from smoke and chemical hazards.	24 hours
	AND	
	B.3 Restore CRE boundary to OPERABLE status.	90 days
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4.	C.1 Be in MODE 3.	6 hours
	AND	
	C.2 Be in MODE 5.	36 hours

Insert 1

Move C to page 3.7-18a

(continued)

Insert C from page 3.7-18

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition A not met in MODE 5 or 6, or during movement of recently irradiated fuel assemblies.	D.1.1 Place OPERABLE CRVS train in pressurization mode. AND D.1.2 Verify that the OPERABLE CRVS train is capable of being powered by an OPERABLE emergency power source. OR D.2 Suspend movement of recently irradiated fuel assemblies.	Immediately Immediately Immediately

(continued)

TS 3.7.10 Insert

Insert 1

(1) The Completion Time that one CRVS train can be inoperable as specified by Required Action A.1 may be extended beyond the 7 day completion time up to 13 days to support repair and restoration of the CRVS actuation instrumentation which required TS 3.7.10 Condition A entry per TS 3.3.7 Required Action B.1.2. Upon completion of the repair and restoration, this footnote is no longer applicable and will expire at 20:38 PST on December 10, 2012.

Revised Technical Specification Page(s)

Remove Page	Insert Page
3.7.18	**3.7.18**
3.7.18A	**3.7.18A**

3.7 PLANT SYSTEMS

3.7.10 Control Room Ventilation System (CRVS)

LCO 3.7.10 Two CRVS trains shall be OPERABLE.

----------NOTE----------
The control room envelope (CRE) boundary may be opened intermittently under administrative controls.

APPLICABILITY: MODES 1, 2, 3, 4, 5, and 6.
During movement of recently irradiated fuel assemblies.

ACTIONS

----------NOTE----------
ACTIONS apply simultaneously to both units.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CRVS train inoperable for reasons other than Condition B.	A.1 Restore CRVS train to OPERABLE status.	7 days [(1)]
B. One or more CRVS trains inoperable due to inoperable CRE boundary in MODE 1, 2, 3, or 4.	B.1 Initiate action to implement mitigating actions.	Immediately
	AND	
	B.2 Verify mitigating actions ensure CRE occupant exposures to radiological hazards will not exceed limits, and CRE occupants are protected from smoke and chemical hazards.	24 hours
	AND	
	B.3 Restore CRE boundary to OPERABLE status.	90 days

(continued)

(1) The Completion Time that one CRVS train can be inoperable as specified by Required Action A.1 may be extended beyond the 7 day completion time up to 13 days to support repair and restoration of the CRVS actuation instrumentation which required TS 3.7.10 Condition A entry per TS 3.3.7 Required Action B.1.2. Upon completion of the repair and restoration, this footnote is no longer applicable and will expire at 20:38 PST on December 10, 2012.

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4.	C.1	Be in MODE 3.	6 hours
	AND		
	C.2	Be in MODE 5.	36 hours
D. Required Action and associated Completion Time of Condition A not met in MODE 5 or 6, or during movement of recently irradiated fuel assemblies.	D.1.1	Place OPERABLE CRVS train in pressurization mode.	Immediately
		AND	
	D.1.2	Verify that the OPERABLE CRVS train is capable of being powered by an OPERABLE emergency power source.	Immediately
	OR		
	D.2	Suspend movement of recently irradiated fuel assemblies.	Immediately

(continued)

List of Regulatory Commitments

Commitment 1

An operations shift order has been put in place to ensure the CRVS train placed in the pressurization mode to meet TS 3.3.7 Required Action B.1.1 is maintained in the pressurization mode. This shift order will remain in place, except as required for restoration testing, until the completion of the modification and required testing to restore the CRVS actuation relays and both CRVS trains to OPERABLE status.

Commitment 2

The following compensatory actions are being taken and will continue until the maintenance and post-maintenance testing are complete, in order to minimize the increase in risk during the 13-day period when one CRVS train is inoperable.

- During the repair of the CRVS actuation circuitry, no other planned maintenance or testing will be performed that would render the CRVS or associated support systems inoperable.
- Any planned CRVS maintenance and surveillance testing will be suspended until the repair and testing of the CRVS actuation circuitry is completed and both CRVS trains are returned to service.
- No planned increased PRA risk configuration (yellow risk or higher) will be allowed during the repair of the CRVS actuation circuitry.
- Emergent increased PRA risk configuration (yellow risk or higher) will require additional risk mitigation actions.
- A standing order will be prepared for the control room operators to provide a written instruction to place the standby CRVS train in the pressurization mode in the event that the running CRVS train becomes inoperable.