

# Diablo Canyon 2

## 3Q/2007 Plant Inspection Findings

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### Initiating Events

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### Mitigating Systems

**Significance:**  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Scope Reactor Cavity and Containment Structure Sump Level Indication Systems Into the Maintenance Rule Program**

GREEN. The inspectors identified a Green, noncited violation of 10 CFR 50.65(b) was identified for the failure of engineering personnel to include the reactor cavity and containment structure sump level indication systems into the scope of its program for monitoring the effectiveness of maintenance. Specifically, between April 14, 2007 and May 17, 2007, Units 1 and 2 experienced multiple failures of the reactor cavity and containment structure sump level indications. These systems are required by the plant's Technical Specifications in order to promptly identify and take actions for reactor coolant system leaks before they can potentially develop into a loss of coolant accident. Additionally, the inspectors discovered that Emergency Operating Procedure ECA-3.1, "SGTR With Loss of Reactor Coolant - Subcooled Recovery Desired," Revision 18, utilized the containment structure sump level indication for mitigative actions. Based on the fact that the systems are used to mitigate a loss of coolant accident and were used in the emergency operating procedures, the inspectors determined that the systems should have been included in Pacific Gas and Electric Company's program for monitoring the effectiveness of maintenance. This issue was entered into Pacific Gas and Electric Company's corrective action program as Action Request A0696295.

The finding is greater than minor because it is associated with the Mitigating Systems Cornerstone attribute of equipment performance and affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Using Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance since it did not represent a loss of system safety function, an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time, or screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event. This finding has a crosscutting aspect in the area of human performance, associated with the decision-making component, in that Pacific Gas and Electric Company failed to use conservative assumptions in evaluating the function and use of the sump level indications in mitigating the effects of design basis accidents (H.1(b)).

Inspection Report# : [2007003](#) (*pdf*)

**Significance:**  Feb 16, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Update 480 V Switchgear Heat Dissipation Calculation**

An NRC-identified, noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was determined for the failure of engineering personnel to appropriately update the heat dissipation calculation for vital 480 V switchgear rooms. Since 1994, Calculation 90-DC, "Heat Dissipation of Electrical Equipment – 480 V Switchgear," Revision 4, had not been updated with changes in analyzed bus electrical loading. The calculation was input to other ventilation calculations to determine air flow balancing to 480 V switchgear and inverter rooms. This issue was entered into Pacific Gas and Electric Company's corrective action program as Action Requests A0688992 and A0689527.

The finding is greater than minor because it is associated with the Mitigating Systems Cornerstone attribute of

procedure quality and affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance since it did not represent a loss of system safety function, an actual loss of safety function of a single train for greater than its Technical Specifications allowed outage time, or screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event.

Inspection Report# : [2007002](#) (*pdf*)

**Significance:**  Jan 11, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Use Correct Design Inputs in Determination of a Potential for Choking Flow/Cavitation Across the Auxiliary Service Water Throttled Butterfly Valves**

Green. The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control, for the failure to translate design basis information into specifications and procedures. The team identified that a nonconservative flow rate was used as an input in engineering design calculations resulting in the potential for choked flow at the discharge valves for the Unit 1 auxiliary service water system. Choked flow turbulence is a wear concern for these components, and can result in system failure. The licensee entered this finding into their corrective action program as Action Requests A0678338 and A0678472.

The finding is more than minor because the error affected the Mitigating System Cornerstone objective (Design Control attribute) of ensuring availability, reliability, and capability of the auxiliary service water systems to respond to initiating events to prevent undesired consequences. Using the Manual Chapter 0609, Significance Determination Process, Phase 1 screening worksheet, the issue screened as having very low safety significance because 1) did not represent a loss of system safety function; and 2) did not represent an actual loss of safety function of one or more non-technical specification trains of equipment; and did not screen as potentially risk significant because of a seismic, flooding, or severe weather initiating event.

Inspection Report# : [2006011](#) (*pdf*)

**Significance:**  Jan 11, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Consider Instrument Uncertainty in Surveillance Requirements for Technical Specifications LCO 3.7.9**

Green. The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control, for the failure to demonstrate that the acceptance criteria for surveillance tests had conservatively accounted for uncertainties in determination of the minimum allowed ultimate heat sink temperature. Specifically, the team identified that the acceptance criteria specified in the Surveillance Test Procedure STP I-1A, Routine Shift Checks Required by the Licensee, Revision 101, did not correctly account for instrument uncertainty. The licensee entered this finding into their corrective action program as Action Request A0682398.

The finding is more than minor because the error affected the Mitigating System cornerstone objective (Design Control attribute) of ensuring availability, reliability, and capability of systems needed to respond to initiating events to prevent undesired consequences. Using the Manual Chapter 0609, Significance Determination Process, Phase 1 screening worksheet, the issue screened as having very low safety significance because 1) did not represent a loss of system safety function; and 2) did not represent an actual loss of safety function of one or more non-technical specification trains of equipment; and did not screen as potentially risk significant because of a seismic, flooding, or severe weather initiating event.

Inspection Report# : [2006011](#) (*pdf*)

**Significance:**  Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

**Inadequate Change to Auxiliary Saltwater Pump Routine Surveillance Test Acceptance Criteria**

GREEN. An NRC-identified, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was determined for the failure of engineering personnel to apply adequate design control measures. Specifically, on February 9, 2006, engineering personnel changed the acceptance criteria in the auxiliary saltwater pump surveillance test from greater than zero packing leak-off to zero packing leak-off with packing gland temperature less than 120°F. The acceptance criteria change was based on engineering judgment even though vendor documentation called for greater than zero packing leak-off to prevent packing and pump shaft damage. This issue was entered into Pacific Gas and Electric Company's corrective action program as Action Request A0684631.

The finding is greater than minor because it is associated with the Mitigating Systems Cornerstone attribute of procedure quality and affects the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to be of very low safety significance because it did not represent an actual loss of system safety function, did not represent an actual loss of a single train for greater than its Technical Specification allowed outage time, and the finding did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a cross-cutting aspect in the area of human performance because engineering personnel failed to provide up-to-date design documentation to support a design change in surveillance test acceptance criteria.  
Inspection Report# : [2006005](#) (*pdf*)

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## Barrier Integrity

**Significance:**  Jan 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

### **Inappropriate Temporary Modification to Control Room Condenser**

An NRC-identified, noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was determined for the failure of maintenance personnel to make modifications to the Control Room Condenser CR-38 filter mount consistent with the component's design documentation and Procedure CF4.ID7, "Temporary Modifications," Revision 18. Specifically, on August 15, 2006, maintenance personnel used vice-grip pliers, C-clamps, and plastic tie-wraps to secure in place the filter mount, which was significantly corroded. The modification had not been documented or analyzed at the time it was placed into service. After subsequent engineering reviews, the condenser was considered inoperable due to the loss of seismic qualification. This issue was entered into Pacific Gas and Electric Company's corrective action program as Action Request A0688202.

The finding is greater than minor because it is associated with the Barrier Integrity Cornerstone attribute of design control for the control room barrier and affects the associated cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Using the Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because the finding did not represent degradation of the barrier function of the control room against radiological hazards, smoke, or toxic atmosphere. This finding has a crosscutting aspect in the area of problem identification and resolution, associated with the corrective action program component, in that maintenance personnel failed to adequately identify the degraded condition of the control room condenser when it was initially discovered.

Inspection Report# : [2007002](#) (*pdf*)

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## Emergency Preparedness

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## Occupational Radiation Safety

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## Public Radiation Safety

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### Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

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### Miscellaneous

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