

## Diablo Canyon 2

### 3Q/2006 Plant Inspection Findings

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## Initiating Events

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## Mitigating Systems

**Significance:**  Sep 25, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Include Floor Drains Credited in the Flood Analysis Into the Maintenance Rule Program**

An NRC-identified, noncited violation of 10 CFR 50.65(b) was determined for the failure of engineering staff to include the auxiliary feedwater pump room floor drains within the scope of Pacific Gas and Electric Company's program for monitoring the effectiveness of maintenance at the Diablo Canyon Power Plant. Specifically, Calculation 76060, "Flooding Analysis G Area and Auxiliary Building," Revision 1, assumes that at least two of the three floor drains in the auxiliary feedwater pump rooms would be able to remove up to 316 gpm of water in the event of a flood. Despite their credited function in the flood analysis, engineering staff did not scope them into their monitoring program. This issue was entered into Pacific Gas and Electric Company's corrective action program as Action Request A0678658.

The finding is greater than minor because it is associated with the Mitigating Systems cornerstone attribute of protection against external factors and affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the inspectors determined that this finding is of very low safety significance because the condition did not represent a loss of system safety function, did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time, did not represent an actual loss of one or more risk-significant non-Technical Specification trains of equipment for greater than 24 hours, and did not screen as potentially risk-significant due to seismic, flooding, or severe weather. This finding has a cross-cutting aspect in the area of problem identification and resolution associated with operating experience because engineering personnel did not effectively incorporate pertinent industry operating experience into their program for evaluating the effectiveness of maintenance performed on AFW pump room floor drains.

Inspection Report# : [2006004\(pdf\)](#)

**Significance:**  Aug 23, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Promptly Identify that the Correct Equipment Necessary for Implementing EOP for Inadequate Core Cooling Was Not Pre-staged**

An NRC-identified, noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to promptly identify a condition adverse to quality. Specifically, Pacific Gas and Electric Company failed to promptly identify that it had prestaged the wrong equipment (a flange hose connection with the wrong tread pattern) necessary to cross-connect the fire main water system to the auxiliary feedwater system during a loss of core cooling event. This performance deficiency was entered into Pacific Gas and Electric Company's corrective action program as Action Request A0676729.

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 Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the inspectors determined that this finding is of very low safety significance because the condition did not represent a loss of system safety function, did not represent an actual loss of safety function

of a single train for greater than its TS allowed outage time, did not represent an actual loss of one or more risk-significant non-TS trains of equipment for greater than 24 hours, and did not screen as potentially risk-significant due to seismic, flooding, or severe weather. This finding has a crosscutting aspect in the area of human performance associated with resources because the licensee did not ensure that equipment needed to perform an EOP was available and adequate to assure nuclear safety.

Inspection Report# : [2006004\(pdf\)](#)

**Significance:**  Apr 20, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

**Inadequate refueling procedure for draining and depressurizing the reactor coolant system**

An NRC-identified, non-cited violation of Technical Specification 5.4.1.a was determined for an inadequate procedure, Procedure OP A-2:II, "Reactor Vessel - Draining the RCS to the Vessel Flange - With Fuel in Vessel," Revision 33A. Specifically, on April 20, 2006, while operators depressurized the reactor coolant system (RCS), with water level 2 ft below the reactor vessel flange, the two required level instruments, wide-range reactor vessel refueling level indication system and LI-400, read 15 inches higher than actual reactor vessel water level. The inspectors determined that the procedure was not adequate because prior operating experience had not been incorporated into the procedure that demonstrated the level instruments would read non-conservatively during RCS depressurization. Also, Procedure OP A-2:II did not have criteria that alerted operators to abnormal level instrument deviations that may be caused by phenomenon outside of the level deviations expected by the RCS depressurization. Pacific Gas and Electric Company (PG&E) has planned to evaluate potential changes to Procedure OP A-2:II and RCS water level instrumentation when used during RCS depressurization. This issue was entered into PG&E's corrective action program as Action Requests A0664484, A0672419, and A0672422.

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 Inspection Manual Chapter 0609, Appendix G, Attachment 1, Checklist 3, the finding is determined to be of very low safety significance since an optional set of instrumentation provided accurate RCS level indication and there was no loss of RCS inventory control. The finding had a cross-cutting aspect in the area of human performance for resources because PG&E failed to ensure the adequacy of procedures used for reactor vessel level monitoring to ensure nuclear safety.

Inspection Report# : [2006003\(pdf\)](#)

**Significance:**  Nov 29, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Promptly Correct Emergency Core Cooling System Check Valve Back-Leakage**

An NRC-identified non-cited violation of 10 CFR Part 50, Criterion XVI, was identified for the failure to promptly correct Emergency Core Cooling System (ECCS) check valve back-leakage. Since 2000, Units 1 and 2 have experienced ECCS check valve back-leakage. Pacific Gas and Electric Company (PG&E) has failed to adequately take into consideration industry experience and provide for timely corrective actions regarding ECCS check valve back-leakage and its potential to cause gas-binding of ECCS pumps and/or water hammer of ECCS piping. This issue was entered into PG&E's corrective action program as Action Requests A0526037 and A0610421.

The finding is greater than minor because it is associated with the Mitigating Systems Cornerstone attribute of equipment performance 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 Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because it did not represent an actual loss of safety function, represent an actual loss of safety function for a single train for greater than the Technical Specification allowed outage time, or screen as potentially risk significant due to seismic, fire, flooding, or severe weather initiating events. The cause of the finding is related to the cross-cutting element of problem identification and resolution in that PG&E did not adequately evaluate and implement timely corrective actions to ECCS check valve back-leakage.

Inspection Report# : [2005005\(pdf\)](#)

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## Barrier Integrity

**Significance:**  May 03, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

### Failure to follow welding procedures

An NRC-identified, non-cited violation of Technical Specification 5.4.1 was identified because Pacific Gas and Electric Company (PG&E) failed to follow the procedure for ensuring that welding preheat temperatures were verified prior to welding. Specifically, during the replacement of Component Cooling Water Valves 279 and 280, which provide cooling to the reactor vessel support pads, PG&E failed to verify that the minimum welding preheat temperature of 50°F was met and could not demonstrate that the ambient temperature was greater than 50°F. PG&E entered the finding into their corrective action program as Action Request A0665588.

The finding was greater than minor because it was associated with the human performance attribute of the Barrier Integrity Cornerstone and impacted the cornerstone objective of providing reasonable assurance that physical design barriers, in this case the reactor coolant system, protect the public from radio-nuclide releases caused by accidents or events. The finding was determined to be of very low safety significance based on management review of the plant conditions at the time the performance deficiency occurred (defueled) and the condition was evaluated prior to the plant entering Mode 5.

Inspection Report# : [2006003\(pdf\)](#)

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## Emergency Preparedness

**Significance:** SL-IV Oct 20, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

### Failure to Accurately Assess and Report Performance Indicator Data

The inspector identified a noncited violation of 10 CFR Part 50.9 because Pacific Gas and Electric Company (PG&E) failed to provide complete and accurate information in a submittal of data for the emergency preparedness drill and exercise performance indicator. Specifically, PG&E staff failed to identify three missed opportunities for emergency notification accuracy during the second calendar quarter of 2005. PG&E took prompt action to correct the second quarter data, which resulted in the drill and exercise performance indicator color to cross from GREEN to WHITE. PG&E also initiated a 100 percent review of the second and third quarter drill and exercise performance indicator data and discovered one additional administrative error in the third quarter performance indicator data, which had been previously evaluated, but not yet reported to the NRC. PG&E had previously initiated a root cause evaluation in its corrective action program to determine the reason for the declining indicator and, subsequently, initiated another root cause evaluation to determine the reason for the failure to adequately evaluate and report the performance indicator data.

Because this issue affected the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process. Supplement 7, Section D.3, of the NRC Enforcement Policy describes this finding as a Severity Level IV violation. The issue is significant because it indicates a declining trend in the attention to detail shown by senior licensed operators in performing emergency notifications to the state and local authorities. This issue is documented in PG&E's corrective action program as Nonconformance Report N0002200. The finding had human performance cross-cutting aspects for the failure to provide accurate performance indicator data.

Inspection Report# : [2005005\(pdf\)](#)

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## Occupational Radiation Safety

**Significance:**  Apr 18, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to survey to identify the magnitude and extent of radiation levels to identify radiological hazards**

The inspectors identified a non-cited violation of 10 CFR 20.1501(a) because Pacific Gas and Electric Company (PG&E) failed to survey to determine the extent and magnitude of radiation levels and evaluate the radiological hazards.

Specifically, on April 18, 2006, the inspectors identified elevated radiation levels near two chemical volume control system valves located in a hallway on the 100-foot elevation of Unit 2. PG&E confirmed elevated radiation levels near the valves were as high as 200 millirem per hour on contact and 28 millirem per hour at 30 centimeters. PG&E surveyed the area and entered the finding into their corrective action program as Action Request A0665039.

The finding was greater than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute of Exposure Control and Monitoring and affected the cornerstone objective to ensure the adequate protection of a worker's health and safety from exposure to radiation because workers could have unknowingly received additional radiation exposure. When going through the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because it was not an as low as is reasonably achievable finding. There was no overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised. The finding also had cross-cutting aspects associated with human performance because adequate resources were not established for the survey requirements.

Inspection Report# : [2006003\(pdf\)](#)

**Significance:**  Nov 15, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Post A Radiation Area**

The inspector identified a non-cited violation of 10 CFR 20.1902 because Pacific Gas and Electric Company (PG&E) failed to post a radiation area. Specifically, PG&E did not post an area within Vault 26 in which the radiation dose rates were approximately 30 millirem per hour at 30 centimeters from the surfaces of radioactive material storage containers. The finding was entered into PG&E's corrective action program as Action Request A0652226 and planned corrective action is still being evaluated.

The finding was more than minor because it was associated with one of the cornerstone attributes (exposure control and monitoring) and the finding affected the Occupational Radiation Safety cornerstone objective, in that uninformed workers could unknowingly accrue additional radiation dose. The inspector determined that the finding had no more than very low safety significance because: (1) it did not involve ALARA planning and controls, (2) there was no personnel overexposure, (3) there was no substantial potential for personnel overexposure, and (4) the finding did not compromise PG&E's ability to assess dose. The finding also has cross-cutting aspects related to problem identification and resolution, in that a similar violation was previously identified during Inspection 50-275/02-04; 50-323/02-04.

Inspection Report# : [2005005\(pdf\)](#)

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## Public Radiation Safety

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## Physical Protection

[Physical Protection](#) information not publicly available.

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## Miscellaneous

