

Diablo Canyon 1

3Q/2010 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Sep 25, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Identify a Degraded Fire Barrier

The inspectors identified a noncited violation of the Diablo Canyon Facility Operating License Condition (5), "Fire Protection," after Pacific Gas and Electric failed to maintain the integrity of a fire door in the rated configuration. On August 19, 2010, the inspectors identified that Fire Door 223 was inoperable. Fire Door 223 was required to provide a 3-hour rated barrier between Fire Areas 5-A-4 and 5-B-4. A fire in either of these areas could have prevented operation of the auxiliary feedwater, auxiliary saltwater, or component cooling water pumps or steam generator level control from the remote shutdown panel. Equipment Control Guideline 18.7, "Fire Rated Assemblies," required the licensee to either maintain Fire Door 223 operable or implement compensatory actions within one hour. The inspectors concluded the most significant contributor to the finding was that licensee personnel did not identify and enter the degraded fire door into the Corrective Action Program. The licensee entered the performance deficiency associated with this finding into the corrective action program as Notification 50336901 and completed repairs to the door on August 23, 2010.

The inspectors concluded that the performance deficiency was more than minor because the degraded fire barrier affected the mitigating systems cornerstone external factors attribute objective to prevent undesirable consequences due to fire. The inspectors determined that the inoperable door was a fire confinement category finding and that the fire barrier was moderately degraded because the door would not perform the rated fire barrier function. The inspectors concluded the finding was of very low safety significance because the degraded barrier would have provided a minimum of 20 minutes fire endurance protection and ignition sources and combustible materials were positioned that had a fire spread to secondary combustibles, the degraded barrier would not have been subject to direct flame impingement. This finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee did not implement a low threshold for identifying and entering issues into the Corrective Action Program [P.1(a)].

Inspection Report# : [2010004](#) (*pdf*)

Significance:  Sep 25, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Risk Assessment during Planned Maintenance Activities

The inspectors identified a noncited violation of 10 CFR 50.65 after Pacific Gas and Electric failed to perform a risk assessment after plant conditions had changed. On July 13, 2010, Pacific Gas and Electric identified that station personnel failed to complete Technical Specification Surveillance Requirement 3.3.4.2, "Remote Shutdown System," within the specified frequency for both Units. As provided by Surveillance Requirement 3.0.3, the licensee performed a risk evaluation to extend the required surveillance completion time beyond twenty-four hours. The licensee initiated the missed surveillance tests and identified results were outside acceptance criteria. On July 26, 2010, Operations personnel declared several remote shutdown system functions inoperable because reasonable expectation no longer existed that remote shutdown system could perform its safety function. Pacific Gas and Electric failed to reassess the effect on plant risk resulting from inoperable remote shutdown system functions before continuing with scheduled maintenance. A subsequent risk assessment concluded that plant risk was in a higher risk category due to planned

maintenance activities conducted during this time frame. The licensee entered the performance deficiency into the corrective action program as Notification 50331841.

The inspectors determined that the performance deficiency is more than minor because the performance deficiency affected the Mitigating Systems Cornerstone attribute of human performance and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Also, the finding is similar to Example 7.e in Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues," because the overall elevated plant risk would put the plant into a higher licensee-established risk category. The inspectors concluded that the finding is of very low safety significance (Green) based on an actual incremental core damage probability deficit of less than 1×10^{-6} and an evaluation using Flowchart 1 of Appendix K of Inspection Manual Chapter 0609, "Maintenance Risk Assessment and Risk Management Significance Determination Process." This finding had a crosscutting aspect in the area of human performance associated with the work practices component because the licensee failed to follow its maintenance risk procedure and reassess plant risk due to changing plant conditions [H.4(b)].

Inspection Report# : [2010004](#) (pdf)

Significance:  Sep 25, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Operability Determination

The inspectors identified a noncited violation of 10 CFR 50, Appendix B, Criteria V, "Instructions, Procedures, and Drawings," after Pacific Gas and Electric failed to promptly evaluate two nonconforming conditions for operability as required by Procedure OM7.ID12, "Operability Determination." The first example involved the failure of engineering personnel to promptly notify plant operations of the failure of the emergency diesel generators to meet licensing and design frequency and voltage recovery requirements. This issue was identified by the NRC on May 11, 2010, but not evaluated for the effect on diesel operability until September 9, 2010. The second example also involved the failure of engineering personnel to promptly notify plant operations to evaluate a nonconforming condition associated with a common cross-tie line that connected both auxiliary saltwater trains. This issue was identified by the NRC on July 22, 2010, but not evaluated for the effect on auxiliary saltwater operability until August 4, 2010. In both examples, engineering personnel failed to follow Procedure OM7.ID12, "Operability Determination," Section 5.1, which required any individual identifying a degraded or nonconforming condition that potentially impacts operability of a system, structure or component to ensure that operations shift management is informed. The licensee entered the performance deficiency associated with this finding into the corrective action program as Notifications 50340417 and 50335847.

The inspectors concluded that the performance deficiency is more than minor because the Mitigating Systems Cornerstone initial design control attribute and objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences were affected. The finding was of very low safety significance (Green) because neither of the two examples was subsequently determined to result in the loss of operability or functionality. This finding had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because Pacific Gas and Electric did not thoroughly evaluate the nonconforming conditions for operability [P.1(c)].

Inspection Report# : [2010004](#) (pdf)

Significance:  Sep 25, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Design Control for the Auxiliary Saltwater System

The inspectors identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," involving the failure to maintain adequate design control measures associated with the auxiliary saltwater system. The inspectors identified that the auxiliary saltwater system design did not comply with the plant design bases as described in the Final Safety Analysis Report Update. Specifically, an auxiliary saltwater vent line did not meet the requirements established in General Design Criteria 1, "Quality Standards and Records," and Regulatory Guide 1.26, "Quality Group Classifications and Standards for Water, Steam, and Radioactive Waste Containing Components of Nuclear Power Plants." The licensee entered the performance deficiency into the corrective action program as Notification

This performance deficiency is greater than minor because the design control attribute of the mitigating systems cornerstone and the cornerstone's objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences were affected. Using the Significance Determination Process (SDP) Phase 1 Screening Worksheet for the Mitigating Systems Cornerstone, the inspectors concluded the finding was of very low significance (Green) because it was a design deficiency confirmed not to result in the loss of operability or functionality. The inspectors concluded that the finding does not have a crosscutting aspect since the performance deficiency is not reflective of current plant performance.

Inspection Report# : [2010004](#) (*pdf*)

Significance:  Jul 27, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Design Control for the Emergency Diesel Generator

The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," involving the failure to maintain adequate design control measures associated with the emergency diesel generating air system. Specifically, failure of non-seismically qualified air compressor unloader sensing lines during a seismic event could impact the safety function of the emergency diesel generators. Subsequent analysis of the nonconforming condition performed by the licensee determined the piping would not fail during a postulated seismic event. The licensee entered this issue into the corrective action program as Notifications 50307496, 50307497, 50307504, 50307670, 50308204, and 50308824.

The finding was more than minor because it affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Significance Determination Process (SDP) Phase 1 Screening Worksheet for the Initiating Events, Mitigating Systems, and Barriers Cornerstones the finding was potentially risk significant for a seismic initiating event requiring a Phase 3 analysis. The analyst estimated the nonrecovery probabilities for operators failing to isolate air between the receiver and the compressor prior to air pressure depletion, and operators failing to manually open fuel transfer valves to makeup to the diesel day tank. The final quantitative result was calculated to be 1.06×10^{-6} . However, using a qualitative evaluation of the bounding assumptions, the analyst determined that the best available information indicated that the finding was of very low risk significance (Green). The team determined that the finding was reflective of current plant performance because it had been recently identified during the license renewal inspection and had a human performance crosscutting aspect related to decision making because the licensee did not use conservative assumptions when evaluating this nonconforming condition in previous evaluations.

Inspection Report# : [2010006](#) (*pdf*)

Significance:  Jul 27, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain Proficiency of Operators to Meet the Time Critical Operator Actions

The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," involving the failure to ensure that operators are able to implement specified actions in response to operational events and accidents. Specifically, operators could not achieve actions within the analysis time estimates for the cold leg recirculation phase of a loss of coolant accident response and the steam generator tube rupture response as described in the licensee's safety analysis report.

The finding is more than minor because it affected the Mitigating Systems Cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding represented a potential loss of a safety function requiring a Phase 2 analysis. Because the probability of human error is not effectively addressed by a Phase 2 analysis, a Phase 3 analysis was performed. The senior reactor analyst reviewed the actual timing of the walkdowns associated with the steam generator tube rupture time critical actions. The analyst determined that, while the licensee failed to meet the specific cooldown timing documented in the Final Safety Analysis Report, the total time to start cooling the reactor was well within the total

critical timing of the event. The analyst found no impact on safety in delaying the cooldown of the reactor for one minute given that the other time critical actions were performed more quickly than required. Therefore, the analyst determined that this portion of the finding was of very low safety significance because it does not represent an actual loss of safety function (Green). The senior reactor analyst reviewed the issue related to the assumed action times associated with switching over to containment sump recirculation lineup for their emergency core cooling system pumps during a large break loss of coolant accident. The analyst noted that this time critical action was only required if a large-break loss of coolant accident occurred simultaneously with the failure of an residual heat removal pump to stop automatically, requiring local isolation of the pump. Given that the frequency of the initial conditions for the time critical action are below the Green/White threshold, the change in core damage frequency associated with this finding must be of very low safety significance (Green). The team determined that the finding was reflective of current plant performance because the licensee participated in a recent industry-wide study on time critical operator actions, but did not implement any of the group's recommendations. The finding had a crosscutting aspect in the area of human performance, decision making, because the licensee did not use conservative assumptions in the decision making process related to verifying the validity of the underlying assumptions used to evaluate the feasibility of operators implementing time critical operator actions.

Inspection Report# : [2010006](#) (pdf)

Significance: SL-IV Jul 27, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Submit Complete and Accurate Information for a Requested License Amendment

The team identified a noncited violation of 10 CFR 50.9(a), "Completeness and Accuracy of Information" with multiple examples. Specifically, information supplied to the NRC in License Amendment Request 01-10, dated February 24, 2010, related to the revision of Technical Specification 3.8.1, "AC Sources - Operating," were not complete and accurate in all material respects. Following NRC questioning of the discrepancies the licensee withdrew the amendment request.

The finding is more than minor because the inaccurate information was material to the NRC. Specifically, this information was under review by the NRC to evaluate specific changes to the surveillance requirements associated with the emergency diesel generators. Following management review, this violation was determined to be of very low safety-significance because the amendment request was withdrawn before the NRC amended the facility technical specifications. Because this issue affected the NRC's ability to perform its regulatory function, it was evaluated with the traditional enforcement process. Consistent with the guidance in Section IV.A.3 and Supplement VII, paragraph D.1, of the NRC Enforcement Policy, this finding was determined to be a Severity Level IV noncited violation. The finding had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program because the licensee did not adequately evaluate the extent of condition and take appropriate corrective actions after the NRC identified a similar violation.

Inspection Report# : [2010006](#) (pdf)

Significance:  Jul 27, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Untimely and Inadequate Corrective Actions for the Emergency Diesel Generators

The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," with two examples for the failure of the licensee to promptly identify and correct nonconforming conditions related to the emergency diesel generators meeting the design basis. The first example resulted from the failure to identify that instrument inaccuracies were not accounted for in the bounding calculations. The second example involved the failure to identify that the worst case loading calculations exceeded the emergency diesel generator operating load limit.

The failure to promptly identify and correct the design deficiencies associated with the emergency diesel generators was a performance deficiency. This finding is greater than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone's objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. In accordance with Inspection Manual Chapter 0609, "Significant Determination Process," the team performed a Phase 1

analysis to analyze the significance of this finding and determined the finding is of very low safety significance because the condition was a design or qualification deficiency confirmed not to result in loss of operability or functionality, did not represent an actual loss of safety function of the system or train, did not result in the loss of one or more trains of nontechnical specification equipment, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding had a crosscutting aspect in the area of human performance, decision making, because the licensee did not use conservative assumptions in the decision making process or conduct an adequate effectiveness review to verify the validity of the underlying assumptions for a safety-significant decision.

Inspection Report# : [2010006](#) (*pdf*)

Significance:  Jun 26, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Corrective Actions Following Identification of a Non-conservative Technical Specification

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criteria XVI, “Corrective Action,” after Pacific Gas and Electric failed to implement prompt corrective actions after identifying a nonconservative technical specification. In December 2008, the inspectors identified that the diesel generator loading calculations were inadequate to demonstrate that the design basis were met. On January 9, 2009, the licensee entered this condition into the corrective action program. On April 9, 2009, Pacific Gas and Electric concluded that Technical Specification Surveillance Requirement 3.8.1, “AC Sources – Operating,” was not adequate to preserve plant safety and applied the provisions of Technical Specification Surveillance Requirement 3.0.3, and Administrative Letter 98-10, “Dispositioning of Technical Specifications that are Insufficient to Assure Plant Safety.” The licensee did not complete the necessary actions to correct the deficient technical specification by submitting an adequate license amendment request. The inspectors concluded the most significant contributor to the finding was a less than adequate engineering evaluation to support the new emergency diesel generator loading profiles following the previous violation. The licensee entered the performance deficiency into the corrective action program as Notification 50232181.

The inspectors determined that the performance deficiency is more than minor because if left uncorrected, the failure to implement prompt corrective actions has the potential to lead to a more significant safety concern. The inspectors concluded the finding was of very low safety significance because the finding was a design deficiency confirmed not to result in the loss of operability or functionality. The finding is associated with the Mitigating Systems Cornerstone. This finding had a crosscutting aspect in the area of problem identification and resolution, associated with the corrective action program component because the licensee failed to perform an adequate evaluation of the nonconservative technical specification such that the resolutions address causes and extent of conditions, as necessary [P.1(c)].

Inspection Report# : [2010003](#) (*pdf*)

Significance: SL-IV Jun 26, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Report a Condition that Could Have Prevented the Fulfillment of a Safety Function

The inspectors identified a noncited violation of 10 CFR 50.73(a)(2)(i)(B) and 10 CFR 50.73(a)(2)(v)(B) and after Pacific Gas and Electric failed to submit a required licensee event report within 60 days following discovery of a condition prohibited by the plant technical specifications and a condition that could have prevented the fulfillment of a safety function. On March 9, 2010, Pacific Gas and Electric identified that the degraded voltage protection scheme, required by Technical Specification 3.3.5, “Loss of Power Diesel Generator Start Instrumentation,” was inadequate to protect operating engineering safety feature pump motors. The licensee concluded that sustained degraded voltage could result in an overcurrent condition affecting equipment powered from the preferred offsite power supply. This condition was required to be reported to the NRC because the degraded voltage protection scheme rendered engineered safety feature pumps inoperable for a period in excess of the allowable technical specification out of service time and the condition resulted in the loss of the degraded voltage protection scheme safety function on all three vital 4 kV power buses.

The inspectors evaluated this finding using the traditional enforcement process because the failure to submit a required event report affected the NRC's ability to perform its regulatory function. The inspectors concluded the violation was a Severity Level IV because the licensee failed to submit an adequate licensee event report. The inspectors determined that the violation was also a finding under the reactor oversight process because licensee personnel failed to adequately evaluate a condition adverse to quality for operability and reportability, as required by station procedures. The inspectors concluded that the finding is more than minor because the failure to properly evaluate degraded plant equipment for past operability and reportability could reasonably be seen to lead to a more significant condition. The inspectors concluded that the finding had very low safety significance because the failure to adequately evaluate the condition did not result in an actual loss of a system safety function or equipment required by technical specifications, or involve the loss or degradation of equipment specifically designed to mitigate a seismic, flooding, or severe weather initiating event, and did not involve the total loss of any safety function that contributes to an external event initiated core damage accident sequence. This finding has a crosscutting aspect in the area of problem identification and resolution, associated with the corrective action program component because the licensee failed to perform an adequate evaluation of the degraded voltage protection scheme such that the resolutions address causes and extent of conditions, as necessary [P.1(c)].

Inspection Report# : [2010003](#) (*pdf*)

Significance: SL-IV Jun 10, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Update the Final Safety Analysis Report Update with the Current Plant Design Bases

The inspectors identified a Severity Level IV noncited violation of 10 CFR 50.71 after Pacific Gas and Electric failed to include the current plant design basis for the 230kV degraded voltage protection scheme in the Final Safety Analysis Report Update. Title 10 CFR 50.71 (e) states in part, "Each person licensed to operate a nuclear power reactor shall update periodically, as provided in paragraphs (e) (3) and (4) of this section, the Final Safety Analysis Report Update originally submitted as part of the application for the operating license, to assure that the information included in the report contains the latest information developed. Contrary to the above, on March 14, 2010, the inspectors identified that Pacific Gas and Electric failed to update the Final Safety Analysis Report Update to include complete design basis information for the offsite degraded voltage protection scheme. The inspectors identified that Final Safety Analysis Report Update did not include the design basis for the allowance time delay or the limiting voltage setpoints. The licensee has entered this issue into their corrective action process as Notification 50313763.

Failure to include the current plant design basis for the 230kV degraded voltage protection scheme in the Final Safety Analysis Report Update is a performance deficiency. Using Inspection Manual Chapter 0612, Appendix B, the team determined that this issue was to be evaluated using the traditional enforcement process because the performance deficiency was a failure to meet a requirement or standard, had the potential for impacting the NRC's ability to perform its regulatory function, and the concern was within the licensee's ability to foresee and correct and should have been prevented. The team used the General Statement of Policy and Procedure for NRC Enforcement Actions, Supplement I "Reactor Operations," dated January 14, 2005, to evaluate the significance of this violation. The team concluded that the violation is more than minor because the incorrect Final Safety Analysis Report Update information had a potential impact on safety and licensed activities. Using Supplement I, Section D, Item 6, of the NRC Enforcement Policy, this performance deficiency will be treated as a Severity Level IV violation because the erroneous information was not used to make any unacceptable change to the facility or procedures. Using Inspection Manual Chapter 0609.04, "Phase 1 Initial Screening and Characterization of Findings," the team concluded that the issue screened as having low safety significance (Green) under the Significance Determination. Because this violation is of very low safety significance and was entered into the licensee's corrective action program, this violation is being treated as a noncited violation, consistent with Section VI.A.1 of the NRC Enforcement Policy. Because the violation included a performance deficiency, the inspectors also concluded the issue was a finding under the Reactor Oversight Process and had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee did not adequately evaluate the extent of the condition and take appropriate corrective actions after the NRC identified a similar violation [P.1(c)].

Inspection Report# : [2010007](#) (*pdf*)

Significance: G Jun 10, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Nonconservative Inputs into Motor Operated Valve Calculation

The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control" involving multiple mechanical and electrical errors in documentation associated with torque, thrust, and operation of certain safety related motor operated valves. Specifically, on March 3, 2010, the team identified seven different numerical inputs to the operation, margin, and functionality of certain safety related motor operated valves, which had non-conservative inputs for the mechanical and electrical settings of the motor operated valves. The composite of these nonconservative inputs could have a detrimental effect on the operation of these motor operated valves. Contrary to above, on March 3, 2010, per 10 CFR Part 50, Appendix B, Criterion III, "Design Control", the licensee did not establish measures to assure that applicable regulatory requirements and the design basis, for those structures, systems, and components were correctly translated into specifications, drawings, procedures, and instructions. The licensee has entered this issue into their corrective action process as Notification 50302437.

The failure of the licensee to correctly translate design basis information into specifications, drawing, procedures, and instructions is a performance deficiency. Using Inspection Manual Chapter 0612, Appendix E, Section 3, Example j, the violation was determined to be more than minor because the engineering calculation error results in a condition where there is now a reasonable doubt on the operability of a system or component. Using the Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheets, the finding was determined to have very low safety significance (Green) because it was not a design issue resulting in loss of function, did not represent an actual loss of a system safety function, did not result in exceeding a technical specification allowed outage time, and did not affect external event mitigation. The inspectors reviewed the finding for crosscutting aspects and none were identified.

Inspection Report# : [2010007](#) (*pdf*)

Significance: G Mar 27, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Effectively Implement the Seismically-induced Systems Interaction Program

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," after Pacific Gas and Electric personnel failed to effectively implement the Seismically Induced System Interaction Program. The Seismic Interaction Program is part of the design basis mitigation strategy for a potential 7.5 magnitude Hosgri earthquake and is required by Procedure AD4.ID3, "SISIP Housekeeping Activities." The inspectors identified three examples of transient equipment and materials improperly staged in seismically induced system interaction target areas. Pacific Gas and Electric had not analyzed the transient equipment to assess the risk to safety related components as required by plant procedures. Pacific Gas and Electric entered this finding into the corrective action program as Notification 50299740.

The finding is more than minor because the failure to follow the Seismically Induced System Interaction Program is associated with the Mitigating Systems Cornerstone external events protection attribute and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors concluded that the finding had very low safety significance because none of the examples of improperly staged equipment resulted in an actual loss of a system safety function or equipment required by technical specifications, or involve the loss or degradation of equipment specifically designed to mitigate a seismic, flooding, or severe weather initiating event, and did not involve the total loss of any safety function that contributes to an external event initiated core damage accident sequence. The inspectors concluded this finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee's past actions to address Seismically Induced System Interaction Program deficiencies were not effective [P.1(d)].

Inspection Report# : [2010002](#) (*pdf*)

Significance: SL-IV Mar 27, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Update the Final Safety Analysis Report with the Current Plant Design Bases

The inspectors identified a noncited violation of 10 CFR 50.71 after Pacific Gas and Electric failed to update the Final Safety Analysis Report Update with the current design basis. The inspectors identified that the current Final Safety Analysis Report Update, Revision 18, Sections 3.1, 6.4, 6.5, and 9.4 did not capture the current design basis for the control room, component cooling water, and auxiliary feedwater systems. The failure of the licensee to provide current design basis information in the Final Safety Analysis Report Update had an adverse impact on the plant modification process, the licensee's ability to assess operability for degraded plant systems, and the NRC's ability to ensure that regulatory requirements were met. The licensee entered this violation into the corrective action program as Notifications 50308588, 50306131, 5030799, and 50307476.

The inspectors evaluated this violation using the traditional enforcement process because the issue affected the NRC's ability to perform its regulatory function. The inspectors concluded that the violation is more than minor because the incorrect Final Safety Analysis Report Update information had a potential impact on safety and licensed activities. The inspectors concluded the violation is Severity Level IV because the erroneous information was not used to make an unacceptable change to the facility or procedures that would have resulted in greater than very low safety significance under the Significance Determination Process. Because the violation included a performance deficiency, the inspectors also concluded the issue was a finding under the Reactor Oversight Process. The finding had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee did not adequately evaluate the extent of condition of previous similar violations and take appropriate corrective actions [P.1(c)].

Inspection Report# : [2010002](#) (pdf)

Significance: SL-IV Mar 27, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Report a Condition that Could Have Prevented the Fulfillment of a Safety Function

The inspectors identified a noncited violation of 10 CFR 50.73(a)(1) after Pacific Gas and Electric failed to submit a required licensee event report within 60 days after discovering a condition that could have prevented the fulfillment of a safety function. On November 22, 2005, the licensee determined that plant operators may not have had the capability to align either residual heat removal train to the cold leg recirculation mode of emergency core cooling following certain small break loss of coolant accidents. Plant engineers determined that the residual heat removal containment sump suction valve operators were inadequately sized to open against the differential pressure generated by the pumps operating in recirculation for an extended period. Plant engineers identified this condition during a follow up of industry operating experience. The licensee initially concluded that the condition was not reportable because the operating experience was not applicable to Diablo Canyon. The licensee failed to re-screen the issue for reportability after determining that the plant was susceptible to the condition. The licensee entered this issue into the corrective action program as Notifications 50301839 and 50295784.

The inspectors evaluated this finding using the traditional enforcement process because the failure to submit a required event report affected the NRC's ability to perform its regulatory function. Consistent with the guidance in Section IV.A.3 and Supplement I, Paragraph D.4, of the NRC Enforcement Policy, the inspectors concluded the violation was a Severity Level IV because the licensee failed to submit a required licensee event report. The inspectors did not assign a crosscutting aspect because the performance deficiency represented a latent issue.

Inspection Report# : [2010002](#) (pdf)

Significance:  Mar 27, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Less Than Adequate Evaluation Following the Failure of Both Motor-Driven Auxiliary Feedwater Trains

The inspectors identified a noncited violation of 10 CFR, Part 50, Appendix B, Criteria XVI, "Corrective Actions," after Pacific Gas and Electric failed to implement adequate corrective actions following a protection system failure. On June 29, 2009, a protection system card failure resulted in the inoperability of both motor-driven auxiliary feedwater trains. The licensee concluded that the failure of the auxiliary feedwater trains were expected as part of the protection system design and limited corrective actions to replacing the failed card. The inspectors concluded that the protection system design did not meet the design basis, which required that no single active failure would prevent the

auxiliary feedwater system from meeting the safety function. The licensee entered this issue into the corrective action program as Notifications 50251823, 50298491 and 50254412.

The inspectors concluded that the finding is greater than minor because the vulnerability of auxiliary feedwater to a single failure is associated with the design control attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined the finding to have very low safety significance because the condition did not represent a loss of system safety function. While the single failure of the protection system card resulted in the inoperability of both motor-driven auxiliary feedwater trains, the turbine-driven auxiliary feedwater train was available to perform the safety function. This finding has a crosscutting aspect in the area of problem identification and resolution, associated with the corrective action program component because the licensee failed to perform an adequate evaluation of the auxiliary feedwater failure such that the resolutions address causes and extent of conditions, as necessary [P.1(c)].

Inspection Report# : [2010002](#) (pdf)

Significance: SL-IV Mar 27, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Submit a Licensee Event Report following the Common-Cause Failure of Independent Trains or Channels

The inspectors identified a noncited violation of 10 CFR 50.73(a)(1) after Pacific Gas and Electric failed to submit a required licensee event report within 60 days after discovery of a common-cause failure of three control room radiation monitors. The inspectors concluded that monitors failed on October 13, 2009, as a result of water intrusion due to heavy rains. The inspectors concluded that common cause failure of the radiation monitors was reportable under 10 CFR 50.73(a)(2)(vii). Pacific Gas and Electric subsequently reported the event on February 17, 2010, as Licensee Event Report 2010-001-00, Control Room Ventilation Pressurization Due to Radiation Detector Failures. The licensee entered this issue into the corrective action program as Notification 50301839.

The inspectors evaluated this finding using the traditional enforcement process because the failure to submit a required event report affected the NRC's ability to perform its regulatory function. Consistent with the guidance in Section IV.A.3 and Supplement I, Paragraph D.4, of the NRC Enforcement Policy, the inspectors concluded that this was a Severity Level IV noncited violation because the licensee failed to submit a required licensee event report. Because the violation included a performance deficiency, the inspectors also concluded the issue was a finding under the Reactor Oversight Process. This finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee failed to thoroughly evaluate the failure of the radiation monitor failures to ensure NRC reportability requirements were met [P.1(c)].

Inspection Report# : [2010002](#) (pdf)

Significance: SL-IV Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate 50.59 Evaluation for Steam Generator Tube Rupture Analysis

The inspectors identified a Severity Level IV noncited violation of 10 CFR 50.59 after Pacific Gas and Electric failed to perform an adequate evaluation of a change to the facility as described in the Final Safety Analysis Report Update. In 1992, the licensee identified that auxiliary feedwater and steam generator power-operated relief valve flow rates assumed in the steam generator tube rupture accident analysis were non-conservative. To address the non-conforming condition, Pacific Gas and Electric changed the accident analysis to include a new time critical operator action to terminate turbine-driven auxiliary feedwater flow 5.54 minutes after the reactor trip and credit motor driven auxiliary feedwater automatic level control to the ruptured steam generator. The licensee did not perform a 10 CFR 50.59 safety evaluation of these changes. The NRC basis of approval of the accident analysis include four time critical operator actions, each assumed to occur after the first 10 minutes following the accident. The inspectors concluded that NRC approval was required before the licensee added the new time critical manual action under the 10 CFR 50.59 Rule in effect at the time because the change reduced the margin to safety to the basis of Technical Specification 3.7.4, "10% Atmospheric Dump Valves." The inspectors also concluded that prior NRC approval was required under the current 50.59 Rule because the change result in a departure from a method of evaluation described in the Final Safety Analysis Report Update. The performance deficiency, a less than adequate 50.59 evaluation, was the result of a latent issue. However, the inspectors concluded that the licensee had reasonable recent opportunities to identify the problem.

The inspectors also concluded that plant programs, processes or organizations have not changed such that the problem would not reasonably occur today and that the most significant contributor to the performance deficiency was reflective of current plant performance. The licensee entered this issue into their corrective action program as Notification 50270786.

The failure of Pacific Gas and Electric to perform a 10 CFR 50.59 evaluation of the changes to the steam generator tube rupture accident analysis was a performance deficiency. The inspectors evaluated this issue using traditional enforcement because the performance deficiency had the potential for impacting the NRC's ability to perform its regulatory function. The issue was more than minor because of reasonable likelihood the change to the facility would require Commission review and approval prior to implementation. The inspectors also evaluated the significance of this issue under the Significance Determination Process using Inspection Manual Chapter 0609.04, "Phase 1 Initial Screening and Characterization of Findings." The finding affected the Mitigating Systems Cornerstone because the change described the operator actions required to mitigate steam generator tube rupture accident. The inspectors concluded the finding screened Green because the finding was a design deficiency that did not result in the loss of operability or functionality. The inspectors concluded that the violation was a Severity Level IV because the issue screened Green under the Significance Determination Process. The inspectors concluded that this finding had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee did not thoroughly evaluate the steam generator tube rupture analysis such that the resolutions addressed causes and extent of condition [P.1(c)].

Inspection Report# : [2009005](#) (*pdf*)

Barrier Integrity

Significance:  Jun 26, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Unit 1 Containment Concrete Inspections

The inspectors identified a noncited violation of Technical Specification 5.5.16.a.1, "Containment Leakage Rate Testing Program," after Pacific Gas and Electric failed to perform containment concrete inspections in accordance with the requirements of and frequency specified by ASME Section XI code, Subsection IWL. The licensee entered this into their corrective action program as Notification 50310054.

The inspectors concluded that the failure of Pacific Gas and Electric to perform the technical specification required inspections is a performance deficiency. The finding is more than minor because the performance deficiency is associated with the Barrier Integrity Cornerstone human performance attribute and adversely affected the cornerstone objective to provide reasonable assurance that containment physical design barrier protects the public from radionuclide releases caused by accidents or events. The inspectors concluded that the finding is of very low safety significance because the performance deficiency did not represent a degradation of the radiological barrier function provided for the control room, auxiliary building, or spent fuel pool, did not represent a degradation of the barrier function of the control room against smoke or toxic atmosphere, did not represent an actual open pathway in the physical integrity of reactor containment, and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors did not assign a crosscutting aspect to this finding because the performance deficiency did not occur within the past three years and is not reflective of present performance.

Inspection Report# : [2010003](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

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.

Miscellaneous

Last modified : January 06, 2011