Diablo Canyon 1
4Q/2005 Plant Inspection Findings

Initiating Events

Significance: G Mar 31, 2005
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to follow procedure resulted in unplanned transient
A self-revealing finding was identified for operators failing to follow Procedure OP J-4A:IV, "Generator Stator Cooling Water-Heat Exchanger Removal from and Return to Service," Revision 5, for isolation of flow to both of the stator cooling water heat exchangers by operating valves out of sequence. This finding resulted in an unplanned transient from a generator runback from 50 to 15 percent power.

The failure to follow Procedure OP J-4A:IV affects the initiating events cornerstone and is more than minor because it resulted in actual impact to the facility. This failure resulted in an inadvertent reactor transient from 50 percent to 15 percent reactor power. This finding screened to green because no loss of safety functions or other adverse impacts to the facility occurred, and was therefore of very low safety significance. This finding has human performance crosscutting aspects for failing to follow procedures when removing a stator cooling water heat exchanger from service.

Inspection Report# : 2005002*(pdf)*

Mitigating Systems

Significance: G Dec 31, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Adequately Assess and Manage Risk Associated With Startup Transformer 1-1 Maintenance
A self-revealing, non-cited violation of 10 CFR 50.65(a)(4) was identified for the failure of maintenance personnel to adequately assess and manage the risk associated with maintenance on Startup Transformer 1-1. On November 19, 2005, when maintenance personnel were performing work on Startup Transformer 1-1, they failed to conduct a circuit isolation plan which was a risk management action required by Procedures AD7.DC8, "Work Control," Revision 20 and MA1.DC11, "Risk Assessment," Revision 5A. The circuit isolation plan would have provided an opportunity to identify the potential of disrupting startup power to Unit 2, which occurred as a result of the maintenance activities. This issue was entered into Pacific Gas and Electric Company's corrective action program as Action Request A0652421.

The finding was greater than minor because it is related to Inspection Manual Chapter 0612, Appendix B, Section 3(5)(i), in that maintenance personnel failed to fully implement Procedures AD7.DC8 and MA1.DC11, which called for a circuit isolation plan for medium- to high-risk maintenance activities as a risk management action. The finding affected the Mitigating Systems Cornerstone. Using Inspection Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process, Flowchart 2 - Assessment of Risk Management Actions, the incremental core damage probability was less than 1E-6 and the incremental large early release frequency was less than 1E-7. The finding was assessed as having very low safety significance. The cause of the finding is related to the cross-cutting element of human performance in that maintenance personnel failed to follow procedures. The cause of the finding is also related to the cross-cutting element of problem identification and resolution in that corrective actions were not effective. Specifically, NRC Inspection Report 05000275; 323/2005004 addressed a similar issue involving work on Startup Transformer 2-1 and the failure to conduct a circuit isolation plan according to procedures. Although training and re-enforcement of standards was provided to personnel, the problem reoccurred.

Inspection Report# : 2005005*(pdf)*

Significance: G 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)*

Significance: G Nov 27, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Properly Implement Procedure for Safety Injection System Operation
A self-revealing, non-cited violation of Technical Specification 5.4.1.a was identified for the failure of operations personnel to properly implement Procedure OP B-3B:I, "Accumulators - Fill and Pressurize," Revision 23. On November 27, 2005, operators failed to correctly align valves according to Procedure OP B-3B:I in order to fill Safety Injection Accumulator 1-3. As a result, the safety injection pumps injected into the reactor coolant system causing the pressurizer cooldown rate to be exceeded and contributing to safety injection discharge header pressurization due to perturbation of check Valve SI-1-8948B. This violation was entered into Pacific Gas and Electric Company's corrective action program as Action Request A0653564.

The finding is greater than minor because it is associated with the Mitigating System Cornerstone attribute of configuration control 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," Appendix G, Checklist 4, the findings did not require quantitative screening. Therefore, the finding was assessed as having very low safety significance. The cause of the finding is related to the crosscutting element of human performance in that operations personnel did not follow procedures.
Inspection Report# : 2005005*(pdf)*

Significance: G Jul 20, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Assure That Appropriate Quality Standards Are Specified and Included in Design Documents and That Deviations are Controlled
The inspectors identified an noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to assure that appropriate quality standards are specified and included in the design documents and that deviations from such standards are controlled. Specifically, Pacific Gas and Electric Company failed to control the quality of work performed by contractors to ensure adequate cable bend radius for the newly installed vital battery chargers. Pacific Gas and Electric Company subsequently reworked to restore the proper bend radius. The quality control documents for cable terminations and installation have been modified to ensure that cable bend radius is assessed.

This finding impacted the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. It is more than minor since it is similar to Inspection Manual Chapter 0612, Appendix E, Example 3.a, in that all vital battery chargers must have their connections and cables reworked for long term reliability. Using the Significance Determination Process Phase 1 Screening Worksheet in Appendix A of Inspection Manual Chapter 0609, the inspectors determined that there was no loss of an actual safety function, no loss of a safety-related train for greater than the Technical Specification allowed outage time, and the finding is not potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event. Therefore, the finding was determined to be of very low safety significance. The cause of the finding is related to the crosscutting element of human performance in that maintenance personnel failed to ensure the adequate cable bend radius for vital battery chargers.
Inspection Report# : 2005004*(pdf)*

Significance: G Jul 13, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Adequately Assess and Manage Risk Associated with Startup Transformer 2-1 Maintenance
A self-revealing, noncited violation was identified for the failure to adequately assess and manage the risk associated with maintenance on startup Transformer 2-1, as required by 10 CFR 50.65(a)(4). Specifically, Pacific Gas and Electric Company failed to adequately evaluate the scope of startup Transformer 2-1 relay maintenance and its impact on startup Transformer 1-1. As a result, the protective relay for startup Transformer 1-1 was challenged but not to a sufficient magnitude to trip the power supply to the transformer. Corrective actions included reinforcement to staff on maintenance risk assessments for non-routine work and a caution note in the applicable work orders regarding the wiring configuration of the startup transformer relays. This finding had crosscutting aspects in the area of human performance for the failure to adequately assess and manage the risk associated with protective relay maintenance.

The finding impacted the Mitigating Systems Cornerstone and was determined to be more than minor using Inspection Manual Chapter 0612, Appendix E, Example 7.f. Specifically, Pacific Gas and Electric Company staff failed to appropriately implement Procedures AD7.DC8 and MA1.DC11 which called for a circuit isolation plan to identify any actions that may impact in-service equipment for medium risk maintenance activities. Using Inspection Manual Chapter 0609, Appendix K, Maintenance Risk Assessment and Risk Management Significance Determination Process, Flowchart 1- Assessment of Risk Deficit, the delta incremental core damage probability deficit was less than 1E-6 and the delta incremental large early release probability deficit was less than 1E-7 since the amount of voltage applied to startup Transformer 1-1 Protective Relay 86SU would not have caused a loss of startup power to either unit. The finding was assessed as having very low safety significance
Inspection Report# : 2005004*(pdf)*

Significance: G Jun 17, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify Non-conservative Containment Recirculation Sump Valve Differential Pressure
The inspectors identified an noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure to promptly identify a condition adverse to quality. Specifically, Pacific Gas and Electric Company initially screened industry operating experience regarding the potential for containment recirculation sump valves failing to open following certain small-break loss-of-coolant accidents as not being applicable to Diablo Canyon Power Plant. Upon questioning from the inspectors, the industry operating experience was found to be applicable and the calculation concerning containment recirculation sump valves were determined to be nonconforming but the valves remained operable. Additionally, the inspectors questioned Pacific Gas and Electric Company regarding the need for a prompt operability assessment for the valves. For corrective actions, Pacific Gas and Electric Company planned to revise the calculation associated with the differential pressure across the containment recirculation sump valves and base future testing of the valves from the new calculation.

The finding impacted the Mitigating Systems Cornerstone and was determined to be more than minor since it impacted the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the finding affected the cornerstone attribute of design control, and the failure to recognize the applicability of the industry operating experience would allow the non-conservative design and testing of the containment recirculation sump valves to continue to exist. Using the Significance Determination Process Phase 1 Screening Worksheet of Inspection Manual Chapter 0609, the finding was determined to be of very low safety significance since the finding is a design or qualification deficiency confirmed not to result in loss of function per Generic Letter 91-18, Revision 1. This finding had cross-cutting aspects in the area of problem identification and resolution.
Inspection Report# : 2005004*(pdf)*

Significance: G May 29, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Promptly Identify and Correct Diesel Engine Generator Lube Oil Carbonization
A self-revealing NCV was identified for the failure to correct a condition adverse to quality, in accordance with 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions." Specifically, Pacific Gas and Electric Company failed to effectively implement interim corrective actions to remove carbonized lube oil from Diesel Engine Generator 1-1 lube oil system, which led to Diesel Engine Generator 1-1 unplanned unavailability. A problem identification and resolution crosscutting aspect was identified for the failure to effectively correct the impact of carbonized lube oil on Diesel Engine Generator 1-1. This issue has been entered into the corrective action program as Action Request A0638887.

The finding impacted the Mitigating Systems Cornerstone and was more than minor since it impacted the cornerstone objective to ensure the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. With respect to this finding, the carbonized oil clogged the precirculation lube oil line and required the unplanned unavailability of Diesel Engine Generator 1-1 to clean the line. Using the significance determination process Phase 1 screening worksheet in Appendix A of IMC 0609, the inspectors determined that there was no loss of an actual safety function, no loss of a safety-related train for greater than the diesel engine generator Technical Specification allowed outage time, and the finding is not potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event. Therefore, the finding was determined to be of very low safety significance
Inspection Report# : 2005003*(pdf)*

Significance: G Mar 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to correct fire program violation concerning qualifications of Operations Responders in support of the fire brigade
The inspectors identified a noncited violation of Technical Specification 5.4.1.d for failure to implement procedures for Fire Protection Implementation, because of failure to provide adequate training for operations fire responders. Procedure OM8, "Fire Protection Program," Revision 2B, Section 7.8 states, in part, that quality problems associated with the Fire Protection Program shall be documented and resolved in accordance with Procedure OM7 "Corrective Action," Revision 2B. Section 9.5.1 of the Final Safety Analysis Report states that measures are established to ensure conditions adverse to fire protection are identified, reported and corrected, and that administrative procedures are established to implement this requirement. Specifically, Pacific Gas & Electric Company failed to adequately resolve a condition adverse to

fire protection in accordance with Procedure OM7. As of March 1, 2005, operations responders were not required to participate in fire drills for initial qualification or maintenance of qualification, as was noted as a qualification deficiency in Non-cited Violation 50-275;323/2003-08-01, and Action Request (AR) A0600934.

The performance deficiency associated with this finding is a failure to adequately implement the fire protection program with respect to the qualifications of the fire brigade operations responder. The finding impacted the mitigating systems cornerstone and was more than minor since there was an adverse impact to a fire protection defense-in-depth element. The finding is greater than minor because the reactor safety mitigating systems cornerstone objective attribute to provide protection against external factors was affected. Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," does not address fire brigade performance deficiencies. Regional management review concluded this finding was of very low safety significance because it affected the fire prevention and administrative controls category and represented a training deficiency. This finding has problem identification and resolution cross cutting aspects for the failure to correct operations responder training deficiencies.

Inspection Report# : 2005002*(pdf)*

Significance: G Feb 15, 2005
Identified By: NRC
Item Type: FIN Finding
Diesel fuel oil transfer modification did not adequately assess reliability impact
A finding was identified for modifying the diesel fuel oil transfer system without properly assessing the resulting net affect on reliability from introducing a new failure potential associated with new active components. As a result, the licensee rejected a small design change, which would have eliminated the failure mode when it was recognized that failure of the new pressure control valves could fail the train. Because the failure potential was not fully assessed, the licensee decided not to implement a change that would have eliminated the impact of the failure, nor were the pressure control valves subject to any preventive maintenance to ensure their reliability. This issue was entered into the licensee's corrective action program under Action Request A0630383.

The failure to properly assess the net effect on system reliability and risk due to the positive and negative effects of this modification, or to mitigate or eliminate a new failure mode created by the modification was a performance deficiency. This issue is more than minor because it affected the design control attribute of the Mitigating Systems cornerstone objective to assure the reliability and capability of equipment needed for accident mitigation. This finding was determined to be of very low safety significance (Green) during a Phase 1 significance determination process, since the performance deficiency was confirmed not to result in a loss of function in accordance with Generic Letter 91-18 based on test results.
Inspection Report# : 2005006*(pdf)*

Significance: G Feb 15, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
No procedure for cross-tying trains of the diesel fuel oil transfer system
A noncited violation was identified for not having a procedure to cross-tie fuel oil transfer trains in response to certain failures, contrary to the design and licensing basis of the system. The design and license basis of the diesel fuel oil transfer system credited the capability to cross-tie trains in order to meet requirements to maintain the system function and be able to withstand a worst-case single failure. The team identified that the licensee did not have a procedure or training to accomplish this task. Failure to incorporate design and licensing requirements into plant procedures was a violation of 10 CFR Part 50, Appendix B, Criterion III. This issue was entered into the licensee's corrective action program under Action Requests A0630010 and A0630015.

The failure to have a procedure needed to meet the design and license basis of the fuel oil transfer system was a performance deficiency. This finding was more than minor because it impacted the Mitigating Systems cornerstone objective of procedure quality to ensure the capability of the system, in that, the system would not be capable of supplying the emergency diesel generators for the required 7-day mission time in the event of a single failure. The team concluded that this would not result in a loss of function in accordance with Generic Letter 91-18; since procedures direct monitoring of fuel capacity, operators would be aware of the need for action for the following reasons: 1) there should be a relatively long time available to detect and correct the problem (in excess of 24 hours), 2) the expected actions are not complex, and 3) existing procedures require monitoring of the remaining fuel oil capacity during extended diesel runs. Therefore, this finding was determined to be of very low safety significance (Green) in Phase 1 of the significance determination process. The licensee took prompt compensatory measures to ensure the full mission time could be met.
Inspection Report# : 2005006*(pdf)*

Significance: G Feb 15, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Diesel fuel oil storage tank calculation did not adequately account for vortexing
A noncited violation was identified for inadequate design control because the licensee did not properly account for vortex prevention in the calculation used to determine the usable volume in the diesel fuel oil storage tank, which could cause the pump to ingest air. The licensee was unable to locate a technical basis for this part of the calculation. The team independently calculated that 4.1 inches was necessary, compared to

the 2.0 inches used in the calculation. The licensee performed a similar calculation and reached the same conclusion, which reduced the tanks' unusable volumes by a little less than 1,000 gallons in this 50,000 gallon tank. Failure to properly account for the unusable fuel oil storage tank volume necessary to prevent vortexing was a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." This issue was entered into the licensee's corrective action program under Action Request A0629779.

The failure to properly evaluate and document the unusable volume of the diesel fuel oil storage tank needed to prevent vortexing and ingesting air into the transfer pump was a performance deficiency. Through calculations, the licensee was able to demonstrate that there was sufficient available margin in both the tank capacity and the existing technical specification requirement to account for this without affecting operability or necessitating a technical specification change. This finding affected the Mitigating Systems cornerstone. The issue is more than minor because it was similar to Example 3.i of Appendix E to Manual Chapter 0609, since it was necessary to re-perform a calculation to determine whether the existing condition was acceptable. The finding was determined to be of very low safety significance (Green) during Phase 1 of the significance determination process, since there was available margin in the tank capacity and technical specification minimum required volume and it was confirmed not to involve a loss of function of the system in accordance with Generic Letter 91-18.
Inspection Report# : 2005006*(pdf)*

Significance: G Feb 15, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to use the highest pressure in calculation to verify adequate auxiliary feedwater flow
A noncited violation was identified for inadequate design control, because Calculation STA-135, "Auxiliary Feedwater System," Revision 2, which was intended to demonstrate that the auxiliary feedwater pumps have adequate capacity to meet their design basis, did not correctly identify the highest pressure under which the pumps needed to function. Specifically, the calculation did not account for the dynamic pressure loss between the feedwater inlet ring and the main steam safety valves. The licensee was able to perform an analysis that concluded the pumps had sufficient flow margin at the new pressure. Failure to properly translate the peak pressure against which the auxiliary feedwater pumps must deliver the required flow rate was a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." This issue was entered into the licensee's corrective action program under Action Request A0630804.

The failure to document the capability of the auxiliary feedwater pumps to deliver the required flow at the maximum possible pressure was a performance deficiency. The issue is more than minor because a calculation was needed to determine whether the existing condition was acceptable, consistent with Example 3.i of Appendix E to Manual Chapter 0609. This issue affected the Mitigating Systems cornerstone. Because there was available margin in the pump capacity, this issue was confirmed not to involve a loss of function of the system in accordance with Generic Letter 91-18. Therefore, the finding was determined to be of very low safety significance (Green) during Phase 1 of the significance determination process.
Inspection Report# : 2005006*(pdf)*

Significance: G Feb 15, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate power operated relief valve accumulator calculation
A noncited violation was identified for inadequately translating design requirements into calculations used to demonstrate the capabilities of the pressurizer power operated relief valve backup accumulators. The calculation was found to contain a number of non-conservative errors and did not contain the most current acceptance criteria from accident analyses. As a result, this calculation failed to demonstrate that the backup nitrogen accumulators could operate the pressurizer power operated relief valves for the required number of cycles. Failure to properly demonstrate that design requirements for the number of power operated relief valve cycles needed to respond to an inadvertent safety injection actuation were satisfied through a design calculation was a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." This issue was entered into the licensee's corrective action program under Action Requests A0631420, A0630719 and A0630740.

The failure to adequately assess and document the capability of the backup accumulators to provide enough gas to operate the power operated relief valves through the required number of cycles was a performance deficiency. This issue was greater than minor because it was similar to Example 3.i in Manual Chapter 0612, Appendix E, in that, calculations had to be performed to demonstrate that the system could satisfy the accident analyses. This finding affected the Mitigating System cornerstone. This finding screened as having very low safety significance (Green) during a Phase 1 significance determination process, since the issue was confirmed to not have resulted in a loss of function in accordance with Generic Letter 91-18.
Inspection Report# : 2005006*(pdf)*

Significance: G Feb 15, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Analyses did not demonstrate proper load sequencing with timer anomalies
A noncited violation was identified for failure to demonstrate that load sequencing would satisfy regulatory requirements. The team identified that a single postulated fault occurring during load sequencing with offsite power available could restart load sequencing timers in all three engineered safety features buses and result in a more limiting scenario than previously analyzed by the licensee. This could result in overlaping starting transients for motors that were intended to start separately, which was not evaluated in existing calculations. The combined effects of

this could cause later starting times for safety-related loads, potentially affecting system performance assumed in accident analyses. Failure to demonstrate that the system could perform as required considering a single fault was a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." This issue was entered into the licensee's corrective action program under Action Request 0630036.

This failure to demonstrate through analyses that the electrical distribution system was capable of performing its required function following a single postulated fault was a performance deficiency. This issue was more than minor because it affected the Mitigating System cornerstone objective of ensuring availability, reliability, and capability of systems needed to respond to a design basis accident. The licensee was subsequently able to demonstrate that there would be no loss of safety function even considering the effects of a fault as described above. Therefore, this finding was determined to be of very low safety significance (Green) in Phase I of the significance determination process.
Inspection Report# : 2005006*(pdf)*

Significance: G Feb 15, 2005
Identified By: NRC
Item Type: FIN Finding
Incomplete action for setting auxiliary feedwater pump minimum flow values
The team identified a Green finding for inadequate response to industry operating experience regarding establishing minimum flow for the auxiliary feedwater pumps. The team concluded that the licensee recognized that the conditions reported in NRC Bulletin 88-04 were present in auxiliary feedwater pumps because of low settings in the minimum flow lines, but failed to take appropriate actions to minimize and manage, or to eliminate, the potential for pump damage.

This finding represented a performance deficiency because the licensee did not adequately address a degradation mechanism identified in NRC Bulletin 88-04, as required by the station's operating experience program. As a result, the auxiliary feedwater pumps continued to be operated with insufficient minimum flow to avoid unusual wear and aging without establishing increased monitoring and maintenance, or other compensating actions. This issue was more than minor because it affected the equipment reliability objective of the Mitigating Systems cornerstone. This issue screened as Green during a Phase 1 significance determination process, since the performance deficiency was confirmed not to result in a loss of function in accordance with Generic Letter 91-18.
Inspection Report# : 2005006*(pdf)*

Barrier Integrity

Significance: G Sep 08, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Implement Adequate Work Control for Activities That Can Affect The Control Room Boundary
A self-revealing noncited violation of Technical Specifications 5.4.1.a was identified for the failure to implement adequate work controls for painting activities in the area of control room ventilation equipment. Subsequently, the conduct of painting in the supply duct for Control Room Supply Fan S-38 resulted in operating fans drawing in the paint fumes into the control room. The work planning did not identify that the established ventilation path would result in the paint fumes entering the control room. The finding has crosscutting aspects associated with human performance in the planning of the work activity.

This finding impacted the Barrier Integrity Cornerstone and was determined to be more than minor because if left uncorrected the finding could result in a more significant safety concern involving control of work activities that could affect the control room atmosphere. Using the Significance Determination Process Phase 1 Screening Worksheet in Appendix A of Inspection Manual Chapter 0609, the inspector considered that the issue represented an administrative control function for preventing paint fumes from entering the control room and the protection of the control room ventilation system charcoal filters. This issue was discussed with a senior reactor analyst and determined that the appropriate safety significance evaluation was through management review. The management review considered Pacific Gas and Electric Company's control of painting materials in and around the control room envelope, any potential impact on the charcoal filters used to maintain the radiological barrier in the event of an accident, and any potential impact on licensee personnel. Based on the introduction of paint fumes into the control room did not adversely affect the control room operators' ability to operate the plant, there was not an actual degradation of the control room boundary and the charcoal filters remained operable, the finding was determined to be of very low safety significance.

Inspection Report# : 2005004*(pdf)*

Significance: G Mar 31, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to properly pre-plan CRVS maintenance when opening the control room boundary
Two examples of a self-revealing, non-cited violation of Technical Specification 5.4.1.a were identified for failure to adequately plan maintenance associated with the Control Room Ventilation System. On January 4 and February 1, 2005, both trains of the Control Room Ventilation System were inadvertently rendered inoperable for short periods of time when the system boundary was opened for maintenance. In

each case, the maintenance activity was not appropriately planned to ensure the administrative controls prescribed by Technical Specification 3.7.10 were met and/or the appropriate components were identified.

This issue is more than minor because the issue affects the Barrier Integrity Cornerstone and represented a partial loss of function of the Control Room Ventilation System for both train boundaries being open. The issue was evaluated utilizing Inspection Manual Chapter 0609, "Significance Determination Process," Appendix A, Item 1 for the Containment Barriers Cornerstone. The Phase 1 review identified that the finding only represents a degradation of the radiological barrier function for the control room and was therefore of very low safety significance. A human performance crosscutting aspect was identified for the inadequate planning and communications involving the work activities on the Control Room Ventilation System.

Inspection Report# : 2005002*(pdf)*

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)*

Occupational Radiation Safety

Significance: G Dec 31, 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)*

Significance: G Jan 14, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation

Failure to Perform an Adequate Survey to Evaluate Radiological Hazards
A self-revealing non-cited violation of 10 CFR 20.1501(a) was identified when the licensee failed to perform an adequate survey to evaluate the radiological hazards associated with venting the steam generator exhaust into containment during the Unit 2 refueling outage. On February 7, 2003, the licensee failed to take air samples to account for the decay of tellurium-132 into iodine-132 in the steam generator exhaust prior to venting into the containment building. Consequently, fifty-two workers in containment received unplanned and unintended low-level intakes (less than 10 millirem) of iodine-132. This issue has been entered into the licensee's corrective action program as Action Request No. A0628334.

The failure to perform a survey to evaluate radiological hazards is a performance deficiency. The finding is more than minor because it affected the Occupational Radiation Safety cornerstone objective to protect worker health and safety from radiation and radioactive materials. This finding was associated with the cornerstone attribute of Exposure Control and involved unplanned and unintended dose to workers that resulted from actions contrary to NRC requirements. Therefore the Occupational Radiation Safety Significance Determination Process was used to analyze the significance of the finding which was determined to be of very low safety significance because it did not involve: (1) ALARA planning and controls, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess dose.
Inspection Report# : 2004009*(pdf)*

Public Radiation Safety

Significance:  Jan 14, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to control radioactive material contained in certain generally-licensed devices in accordance with 10 CFR 31.5
The team identified a non-cited violation of 10 CFR 31.5(c) because the licensee failed to maintain a program for generally-licensed radioactive devices used for reactor operations in accordance with the regulatory requirements. The licensee failed to implement a program for the use of generally-licensed devices used for monitoring personnel, and consequently failed to maintain and test 14 radioactive sources housed within the generally-licensed devices. Specifically, the licensee had not (1) conducted contamination leak tests on the device and the 10-millicurie Nickel-63 source housed in each device at the required frequency and (2) assigned an individual with the regulatory knowledge or authority to ensure compliance with 10 CFR 31.5. This issue has been entered into the licensee's corrective action program as Action Request A0628345.

The licensee's failure to control generally-licensed devices containing radioactive material in accordance with 10 CFR 31.5 was a performance deficiency. The finding was more than minor because it affected the Public Radiation Safety cornerstone attribute and affected the associated cornerstone objective. In order to ensure adequate protection of the public health and safety from exposure to radioactive materials released into the public domain, the licensee is required to leak test each generally-licensed device. Using the Public Radiation Safety Significance Determination Process, the finding had very low safety significance (Green) because: (1) it was not a transportation issue, (2) public exposure was not more than 5 millirem, and (3) there were not more than five occurrences. This finding also had crosscutting aspects associated with the effectiveness of problem identification and resolution.
Inspection Report# : 2004009*(pdf)*

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : March 03, 2006