Diablo Canyon 1
2Q/2004 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate procedure for reactor vessel draining resulted in inadvertent two feet level change
A self-revealing violation of 10 CFR 50 Appendix B, Criterion V was identified for failure to provide a procedure appropriate to the circumstances. Specifically, Procedure OP A-2:II "Reactor Vessel - Draining the RCS to the Vessel Flange with Fuel in the Vessel," Revision 28, was not appropriate to the circumstances in that Attachent 9.5 prescribed opening cross-tie valves between the pressurizer and reactor vessel head following reactor vessel drain down to the reactor vessel flange. This resulted in an alignment in which the reactor vessel head was not vented, and caused an inadvertent loss of control of vessel level and inadvertent increase of two feet in vessel level, when Attachment 9.5 was performed. When the reactor vessel head was vented by placing the level indication system and inadvertent increase of two feet in reactor vessel level occurred. In addition to the procedure aligning the system at an inappropriate point in the evolution, operators did not maintain the valve status board and assumed that the reactor vessel was adequately vented. Three other instances occurred that impacted the plant in which PG&E operators did not maintain control of system status (not maintaining adequate steam generator levels per the outage safety plan, inadvertent transfer of water from the refueling water storage tank to the spent fuel pool, and adding water to the upper reactor cavity when intending to fill the lower reactor cavity). Following the above events that included inadvertent losses of control of system status by operations leadership, the operations director initiated an operations stand down with the senior reactor operators and day shift plant operations staff, emphasizing the need to control overall system status.

This finding was of greater than minor significance because it involved the Initiating Events cornerstone and represented a loss of control of reactor vessel level. This finding was assessed using the Significance Determination Process (SDP) IMC 0612, Appendix G, "Shutdown Operations," and determined to be of very low safety significance (Green). Item II.C(5) of the shutdown SDP ("Drain down controlled") applies. Although this violation resulted in an inadvertent level change of approximately two feet, the level change resulted in an increase in vessel water level, thus not decreasing the time to boil.

Inspection Report# : 2004003*(pdf)*

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Exceeding pressurizer heat up rate
A noncited violation of Technical Specification 5.4.1.a was identified for failure to implement procedures. Specifically, PG&E failed to implement Procedure OP A-2:IX "Reactor Vessel - Vacuum Refill of the RCS," Revision 3, by exceeding the required pressurizer heatup rate of 100 degrees in any one hour. On May 11, 2004, during drawing of a pressurizer steam bubble operators allowed a pressurizer heatup rate of 129 degrees in one hour. Operators monitored an out of service pressurizer pressure channel, while drawing the bubble, and failed to adequately coordinate charging into the reactor coolant system and energization of pressurizer heaters. Following identification of the excessive heatup rate, operators also did not implement licensee controlled specification Equipment Control Guideline 7.5, which required an engineering evaluation be performed within 6 hours to determine the affect of the excessive heatup rate on the pressurizer and verify that the pressurizer will remain operable.

This issue affects the barrier integrity cornerstone objective to ensure that the pressurizer, part of reactor coolant system barrier, remains intact, and not subject to excessive thermal stresses. This issue is more than minor because it could had an actual impact on the ability to minimize stresses on the reactor coolant pressure boundary. Using the Phase 1 significance determination process the inspectors determined that the issue was of very low safety-significance (Green) because engineers performed an evaluation of the condition and determined that the pressurizer remained operable because the condition was bounded by a previous analysis. Previous analysis indicated that the pressurizer could withstand a maximum heat up rate of up to 282 degrees F per hour without excessive stresses.

Inspection Report# : 2004003*(pdf)*

Mitigating Systems

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Violation of T.S. 3.0.4 for changing modes with an AFW pump inoperable

A self-revealing noncited violation of Technical Specification 3.0.4 was identified for transitioning from Mode 4 (Hot Shutdown) to Mode 3 (Hot Standby) with turbine driven auxiliary feedwater Pump 1-1 inoperable. Technical Specification 3.7.5 requires three trains of auxiliary feedwater to be operable in Mode 3, but only two trains were operable when entering Mode 3. Operators closed Valves LCV-106, -107, -108, and -109, the remote-manual isolation valves for auxiliary feedwater Pump 1-1 when entering Mode 5 on May 27, 2004, but were not reopened prior to entering Mode 3 on May 30. This condition existed for 21 hours. Operators failed to track the status of these valve, and failed to perform an adequate review of system status during mode transition (Mode 4 to Mode 3) and shift turnovers.

This issue affects the mitigating systems cornerstone and is more than minor because it adversely affects the cornerstone objective of availability and reliability of a risk significant system (auxiliary feedwater). Using the Phase 1 significance determination process the inspectors determined that the issue was of very low safety-significance (Green) because the finding occurred while the unit was not operational, where the probability and consequences of an accident are lower, and the time of inoperability (21 hours) was less than the 72 hours allowed in TS 3.7.5. Although auxiliary feedwater Pump 1-1 was inoperable per the Technical Specifications, the pump was available for operators to manually initiate AFW if needed during a transient or accident. In addition, both 100 percent capacity motor-driven AFW pumps were also available if needed.

Inspection Report# : 2004003*(pdf)*

Significance: G Mar 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Translate Design Basis of Diesel Fuel Oil Storage Tank into Implementing Procedures
A oncited violation of 10 CFR 50, Appendix B, Criterion III, was identified for failure to translate the design basis of the fuel oil storage system into procedures. Calculation M-786 provided the basis that the technical specification capacity of the fuel oil storage tanks contained 7 days of fuel for a loss of offsite power for both units, based on each unit operating only the minimum safety related loads to achieve and maintain safe shutdown. However, this loading strategy was not translated into procedures, nor was any instructions to alert operators to take actions to conserve fuel oil. Without taking actions to minimize loads, if all six diesel generators ran fully loaded, Diablo Canyon would have enough fuel to last two days upon a loss of offsite power.

This issue affects the mitigating systems cornerstone and is more than minor because it could have actual impact on the ability to mitigate a long-term loss of offsite power event up to the 7 day design basis capacity of the fuel oil storage tank. Using the phase 1 significance determination process the inspectors determined that the issue screens to green because it did not involve unavailability of any technical specification system. The licensee has alternate means to obtain additional fuel oil from offsite sources in an expeditious manner. Therefore, this issue has very low safety signficance.
Inspection Report# : 2004002*(pdf)*

Significance: G Mar 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Adequate Procedures for Preventive Maintenance and Operation of Limitorque Motor-operated Valves in a Moist Environment
A non-cited violation was identified by the inspectors for the failure to assure activities affecting quality shall be accomplished in accordance with documented instructions, procedures, or drawings, as required by 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings." Specifically, Pacific Gas and Electric Company failed to provide adequate procedures for preventive maintenance and operation of Limitorque motor-operated valves in a moist environment. The inadequate procedures resulted in the degraded operation of three Limitorque motor-operated valves in the ASW system during quarterly valve surveillance activities.

This finding impacted the mitigating systems cornerstone and is greater than minor because the finding would become a more significant safety concern if the problem was left uncorrected. Specifically, the problems of undiscovered rust formation on the valve declutch lever and the out-of-adjustment tripper fingers would continue to repeatedly affect the closing operation of the three ASW motor-operated valves, and thus affect the overall reliability of the ASW systems. Using the SDP Phase 1 Worksheet in Inspection Manual Chapter 0609, the inspectors determined that this finding is of very low safety significance. Although operation of the three ASW valves were degraded, the three motor-operated valves were available to perform their intended safety functions. The finding did not result in a loss of safety function or screen as potentially risk significant from the consideration of external event impacts.
Inspection Report# : 2004002*(pdf)*

Significance: G Mar 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Control Placement of Temporary Equipment With Regards to Potential Seismic Impact on Safety-Related Systems
A non-cited violation was identified by the inspectors for the failure to adequately control the potential for seismically-induced impact of stored, temporary equipment on safety systems, as required by Technical Specification 5.4.1.a. Specifically, on March 18 and March 31, the inspectors and Pacific Gas and Electric Company staff identified four instances were transient equipment was stored in close proximity to safety-related systems. The transient equipment was determined not to impact the functionality of the safety-related systems in the event of an earthquake.

The finding impacted the mitigating systems cornerstone and was more than minor when compared to Example 4.a of Inspection Manual Chapter 0612, Appendix E. Similar to the example, the inspectors and Pacific Gas and Electric Company staff found several examples on the auxiliary building 140 ft. elevation where temporary equipment was stored contrary to procedures to protect safety-related systems from seismic impact. Using the Significance

Determination Process Phase I worksheet in Inspection Manual Chapter 0609, Appendix A, the finding is of very low safety significance since it did not screen as potentially risk significant due to a seismic event. Specifically, the inspectors determined that the finding did not involve the loss or degradation of equipment or function specifically designed to mitigate a seismic event and it does not involve the total loss of any safety function with respect to a seismic event.
Inspection Report# : 2004002*(pdf)*

Significance: G Mar 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Address Loss of Diesel Fuel Oil Level in Priming Tank
A non-cited violation was identified by the inspectors for the failure to promptly address operability of diesel engine generator 1-2 in accordance with 10 CFR Part 50, Appendix B, Criterion XVI. Specifically, Pacific Gas and Electric Company suspected that a leaking valve was causing the potential loss of prime to the fuel oil booster pump, but failed to adequately address the operability of diesel engine generator 1-2 with respect to the leak. The failure resulted in an additional challenge to operators approximately two months later.

The finding impacted the mitigating systems cornerstone and was more than minor since it affected the configuration control and procedure quality attributes. By failing to ensure that compensatory measures and/or appropriate procedure modifications were in place to maintain priming tank level, operators were faced with an additional instance of having to restore priming tank level. Using the Significance Determination Process Phase I worksheet in Inspection Manual Chapter 0609, the inspectors determined that the deficiency was confirmed not to result in a loss of function per Generic Letter 91-18. Specifically, the inspectors calculated that it would take 1.5 to 2.0 hours before the fuel oil booster pump would lose prime and that operators had responded within that time frame. Therefore, the finding was determined to be of very low safety significance.
Inspection Report# : 2004002*(pdf)*

Significance: TBD Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Train Operations Responders in Support of the Fire Brigade
The inspectors identified a violation of Technical Specification 5.4.1.d which requires written procedures be established, implemented and maintained covering the Fire Protection Program implementation. Specifically, PG&E failed to adequately establish and implement procedural changes that provided for senior control operators, licensed control operators and non-licensed, level 8 nuclear operators to serve in the operator responder position. The inspectors noted that the applicable attachment to the procedure for conduct of the operations response position was not established until after training had been provided on implementing the procedure. Operations responders supporting the fire brigades exhibited a knowledge weakness in activities such as communications with the control room, manual actuation of fire suppression equipment, and providing information to the fire brigade regarding safe shutdown equipment.

The finding is unresolved pending completion of a significance determination. The finding is greater than minor because it affects the mitigating system cornerstone objective by degrading fire brigade effectiveness, which is a fire protection defense-in-depth element.
Inspection Report# : 2003008*(pdf)*

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Monitor Auxiliary Feedwater System According to 10 CFR 50.65(a)(2)
The inspectors identified a noncited violation for the failure to adequately monitor the performance of the Unit 1 auxiliary feedwater system in accordance with 10 CFR 50.65(a)(2). Specifically, the unavailability time performance criteria for the auxiliary feedwater system had been exceeded during its monitoring period, but the system was not monitored per 10 CFR 50.65(a)(1).

The finding impacted the mitigating systems cornerstone objective to ensure the availability and reliability of the auxiliary feedwater system to respond to initiating events. The finding is greater than minor using Example 1.f of Inspection Manual Chapter 0612, Appendix E. Similar to the example, the inspectors identified that Pacific Gas and Electric did not consider unavailability time for the Unit 1 auxiliary feedwater system, although the unavailability time was due to prior poor maintenance practices on Valve FW-1-FCV-437. If the unavailability time was considered, the 10 CFR 50.65 (a)(2) evaluation would be invalid. Using the Significance Determination Process Phase I worksheet in Inspection Manual Chapter 0609, Appendix A, the finding is of very low safety significance since 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.
Inspection Report# : 2003008*(pdf)*

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Adequate Technical Bases for Core Exit Thermocouple Radial Temperature Measurement
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, when Pacific Gas and Electric personnel failed to adequately evaluate the capability of core exit thermocouples to measure the radial temperature gradient for Quadrant 1 of the Unit 1 reactor core. Specifically, maintenance personnel inadvertently swapped core exit thermocouples at a connection, leaving only 3 operable thermocouples per Trains

A and B for Quadrant 1. When questioned by the inspectors, engineering personnel could not provide an adequate technical bases for how measurement of radial temperature gradient could be accomplished.

The finding impacts the mitigating system cornerstone through degraded overall availability of the components within a system used to assess and respond to initiating events to prevent undesirable consequences. The finding was greater than minor when compared to Example 3.a of Inspection Manual Chapter 0612, Appendix E. Similar to Example 3.a, Pacific Gas and Electric performed additional work to verify the ability of the core exit thermocouples to measure radial temperature gradient within Quadrant 1 of the Unit 1 reactor core. Using the Significance Determination Process Phase 1 screening worksheet from Inspection Manual Chapter 0609, Appendix A, the finding was determined to be of very low safety significance since the deficiency was confirmed not to result in loss of function per Generic Letter 91-18, Revision .
Inspection Report# : 2003008*(pdf)*

Significance: G Dec 31, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to Promptly Identify and Correct Rockwell-Edwards Valves Susceptible to Packing Gland Follower Flange Failures
A self-revealing violation of 10 CFR Part 50, Appendix B, Criterion XVI, was identified for failure to promptly identify and correct a condition adverse to quality. Specifically, in December 2000, Pacific Gas and Electric failed to identify and correct the population of Rockwell-Edwards valves in safety-related and risk-significant systems that were susceptible to failure of the packing gland follower flange from intergranular stress corrosion cracking. Pacific Gas and Electric received an industry notification in December 2000 that Rockwell-Edwards valves were vulnerable for this type of failure, but initiated corrective actions on a very limited population of valves (those involving a trip risk). As a result, on December 3, 2003, the packing gland follower flange for safety injection Valve SI-1-8890A (pressure equalization valve) on the hot leg injection line failed, due to intergranular stress corrosion cracking, resulting in excessive packing gland leakage.

The finding impacted the mitigating systems cornerstone through degraded equipment performance for a system train that responds to initiating events to prevent undesirable consequences. The finding is greater than minor because the finding would become a more significant safety concern if the valve condition was left uncorrected. The amount of leakage from the valve would be significantly greater than a 30 drop per minute leak rate, if the safety injection pumps were fully running in the hot leg injection mode. The Valve SI-1-8890A leak rate is bounded by a residual heat removal pump seal failure. Pacific Gas and Electric concluded the safety injection system was operable but degraded because both safety injection system trains would be available to provide adequate flow if a demand occurs. Using the Significance Determination Process Phase 1 worksheet in Inspection Manual Chapter 0609, Appendix A, the finding was determined to be of very low safety significance, since there is 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.
Inspection Report# : 2003008*(pdf)*

Significance: G Oct 07, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform A Prompt Operability Assessment for Multiple Battery Charger Failures
A non-cited violation was identified for inadequate corrective actions for multiple battery charger failures. 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," states, in part, that significant conditions adverse to quality shall be promptly identified, the cause shall be determined, and corrective action shall be taken to preclude repetition. Additionally, the identification, cause, and corrective actions associated with a significant condition adverse to quality shall be documented and reported to appropriate levels of management. Contrary to the above, the team discovered multiple examples of PG&E's failure to promptly identify, determine the cause, apply corrective action and report to appropriate management the design deficiency and other causes for multiple failures in vital battery chargers between January 1999 and May 2003. The failure to correct the battery charger design deficiency allowed battery charger failures in both units.

This issue was more than minor because it could become more significant safety concern if not corrected because multiple failures could exist simultaneously without being detected, although this did not represent a common mode failure. It affected the Mitigating Systems Cornerstone The issue was of very low safety significance because the primary failure mechanism involved an increased failure rate, but did not constitute a common cause failure mode. A Phase 3 SDP determined that there was a good likelihood that at least one 125 Vdc bus would have power during design basis conditions, allowing the plant to reach a safe shutdown condition.
Inspection Report# : 2003010*(pdf)*

Significance: G Oct 07, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Multiple Examples of A Violation of 10 CFR Part 50, Appendix B, Criterion XVI, Related to Battery Charger Failures Between 1999 and 2003
The team identified that, in the case of repeated failures of Class 1E battery chargers between January 1999 and May 2003, the licensee's corrective action process was ineffective in a number of ways. The licensee failed to appropriately prioritize and evaluate battery charger failures, individually and collectively. The Action Request Review Team consistently assigned low significance, did not assign any cause investigation, and did not recognize a trend of charger failures existed, even when multiple failures were identified in a short period of time. The licensee inappropriately judged the significance of the charger failures on lack of actual adverse plant consequences rather than the potential consequences of similar failures during a design basis event. Corrective actions were ineffective and limited to component replacement, allowing additional failures to occur. The licensee's Corrective Action Program had little defense-in-depth and no effective feedback mechanisms in the area of determining the significance of an issue and assigning an appropriate type of cause assessment. The licensee did not have a formal program for trending equipment failures. The program did not

give adequate consideration to determining the extent of condition or potential for common mode failure.
Inspection Report# : 2003010*(pdf)*

Significance: G Oct 07, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Ten Examples of A Violation of Technical Specification 3.8.4 for Battery Chargers Inoperable Longer Than the AOT.
A non-cited violation of Technical Specification 3.8.4 was identified because various Class 1E DC chargers in both units were incapable of performing their intended safety functions of supplying 125 Vdc loads and recharging the associated battery for longer than permitted by the associate action statements during various times between January 1999 and May 2003. This condition was allowed to occur because the licensee failed to identify the cause and take effective corrective actions from earlier failures. Specifically, multiple, and in some cases repetitive, failures occurred which were undetected until the chargers were fully loaded, as would be the case during performance of its intended safety function.

This issue was more than minor because it could become more significant safety concern if not corrected because multiple failures could exist simultaneously without being detected, although this did not represent a common mode failure. It affected the Mitigating Systems Cornerstone. The issue was of very low safety significance because the primary failure mechanism involved an increased failure rate, but did not constitute a common cause failure mode. A Phase 3 SDP determined that there was a good likelihood that at least one 125 Vdc bus would have power during design basis conditions, allowing the plant to reach a safe shutdown condition.
Inspection Report# : 2003010*(pdf)*

Significance: G Sep 27, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Promptly Identify and Correct Diesel Engine Generator Lube Oil Carbonization
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI for Pacific Gas & Electric Company's failure to promptly identify and correct lube oil carbonization in diesel engine generators. This failure resulted in increased lube oil filter differential pressures and partial clogging of precirculation lube oil lines for Diesel Engine Generators 1-3 and 2-2.

The finding impacted the mitigating systems cornerstone and was more than minor when assessed using Inspection Manual Chapter 0612, Appendix E, Example 3.b. In Example 3.b, a discrepancy between an actual condition and the design was more than minor if the operation of the system was adversely affected. With respect to this finding, the carbonized oil clogged the precirculation lube oil line requiring Diesel Engine Generator 1-3 unavailability to clean the line. Additionally, the carbonized lube oil caused an increase in lube oil filter differential pressure. The finding is of very low safety significance since there was no loss of an actual safety function, no loss of a safety-related train for greater than the Diesel Engine Generator 1-3 Technical Specification allowed outage time, and the finding is not potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Inspection Report# : 2003007*(pdf)*

Significance: G Sep 27, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Two Examples of a Violation of Technical Specification 5.4.1.d for Inadequate Fire Protection Implementation
The inspectors identified two examples of a violation of Technical Specification Section 5.4.1.d, for failure to establish, implement, and maintain adequate procedures covering fire protection program implementation.

Example 1: The licensee failed to adequately implement fire protection program requirements specified in Calculation M-944 "10 CFR 50 Appendix R, Alternate Shutdown Methodology Time and Manpower Study/Safe Shutdown System Considerations." Specifically, in a control room fire scenario requiring control room evacuation and remote shutdown, operators failed to complete actions required for achieving safe shutdown specified in Procedure OP AP-8A, "Control Room Inaccessibility Hot Standby," within the times assumed in Calculation M-944.

This finding was of greater than minor significance because it impacted the mitigating systems cornerstone and adversely affected the ability of the licensee to manually operate certain components required for safe shutdown within the analyzed times. Specifically, in a simulated field walkdown, operators were not able to establish auxiliary feedwater within 30 minutes as required by analysis nor close a stuck open power operated relief valve within 5 minutes. The inspectors used Appendix F of Manual Chapter 0609 and determined that the inability to perform the safe shutdown procedures required a Phase 2 and Phase 3 analysis in the significance determination process. The Phase 2 and 3 analysis of the ignition frequencies and the potential heatup of the core in this degraded condition, revealed that this finding was of very low safety significance.

Example 2: The licensee failed to adequately implement fire protection program requirements for a fire in the control room requiring control room evacuation and remote shutdown. Specifically, the licensee failed to provide adequate information in procedure OP AP-8A, "Control Room Inaccessibility Hot Standby," or on the Unit 2 hot shutdown panel concerning the correct hot shutdown panel switch positions of certain components required for safe shutdown. Consequently, in stepping through procedure OP AP-8A, operators failed to transfer control of the auxiliary feedwater throttle valves and steam generator atmospheric dump valves from the control room to the hot shutdown panel.

This finding was of greater than minor significance because it impacted the mitigating systems cornerstone and adversely affected the ability of the licensee to take control of certain components required for safe shutdown. Specifically, information identifying the correct hot shutdown panel switch

positions for the auxiliary feedwater throttle valves and steam generator atmospheric dump valves were not provided to the operators. During a control room fire and remote shutdown, if not placed in the correct positions, these components would have remained vulnerable to fire damage that could cause spurious operation. The inspectors used Appendix F of Manual Chapter 0609 and determined that the inability to perform the safe shutdown procedures required a Phase 2 and Phase 3 analysis in the significance determination process. The Phase 2 and 3 analysis of the ignition frequencies and the potential heatup of the core in this degraded condition, revealed that this finding was of very low safety significance.
Inspection Report# : 2003007*(pdf)*

Barrier Integrity

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to take corrective actions for stuck open safety injection check valve
A noncited violation of 10 CFR 50 Appendix B, Criterion XVI was identified for failure to identify the cause and correct a condition adverse to quality. Specifically, PG&E failed to inspect and repair the corroded internals of Valve SI-1-8820 prior to changing operating modes. Safety injection check Valve SI-1-8820, listed in the Final Safety Analysis Report as the inboard containment isolation valve for the common high pressure injection header, was found stuck open during a backflow leak test. However, the licensee mechanically agitated the valve to close it, and wrote an operability assessment, to justify an increase in operational modes without determining the cause of failure and repairing the valve.

This issue affects the barrier integrity cornerstone objective to ensure that systems penetrating the containment and are connected to the reactor coolant system has adequate isolation to protect the containment barrier. This issue is more than minor because it could have an actual impact on the ability to isolate a fault outside of containment given a single failure. Using the Phase 1 significance determination process the inspectors determined that the issue was of very low safety-significance (Green) because the finding occurred while the unit was not operational, where the probability and consequences of an accident are lower. Alternate means existed to isolate the penetration, in that motor operated Valves SI-1-8801A/B were in series with Valve SI-1-8820, and could isolate a fault on the charging injection line.
Inspection Report# : 2004003*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: FIN Finding
Failure to Maintain Collective Doses ALARA
A finding was identified because Pacific Gas and Electric failed to maintain collective doses as low as is reasonably achievable. Specifically, work activities associated with Radiation Work Permit 03-2055, "Reactor Coolant Pump (RCP) 2-2, 10 year inspection," exceeded 5 person-rem and the dose estimation by more than 50 percent due to a miscommunication among work groups.

The failure to maintain collective doses as low as is reasonably achievable is a performance deficiency. This finding was more than minor because it is associated with the Occupational Radiation Safety Cornerstone attribute (program and process) and affected the associated cornerstone objective (to ensure adequate protection of workers' health and safety from exposure to radiation). This occurrence involved inadequate planning which resulted inunplanned, unintended occupational collective dose for the work activity. When processed through the Occupational Radiation Safety Significance Determination Process, this finding was found to have no more than very low safety significance because the finding was an as low as is reasonably achievable planning issue and Pacific Gas and Electric Company's 3-year rolling average collective dose was less than 135 person-rem.
Inspection Report# : 2003008*(pdf)*

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : September 08, 2004