Diablo Canyon 1
1Q/2015 Plant Inspection Findings

Initiating Events

Significance: G Sep 19, 2014
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Provide Adequate Procedural Guidance Resulting in a Loss of Unit 1 230kV Off-site Power
The inspectors reviewed a Green self-revealing finding for the licensee's failure to provide appropriate acceptance criteria to ensure work activities were satisfactorily accomplished. Specifically, the licensee failed to provide acceptance criteria for torqueing or verification of acceptable torqueing during the re-assembly of the load tap changer in Work Order 64006965, Reinhausen Tap Changer Overhaul, for the re-termination of the Unit 1 startup transformer load tap changer diverter switch flex lead terminations. The licensee documented this issue in Notification 50578636. The licensee replaced the load tap changer and revised the procedure as part of their corrective actions.

The licensee's failure to provide appropriate acceptance criteria in Work Order 64006965 for the re-termination of the Unit 1 Startup Transformer load tap changer diverter switch flex lead terminations was a performance deficiency. Specifically, the work order did not provide acceptance criteria for torqueing or verification of acceptable torqueing during the re-assembly of the load tap changer diverter switch flex lead terminations. This performance deficiency was more than minor because it is associated with the procedure quality attribute of the Initiating Events cornerstone objective and adversely affected the objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Appendix A, Exhibit 1, "Initiating Events Screening Questions," this finding was determined to be of very low safety significance (Green) because, it did not result in a reactor trip or a loss of mitigating equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition.

This finding has a human performance cross-cutting aspect associated with work management, specifically in that the licensee did not implement a process of planning, controlling, and executing work activities such that nuclear safety is the overriding priority [H.5]. (Section 4OA3.2)
Inspection Report# : 2014004 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Effectively Implement Risk Management Actions Associated with Safety-Related Emergency Diesel Generators
The inspectors reviewed a self-revealing non-cited violation of 10 CFR 50.65(a)(4) for failing to manage risk when a protected train emergency diesel generator was unexpectedly rendered inoperable while another train was being returned to service. Specifically, the installed and administrative operational barriers failed to prevent a loss of safety

function to an operable emergency diesel generator resulting in two inoperable emergency diesel generators for period of two hours.

The inspector determined that the licensee's failure to adequately implement risk management actions associated with performance of the maintenance outage window of emergency diesel generator EDG 1 2 was a performance deficiency. The performance deficiency is more than minor and therefore a finding because it was associated with the configuration 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 performance deficiency involved the licensee's assessment and management of risk associated with performing maintenance in accordance with 10 CFR 50.65(a)(4). The inspectors reviewed the results of Calculation RA 13 11, "Evaluation for Unit 1 EDG 1 3 Inoperable while EDG 1 2 is in Maintenance," Revision 0, for impact to incremental core damage probability. The inspectors used Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," and determined because the incremental core damage probability deficit (ICDPD) was not greater than 1E 06/year, the finding was determined to be of very low safety significance (Green).

The finding was determined to have a cross cutting aspect in the area of human performance, associated with the work practices component, in that personnel work practices are used commensurate with the risk of the assigned task, such that work activities are performed safely. Specifically, the operator did not consider potential undesired consequences, such as damage to the fuel line, and perform adequate self or peer checks prior to performance of an inspection of protected equipment to ensure risk management action would provide appropriate protection [H.11]. (Section 4OA3)

Inspection Report# : 2014005 *(pdf)*

Significance: G Sep 19, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Document Degraded Conditions in the Corrective Action Process
The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and drawings," in that the licensee did not enter degraded conditions into the corrective action process. The inspectors identified two examples. Specifically, on May 12-13, 2014, the licensee experienced high temperatures in the 480 volt vital bus rooms and did not initiate a notification to document the unexpected condition. Second, on May 20, 2014, the licensee failed to document that a 480 volt vital bus room ventilation system register louvers was found closed.

The failure to enter problems into the corrective action process on the 480 volt busses was a performance deficiency. The performance deficiency was more than minor because it was associated with the human performance attribute of the Mitigating Systems Cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and is therefore a finding. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," this finding was determined to be of very low safety significance (Green) because, it was not a design or qualification deficiency, was not a loss of the system or function, and did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time. The inspectors determined this finding has a human performance cross-cutting aspect associated with challenging the unknown attribute, specifically in that licensee personnel did not maintain a questioning attitude to resolve unexpected conditions [H.11]. (Section 1R15)
Inspection Report# : 2014004 *(pdf)*

Significance: G Sep 19, 2014
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Inadequate Maintenance Procedure Resulted in Improper Configuration of Safety Related Equipment
The inspectors reviewed a Green self-revealing, non-cited violation of Technical Specification 5.4.1.a, "Procedures," for failure to implement properly preplanned maintenance procedures affecting the performance of safety-related equipment. Specifically, inspectors reviewed the licensee performance associated with surveillance and maintenance activities and identified two examples of improper configuration of safety-related equipment returned to service, because of inadequate preplanned maintenance procedures.

The failure to implement properly preplanned maintenance procedures affecting the performance of safety-related equipment is a performance deficiency. The inspectors determined that the finding was more than minor because it is associated with the procedure quality attribute of the Mitigating System Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesired consequences. Specifically, the restriction of airflow caused by inadvertent closure of ventilation registers following the damper inspection resulted in the undesired consequences of higher ambient 480 volt switchgear room temperatures. In addition, the misconfiguration of the source range N-32 nuclear instrumentation impacted the functioning of the P-6 permissive and prevented it from performing properly during Unit 2 reactor startup such that operator action was necessary to prevent damage to the detector. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," this finding was determined to be of very low safety significance (Green) because the finding was a deficiency affecting the design or qualification of mitigating structures, systems, and components that did not affect operability or functionality.

The inspectors concluded that this finding affected the cross-cutting aspect of human performance associated with documentation, because the licensee did not ensure plant activities are governed with comprehensive maintenance procedures which are complete, accurate, and up to date to ensure work processes did not affect the performance of safety-related equipment [H.7]. (Section 4OA2.2)
Inspection Report# : 2014004 *(pdf)*

Significance: G Sep 12, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Document Degraded Emergency Diesel Generator Fuel Injector Nozzles in the Corrective Action Program
The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," in that the licensee did not enter degraded conditions into the corrective action process. The first example of this violation occurred in ten identified instances from 2009 to 2012 when technicians failed to document degraded emergency diesel generator fuel injector nozzles in the corrective action program. The second example occurred in July and August 2014 when engineering personnel failed to appropriately document loose bolts on 4.16kV breaker panels in the corrective action program. The licensee documented this issue in the corrective action program as SAPNs 50641514 and 50656750 and issued a communication to the station reminding personnel of the requirement to initiate notifications even when problems are immediately resolved.

The failure to document unsatisfactory emergency diesel generator fuel injection nozzles and loose 4.16kV switchgear bolts in the corrective action program as required by procedure was a performance deficiency. The performance deficiency was more than minor because it was associated with the human performance attribute of the mitigating systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. It is therefore a finding.

Using Inspection Manual Chapter 0609, Appendix A, the team determined that this finding was of very low safety significance (Green) because it did not result in the loss of operability or functionality of a system or train. The inspectors determined this finding has an identification cross-cutting aspect in the problem identification and resolution cross-cutting area because the organization failed to implement a corrective action program with a low threshold for identification (P.1). Specifically, personnel failed to recognize that identified deficiencies were deviations from standards and that degraded conditions were promptly documented in the corrective action program.
Inspection Report# : 2014007 *(pdf)*

Significance: G Sep 12, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Technical Specification Surveillance Requirement for Emergency Diesel Generators
The team identified a Green non-cited violation of 10 CFR 50.36 for the licensee's failure to establish an appropriate surveillance test to demonstrate operability of its emergency diesel generators. After revising its emergency diesel generator loading analysis, the licensee failed to adjust the parameters for the full-load-reject surveillance to ensure the test was performed with the maximum anticipated electrical loading. After the team identified this violation, the licensee entered Surveillance Requirement 3.0.3 and documented the condition in its corrective action program as SAPNs 50657635 and 50657637.

The licensee's failure to specify the "lowest functional capability or performance level of equipment required for safe operation of the facility" as required by 10 CFR 50.36 was a performance deficiency. This performance deficiency was more than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, the team determined that this finding was of very low safety significance (Green) because it did not result in the loss of operability or functionality of a system or train. This finding has a resolution cross-cutting aspect in the problem identification and resolution cross-cutting area because the licensee failed to take effective corrective actions to address the nonconservative surveillance parameters in a timely manner (P.3). Specifically, the licensee did not take appropriate interim corrective actions to mitigate the issue while more fundamental causes were being assessed.
Inspection Report# : 2014007 *(pdf)*

Significance: G Sep 12, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
Longstanding Uncompensated Nonconforming Condition
The team identified a Green non-cited violation of 10 CFR Part 50 Appendix B Criterion XVI for the licensee's failure to take timely corrective actions. In 2011, the licensee identified a potential path for gas intrusion into the containment spray system, contrary to design basis requirements. The licensee took no interim or compensatory actions while planning its final corrective actions. The licensee documented this condition in its corrective action program as SAPN 50657636.

The failure to take timely corrective actions as required by 10 CFR 50 Appendix B Criterion XVI was a performance deficiency. This performance deficiency was more than minor because it was associated with the design control attribute of the mitigating systems cornerstone and it adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609 Appendix A, the team determined that this finding was of very low safety significance (Green) because it did not result in the loss of operability or functionality of a system or train. This finding has a conservative bias cross-cutting aspect in the human performance cross-cutting area because licensee personnel failed to use decision-making practices that emphasized prudent choices over those that were simply allowable (H.14). Specifically, licensee managers failed

to take timely action to address degraded conditions commensurate with their safety significance.
Inspection Report# : 2014007 *(pdf)*

Significance: G Jun 30, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Follow Procedure Associated with Seismic Induced Structural Interactions
The inspectors identified a Green non-cited violation of 10 CFR, Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to properly identify and evaluate system interactions as required by the licensee's Seismically-Induced Systems Interaction Program (SISIP) Procedure AD4.ID3, "SISIP Housekeeping Activities." Specifically, the inspectors identified multiple instances of components or sources capable of producing a potential threat related to seismic induced structural interactions of safety related equipment or components.

The failure of plant personnel to follow procedure requirements to properly identify and evaluate for impact equipment near sensitive or safety related equipment was a performance deficiency. This performance deficiency was more than minor and is therefore a finding because it was associated with the protection against external factors (seismic) attribute of the Mitigating Systems cornerstone objective and adversely affected the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, because Diablo Canyon staff did not fix or perform evaluations of seismic induced system interactions on safety-related or accident mitigating systems, this had the potential to challenge the availability, reliability, and capability of various systems required to function following or during earthquakes to prevent undesirable consequence.

Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Appendix A, Exhibit 2, "Mitigating System Screening Questions," the finding was determined to be of very low safety significance (Green) because the finding was associated with seismic design or qualification of systems, structures, and components but did not result in the loss of a system operability or functionality.

The inspectors determined this finding has a problem identification and resolution cross cutting aspect associated with the Identification attribute; specifically in that PG&E personnel failed to implement the SISIP with a low enough threshold for identifying and assessing seismic induced system interactions in accordance with the SISI program and procedures [P.1].
Inspection Report# : 2014003 *(pdf)*

Significance: G Jun 30, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Design Control with Respect to Seismic Induced System Interaction of Safety Related Components
The inspectors identified a Green non-cited violation of 10 CFR, Part 50, Appendix B, Criterion III, "Design Control," involving the licensee's failure to verify the adequacy of their design with respect to seismic induced system interaction of safety related components. Specifically, PG&E did not verify the adequacy of interference limitations on structural components associated with the safety related component cooling water (CCW) heat exchanger.

The licensee's failure to verify the adequacy of their design with respect to seismic induced system interaction of safety related components was a performance deficiency. This performance deficiency is more than minor, and is therefore a finding because the finding was associated with the Mitigating Systems Cornerstone attribute of design control and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of the component cooling water system to respond to initiating events to prevent undesirable consequences. Specifically, the original plant design configuration associated with seismic interference clearances for Unit 1 component cooling

water heat exchanger components was not adequately controlled to ensure design piping stresses would not be challenged. Using Inspection Manual Chapter 0609, Attachment 04, “Initial Characterization of Findings,” and Appendix A, Exhibit 2, “Mitigating System Screening Questions,” the finding was determined to be of very low safety significance (Green) because the finding was associated with seismic design or qualification of systems, structures, and components but did not result in the loss of a system operability or functionality. The inspectors determined this finding has a problem identification and resolution cross cutting aspect associated with the Identification attribute; specifically in that PG&E personnel failed to implement the SISIP with a low enough threshold for identifying and assessing seismic induce system interactions in accordance to the SISI program and procedures.

This finding did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.
Inspection Report# : 2014003 *(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: TBD Oct 17, 2014
Identified By: NRC
Item Type: AV Apparent Violation
Failure to Obtain Prior Approval for a Change Which Decreased the Effectiveness of the Emergency Plan
The inspectors identified an apparent Severity Level III violation of 10 CFR 50.54(q) and an associated preliminary finding of low to moderate significance (White) for failing to obtain prior approval for an emergency plan change which decreased the effectiveness of the emergency plan. Specifically, on November 4, 2005, without approval from the NRC, the licensee removed instructions in emergency plan implementing procedures for making protective action recommendations for members of the public on the ocean within the 10-mile emergency planning zone, decreasing the plan’s effectiveness.

The plan change, as implemented, resulted in a failure to meet the planning standard requirement of 10 CFR 50.47(b)(10) to develop and have in place procedures for the issuance of protective action recommendations (PARs) for the plume exposure pathway emergency planning zone, specifically, for areas of the ocean. This change constituted a decrease in effectiveness of the plan and, therefore, implementing the change without prior approval from the NRC is a performance deficiency. This performance deficiency is more than minor because it impacts the Emergency Response Organization performance attribute of the Emergency Preparedness Cornerstone objective to ensure that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Using the examples in Table 5.10-1, “Significance Examples § 50.47(b)(10),” of Appendix B to Inspection Manual Chapter 0609, "Emergency Preparedness Significance Determination Process," the inspectors concluded that this finding represents a degradation of the licensee’s risk-significant planning standard function. The required planning standard function was degraded because the licensee’s procedures did not direct the licensee to issue appropriate protective action recommendations to cover affected areas over the ocean within 5 to 10 miles of the site. The planning standard function was degraded, rather than lost, because default procedural actions of local governments would have resulted in effective protective actions for affected areas within 5 miles of the site. The finding does not present an immediate safety concern because, even without appropriate protective action recommendations from the licensee, the local governments would have ordered adequate protective actions for members of the public in the affected areas. No cross-cutting aspect is proposed as this performance deficiency

occurred in 2005 and is not indicative of current licensee performance.
Inspection Report# : 2014502 *(pdf)*

Occupational Radiation Safety

Significance: G Dec 31, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Control Access to a High Radiation Area With Dose Rates Greater Than 1 Rem/Hour
The inspectors reviewed a self-revealing non-cited violation of Technical Specification 5.7.2 because the licensee failed to control access to a high radiation area with dose rates greater than 1 rem/hour. A radiation protection technician assumed responsibility for guarding the area and reestablished compliance with technical specification requirements. Licensee representatives documented the occurrence in the corrective action program and performed an apparent cause evaluation.

The failure to control access to a high radiation area with dose rates greater than 1 rem/hour is a performance deficiency. The requirement not met was Technical Specification 5.7.2. The significance of the performance deficiency was more than minor because, if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern if workers had entered an uncontrolled high radiation area and received unintended radiation dose. The Occupational Radiation Safety Cornerstone was affected; therefore, the inspectors used Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," August 19, 2008, to determine the significance of the violation. The violation had very low safety significance because: (1) It was not an as low as is reasonably achievable (ALARA) finding, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. This violation has a cross cutting aspect in the human performance area, associated with avoiding complacency, because individuals did not recognize and plan for the possibility of mistakes, latent issues, and inherent risk and did not implement appropriate error reduction tools [H.12]. (Section 2RS1)

Inspection Report# : 2014005 *(pdf)*

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

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