



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION IV
1600 E LAMAR BLVD
ARLINGTON, TX 76011-4511

October 27, 2014

Mr. Edward D. Halpin
Senior Vice President
and Chief Nuclear Officer
Pacific Gas and Electric Company
Diablo Canyon Power Plant
P.O. Box 56, Mail Code 104/6
Avila Beach, CA 93424

**SUBJECT: DIABLO CANYON POWER PLANT – NRC INTEGRATED INSPECTION
REPORT 05000275/2014004 and 05000323/2014004**

Dear Mr. Halpin:

On September 19, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Diablo Canyon Power Plant Units 1 and 2. On October 7, 2014, the NRC inspectors discussed the results of this inspection with you and other members of your staff. Inspectors documented the results of this inspection in the enclosed inspection report.

NRC inspectors documented four findings of very low safety significance (Green) in this report. Three of these findings involved violations of NRC requirements. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2.a of the NRC Enforcement Policy.

If you contest the violations or significance of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC resident inspector at the Diablo Canyon Power Plant.

If you disagree with a cross-cutting aspect assignment or a finding not associated with a regulatory requirement in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region IV; and the NRC resident inspector at the Diablo Canyon Power Plant.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's

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- 2 -

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Sincerely,

/RA/

Wayne C. Walker, Chief
Project Branch A
Division of Reactor Projects

Docket Nos.: 05000275, 05000323

License Nos: DPR-80, DPR-82

Enclosure:

Inspection Report 05000275/2014004 and
05000323/2014004

w/Attachment: Supplemental Information

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E. Halpin

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Letter to Edward D. Halpin from Wayne C. Walker dated October 27, 2014

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REPORT 05000275/2014004 and 05000323/2014004

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 05000275; 05000323

License: DPR-80; DPR-82

Report: 05000275/2014004; 05000323/2014004

Licensee: Pacific Gas and Electric Company

Facility: Diablo Canyon Power Plant, Units 1 and 2

Location: 7 ½ miles NW of Avila Beach
Avila Beach, CA

Dates: July 1 through September 19, 2014

Inspectors: T. Hipschman, Senior Resident Inspector
J. Reynoso, Resident Inspector
M. Bloodgood, Operations Engineer
L. Micewski, Reactor Operations Engineer
C. Alldredge, Health Physicist
L. Carson II, Senior Health Physicist
N. Greene, Ph.D., Health Physicist
J. Mateychick, Senior Reactor Inspector
J. O'Donnell, CHP, Health Physicist
C. Osterholtz, Senior Operations Engineer
L. Ricketson, PE, Senior Health Physicist

Approved By: Wayne Walker, Chief
Project Branch A
Division of Reactor Projects

SUMMARY

IR 05000275/2014004, 05000323/2014004; 07/01/2014 – 09/19/2014; Diablo Canyon Power Plant; Operability Determinations and Functionality Assessments, Problem Identification and Resolution, Follow-up of Events and Notices of Enforcement Discretion

The inspection activities described in this report were performed between July 1 and September 19, 2014, by the resident inspectors at Diablo Canyon Power Plant and inspectors from the NRC's Region IV office. Four findings of very low safety significance (Green) are documented in this report. Three of these findings involved violations of NRC requirements. The significance of inspection findings is indicated by their color (Green, White, Yellow, or Red), which is determined using Inspection Manual Chapter 0609, "Significance Determination Process." Their cross-cutting aspects are determined using Inspection Manual Chapter 0310, "Aspects within the Cross-Cutting Areas." Violations of NRC requirements are dispositioned in accordance with the NRC Enforcement Policy. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

Cornerstone: Initiating Events

- Green. 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 torquing or verification of acceptable torquing 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 torquing or verification of acceptable torquing 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)

Cornerstone: Mitigating Systems

- Green. 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)

- Green. 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)

- Green. The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee failure to prescribe a procedure appropriate to the circumstances with respect to safety-related atmospheric dump valves and main steam safety valves. Specifically, control of atmospheric steam dump valves was not appropriate for a rapid plant shutdown resulting in unnecessary lifting of a spring-loaded main steam safety valve.

The inspectors determined that the licensee's failure to ensure appropriate procedures to properly control steam generator pressure and prevent unnecessary lifting of main steam safety valves was a performance deficiency. This performance deficiency was determined to be more than minor because it affected the Mitigating Systems cornerstone attribute of procedural quality and the objective of ensuring the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," the finding was determined to be of very low safety significance (Green) because the finding was a deficiency affecting the design or qualification of a mitigating structure, system, or component that did not affect operability or functionality.

The inspectors concluded that this finding affected the cross-cutting aspect of human performance associated with avoiding complacency, because the licensee failed to recognize during rapid load reductions the inherent risk of lifting a main steam safety valve and did not recognize or plan with adequate procedures, for a condition with a potential latent problem [H.12]. (Section 4OA3.3)

PLANT STATUS

Unit 1 began the inspection period at full power. Unit 1 remained at full power for the remainder of the inspection period.

Unit 2 began the inspection period at full power. On July 19, 2014, Unit 2 reduced power to approximately eighteen percent for a planned unit curtailment to perform cold washing of 500 kV insulators and returned to full power on July 20, 2014.

On August 14, 2014, Unit 2 shut down and entered Mode 3 to comply with technical specification actions after discovery of a condition resulting in declaring two of the three emergency diesel generators inoperable. Following repairs, Unit 2 returned to Mode 1 on August 18, 2014, and returned to full power on August 21, 2014.

Unit 2 remained at full power for the remainder of the inspection period.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

1R01 Adverse Weather Protection (71111.01)

.1 Readiness for Seasonal Extreme Weather Conditions

a. Inspection Scope

From July 15 to 18, 2014, the inspectors completed an inspection of the station's readiness for seasonal extreme fall weather conditions. The inspectors reviewed the licensee's procedures related to seasonal ocean storms and ocean conditions that could result in a high influx of marine bio-fouling. The inspectors evaluated the licensee's implementation of these procedures. The inspectors verified that prior to the onset of ocean storms and weather the licensee had corrected weather-related equipment deficiencies identified during the previous spring weather season.

The inspectors reviewed the licensee's procedures and design information to ensure the systems and component would remain functional when challenged by marine conditions and adverse weather. The inspectors verified that operator actions described in the licensee's procedures were adequate to maintain readiness of these systems. The inspectors walked down portions of these systems to verify the physical condition of the intake systems for the adverse weather protection features.

These activities constituted one sample of readiness for seasonal adverse weather, as defined in Inspection Procedure 71111.01.

b. Findings

No findings were identified.

.2 Readiness for Impending Adverse Weather Conditions

a. Inspection Scope

On September 4, 2014, the inspectors completed an inspection of the station's readiness for impending adverse weather conditions. The inspectors reviewed plant design features, the licensee's procedures to respond to increased kelp and jellyfish loading during expected seasonal storms, and the licensee's monitoring and contingency implementation of these procedures. The inspectors evaluated operator staffing and accessibility of controls and indications for those systems required to control the plant.

These activities constituted one sample of readiness for impending adverse weather conditions, as defined in Inspection Procedure 71111.01.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

Partial Walkdown

a. Inspection Scope

The inspectors performed partial system walk-downs of the following risk-significant systems:

- July 25, 2014, Unit 2, emergency diesel generator (2-3) alignment
- August 8, 2014, Unit 2, emergency diesel generator (2-1) alignment
- September 9, 2014, Unit 1, auxiliary feedwater system alignment

The inspectors reviewed the licensee's procedures and system design information to determine the correct lineup for the systems. They visually verified that critical portions of the systems were correctly aligned for the existing plant configuration.

These activities constituted three partial system walk-down samples as defined in Inspection Procedure 71111.04.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

Quarterly Inspection

a. Inspection Scope

The inspectors evaluated the licensee's fire protection program for operational status and material condition. The inspectors focused their inspection on five plant areas important to safety:

- July 22, 2014, Units 1 and 2, intake structure
- August 7, 2014, Unit 1, 4 kV vital switchgear rooms, fire zones 12-A, 12-B, and 12-C2
- August 8, 2014, Unit 2, 12 kV switchgear room, 85 foot elevation
- August 12, 2014, Unit 2, turbine building, 104 foot cable spreading rooms
- August 14, 2014, Unit 2, emergency diesel generator rooms

For each area, the inspectors evaluated the fire plan against defined hazards and defense-in-depth features in the licensee's fire protection program. The inspectors evaluated control of transient combustibles and ignition sources, fire detection and suppression systems, manual firefighting equipment and capability, passive fire protection features, and compensatory measures for degraded conditions.

These activities constituted five quarterly inspection samples, as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

On September 9-12, 2014, the inspectors completed an inspection of the station's ability to mitigate flooding due to internal causes. After reviewing the licensee's flooding analysis, the inspectors chose the following plant areas which contained risk-significant structures, systems, and components (SSCs) that were susceptible to internal flooding:

- Turbine building
- Emergency diesel generators

The inspectors reviewed plant design features and licensee procedures for coping with internal flooding. The inspectors walked down the selected areas to inspect the design features, including the material condition of seals, drains, and flood barriers. The inspectors evaluated whether operator actions credited for flood mitigation could be successfully accomplished.

These activities constitute completion of one flood protection measures sample, as defined in Inspection Procedure 71111.06.

b. Findings

No findings were identified.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope

On September 11, 2014, the inspectors completed an inspection of the readiness and availability of the emergency diesel generator risk-significant heat exchangers. The inspectors reviewed the data from a performance test for the heat exchanger. Additionally, the inspectors walked down the heat exchanger to observe its performance and material condition.

These activities constitute completion of one heat sink performance annual review sample, as defined in Inspection Procedure 71111.07.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11)

.1 Review of Licensed Operator Requalification

a. Inspection Scope

On August 19, 2014, the inspectors observed a portion of an annual requalification test for licensed operators and an evaluated simulator scenario performed by an operating crew. The inspectors assessed the performance of the operators and the evaluators' critique of their performance. The inspectors also assessed the modeling and performance of the simulator during the evaluated simulator scenario.

These activities constitute completion of one quarterly licensed operator requalification program sample, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

.2 Review of Licensed Operator Performance

a. Inspection Scope

On August 15, 2014, the inspectors observed the performance of on-shift licensed operators in the plant's main control room. At the time of the observations, the plant was in a period of heightened activity due to the Technical Specification 3.8.1 required

reactor shutdown. In addition, the inspectors assessed the operators' adherence to plant procedures, including conduct of operations procedure and other operations department policies.

These activities constitute completion of one quarterly licensed operator performance sample, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

.3 Annual Review of Requalification Examination Results

a. Inspection Scope

The licensed operator requalification program involves two training cycles that are conducted over a two-year period. In the first cycle, the annual cycle, the operators are administered an operating test consisting of job performance measures and simulator scenarios. In the second part of the training cycle, the biennial cycle, operators are administered an operating test and a comprehensive written examination. For this annual inspection requirement the licensee was in the first part of the training cycle.

The inspectors reviewed the results of the operating tests for both units to satisfy the annual requirements.

On August 11, 2014, the licensee informed the inspector of the following results combining both units:

- 17 of 17 crews passed the simulator portion of the operating test
- 89 of 91 licensed operators passed the simulator portion of the operating test
- 89 of 91 licensed operators passed the job performance measure portion of the operating test

Two individual senior reactor operators failed the simulator scenario operating test, were remediated, retested, and passed their retake tests. Two individual reactor operators failed the job performance measure of the operating test, were remediated, retested, and passed their retake tests.

The inspector completed one inspection sample of the annual licensed operator requalification program.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed two instances of degraded performance or condition of safety-related SSCs:

- August 15, 2014, emergency diesel generators, fuel injector bolt degradation
- September 15-17, 2014, degraded 480 volt switchgear ventilation due to closed exhaust registers and configuration control

The inspectors reviewed the extent of condition of possible common cause SSC failures and evaluated the adequacy of the licensee's corrective actions. The inspectors reviewed the licensee's work practices to evaluate whether these may have played a role in the degradation of the SSCs. The inspectors assessed the licensee's characterization of the degradation in accordance with 10 CFR 50.65 (the Maintenance Rule), and verified that the licensee was appropriately tracking degraded performance and conditions in accordance with the Maintenance Rule.

These activities constituted completion of two maintenance effectiveness samples, as defined in Inspection Procedure 71111.12.

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

The inspectors reviewed two risk assessments performed by the licensee prior to changes in plant configuration and the risk management actions taken by the licensee in response to elevated risk:

- August 7, 2014, Unit 2, risk assessment for 230 kV cross tied with Unit 1 and DCPP on a radial feed from Morro Bay 230 kV switchyard
- August 19, 2014, Unit 2, 500 kV insulators cold wash

The inspectors verified that these risk assessments were performed timely and in accordance with the requirements of 10 CFR 50.65 (the Maintenance Rule) and plant procedures. The inspectors reviewed the accuracy and completeness of the licensee's risk assessments and verified that the licensee implemented appropriate risk management actions based on the result of the assessments.

Additionally, on August 14, 2014, the inspectors observed the Unit 1 and 2 emergency diesel generator extent of condition on line emergent work risk assessment following identification of a broken bolt on the fuel supply header. The inspectors also observed portions of this emergent work activity in that it had the potential to cause an initiating

event, to affect the functional capability of mitigating systems, or to impact barrier integrity.

The inspectors verified that the licensee appropriately developed and followed a work plan for these activities. The inspectors verified that the licensee took precautions to minimize the impact of the work activities on unaffected SSCs.

These activities constitute completion of three maintenance risk assessments and emergent work control inspection samples, as defined in Inspection Procedure 71111.13.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15)

a. Inspection Scope

The inspectors reviewed seven operability determinations that the licensee performed for degraded or nonconforming SSCs:

- July 1, 2014, operability determination of auxiliary saltwater pump 1-1, vault room drain valve
- July 1, 2014, operability determination of auxiliary saltwater pump, 4 kV breakers resulting from loose panel screws
- July 2-3, 2014, operability determination, prompt operability assessment of an acceptable alternative methodology for appropriate outdoor ambient air temperature for HVAC design basis
- July 23, 2014, operability determination of emergency diesel generator 1-1
- July 29-31, 2014, Unit 1 and 2, 4160 volt bus room operability determination of unanalyzed condition involving postulated main steam line high energy line break in the turbine building
- August 15, 2014, operability determination of emergency diesel generator 2-3
- August 21, 2014, operability determination of preliminary new seismic information

The inspectors reviewed the timeliness and technical adequacy of the licensee's evaluations. Where the licensee determined the degraded SSC to be operable, the inspectors verified that the licensee's compensatory measures were appropriate to provide reasonable assurance of operability. The inspectors verified that the licensee had considered the effect of other degraded conditions on the operability of the degraded SSC.

These activities constitute completion of seven operability and functionality review samples, as defined in Inspection Procedure 71111.15.

b. Findings

Failure to Document Degraded Conditions in the Corrective Action Process

Introduction. 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. Also, on May 20, 2014, the licensee failed to document that a 480 volt vital bus room ventilation system register louvers was found closed.

Description. On May 12, 2014, control room operators received a high temperature alarm associated with the Unit 2, Bus G, 480 volt room. Operators appropriately entered alarm response procedure AR PK 15-09. Outside air temperatures on site were warmer than normal for the time of year, reaching approximately 86 degrees Fahrenheit. Overnight, the room high temperature condition cleared. On May 13, 2014, the room high-temperature alarm was received again, and operators again entered the appropriate alarm response procedure. Throughout the day, room temperatures began to climb, and operators propped open doors and placed portable fans per abnormal Operating Procedure CP-M-10, "Fire Protection of Safe Shutdown Equipment." Additionally, high room temperature alarms in the Unit 2, Bus F and H rooms were received.

The inspectors questioned the control room operators why the initial alarms were limited to Unit 2, Bus G, and whether they had entered it in the corrective action process. The operators responded that in their experience, Unit 2, Bus G typically ran warmer due to its location and the bus loading. The inspectors questioned the difference between Units 1 and 2, and noted that the largest load, containment fan cooler unit 2-1, had been secured to lower the bus loading and thermal load on the room. Additionally, the operators informed the inspector that it was not necessary to document the condition in a notification because they were using alarm response procedures.

Procedure OM7.ID1, "Problem Identification and Resolution," Section 10.2.7.a.3 requires that a notification should be written when an event causes, affects, or has the potential to affect the availability of a safety-related component or system. The inspectors noted that the temperatures exceeded the alarm setpoint for approximately 12 hours and lowered when additional portable equipment was placed in service. The inspectors determined that operators did not demonstrate a questioning attitude when the initial high temperature alarms were received and particularly affected Unit 2, Bus G, and the problem was later determined to be due to closed register louvers in the ventilation system.

The second example occurred on May 20, 2014, when the inspectors were performing a walk-down of the 480 volt vital bus room. They noticed differences in the highest recorded bus temperatures and asked the shift manager for an explanation. The shift manager directed an investigation of the 480 volt vital bus room ventilation system. On May 20, 2014, the licensee documented a concern expressed by the inspector because

of differences in ambient temperatures between the 480 volt switchgear rooms. The notification stated in part, “the outlet air damper for the Unit 2, 480 volt bus G appears to be closed or barely open.” The notification identified the fire damper exhaust as the problem component. Maintenance personnel later investigated and found the fire damper was open but airflow was restricted because exhaust ductwork air distribution register louvers were found closed. Only after prompting by the inspectors did the licensee initiate a new Notification 50631525 to address the inadvertent closure of the ventilation registers. Closure of the registers placed the 480 volt switchgear ventilation outside design bases.

Analysis. The failure to enter problems into the corrective action process on the 480 volt buses 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 the challenging the unknown attribute, specifically in that licensee personnel did not maintain a questioning attitude to resolve unexpected conditions [H.11].

Enforcement. Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” requires, in part, that the licensee follow procedures for activities affecting quality. Procedure OM7.ID1, “Problem Identification and Resolution,” Section 10.2.7 requires that a notification should be written when a component or system does not meet expectations as identified by adverse trends or individual observations. Contrary to this requirement, on May 12 – 13 and May 20, 2014, the licensee failed to follow procedures for activities affecting quality. Specifically, the licensee failed to ensure compliance with the corrective action program to ensure the problems were identified. Because this violation was of very low safety significance (Green) and was entered into the licensee’s corrective action program as Notifications 50632554, 50641971, 50631525, and 50641514, it is being treated as a non-cited violation consistent with Section 2.3.2.a of the NRC’s Enforcement Policy: NCV 05000275/2014001-01 and 05000323/2014004-01, “Failure to Document Degraded Conditions in the Corrective Action Process.”

1R18 Plant Modifications (71111.18)

a. Inspection Scope

On September 16, 2014, the inspectors reviewed a temporary plant modification to the component cooling water heat exchanger 2-2 temporary transmitter.

The inspectors verified that the licensee had installed this temporary modification in accordance with technically adequate design documents. The inspectors verified that

this modification did not adversely impact the operability or availability of affected structures, systems, and components. The inspectors reviewed design documentation and plant procedures affected by the modification to verify the licensee maintained configuration control.

These activities constitute completion of one sample of temporary modifications, as defined in Inspection Procedure 71111.18.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed five post-maintenance testing activities that affected risk-significant SSCs:

- July 24, 2014, Unit 1, emergency diesel generator 1-1, post-maintenance testing following lube oil leak repair
- July 29-30, 2014, Unit 2, emergency diesel generator, post-maintenance testing following turbocharger replacement
- August 15, 2014, Unit 2, emergency diesel generator 2-3, post-maintenance testing following fuel injector bolt and fuel oil booster pump replacement
- August 25, 2014, Unit 2, emergency diesel generator 2-2, post-maintenance testing following major maintenance window
- September 15, 2014, auxiliary feedwater pump 2-1, surveillance testing following oil flush and replacement

The inspectors reviewed licensing- and design-basis documents for the SSCs and the maintenance and post-maintenance test procedures. The inspectors observed the performance of the post-maintenance tests to verify that the licensee performed the tests in accordance with approved procedures, satisfied the established acceptance criteria, and restored the operability of the affected SSCs.

These activities constitute completion of five post-maintenance testing inspection samples, as defined in Inspection Procedure 71111.19.

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities (71111.20)

a. Inspection Scope

During the station's forced maintenance outage that concluded on August 18, 2014, the inspectors evaluated the licensee's outage activities. This verification included the following:

- Monitoring of shut-down and cool-down activities
- Verification that the licensee maintained defense-in-depth during outage activities

These activities constitute completion of one outage activities sample, as defined in Inspection Procedure 71111.20.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed five risk-significant surveillance tests and reviewed test results to verify that these tests adequately demonstrated that the SSCs were capable of performing their safety functions:

In-service tests:

- July 10-11, 2014, Unit 1, turbine-driven auxiliary feedwater pump 1-1, surveillance test

Other surveillance tests:

- August 5, 2014, Unit 2, snubber functional testing results per STP-M-78B
- August 15, 2014, Unit 1 emergency diesel testing per STP-M-9X
- August 20-21, 2014, infrared thermography inspection of safety-related 480 volt circuit breaker, Unit 2, auxiliary building ventilation exhaust fan
- August 25, 2014, Unit 2, emergency diesel testing per STP-M-9A

The inspectors verified that these tests met technical specification requirements, that the licensee performed the tests in accordance with their procedures, and that the results of the test satisfied appropriate acceptance criteria. The inspectors verified that the licensee restored the operability of the affected SSCs following testing.

These activities constitute completion of five surveillance testing inspection samples, as defined in Inspection Procedure 71111.22.

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspector performed an in-office review of changes to Diablo Canyon Power Plant, Units 1 and 2, Emergency Plan Appendix D, Category R, "Diablo Canyon Power Plant Abnormal Rad Levels/Radiological Effluent," letter dated June 18, 2014. The change updated the description of the function of the fuel handling building ventilation system with respect to auto actuation versus auto isolation on a rad monitor high alarm. Additionally, several editorial corrections were made.

These revisions were compared to previous revisions, to the criteria of NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, and to the standards in 10 CFR 50.47(b) to determine if the revision adequately implemented the requirements of 10 CFR 50.54(q)(3) and 50.54(q)(4). The inspector verified that the revisions did not reduce the effectiveness of the emergency plan. This review was not documented in a safety evaluation report and did not constitute approval of licensee-generated changes; therefore, these revisions are subject to future inspection.

These activities constitute completion of one emergency action level and emergency plan change samples as defined in Inspection Procedure 71114.04.

b. Findings

No findings were identified.

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors observed an emergency preparedness drill on August 31, 2014, to verify the adequacy and capability of the licensee's assessment of drill performance. The inspectors reviewed the drill scenario and observed the drill from the control room simulator and onsite medical facility. The inspectors verified that the licensee's emergency classifications, off-site notifications, and protective action recommendations were appropriate and timely. The inspectors verified that any emergency preparedness weaknesses were appropriately identified by the licensee in the post-drill critique and entered into the corrective action program for resolution.

These activities constitute completion of one emergency preparedness drill observation sample, as defined in Inspection Procedure 71114.06.

b. Findings

No findings were identified.

.2 Training Evolution Observation

a. Inspection Scope

On September 10, 2014, the inspectors evaluated the conduct of a licensee hostile action based emergency exercise, to identify any weaknesses and deficiencies during the drill activities involving onsite and offsite resources responding to an emergency. The inspectors observed emergency response operations at the simulator.

These activities constitute completion of one training observation sample, as defined in Inspection Procedure 71114.06.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstones: Public Radiation Safety and Occupational Radiation Safety

2RS5 Radiation Monitoring Instrumentation (71124.05)

a. Inspection Scope

The inspectors evaluated the accuracy and operability of the radiation monitoring equipment used by the licensee to (1) monitor areas, materials, and workers to ensure a radiologically safe work environment and (2) detect and quantify radioactive process streams and effluent releases. The inspectors interviewed licensee personnel, walked down various portions of the plant, and reviewed licensee performance in the following areas:

- Selected plant configurations and alignments of process, post-accident, and effluent monitors with descriptions in the Final Safety Analysis Report and the Offsite Dose Calculation Manual
- Selected instrumentation, including effluent monitoring instrument, portable survey instruments, area radiation monitors, continuous air monitors, personnel contamination monitors, portal monitors, and small article monitors to examine their configurations and source checks
- Calibration and testing of process and effluent monitors, laboratory instrumentation, whole body counters, post-accident monitoring instrumentation, portal monitors, personnel contamination monitors, small article monitors, portable survey instruments, area radiation monitors, electronic dosimetry, air samplers, and continuous air monitors

- Audits, self-assessments, and corrective action documents related to radiation monitoring instrumentation since the last inspection

These activities constitute completion of one sample of radiation monitoring instrumentation as defined in Inspection Procedure 71124.05.

b. Findings

No findings were identified.

2RS6 Radioactive Gaseous and Liquid Effluent Treatment (71124.06)

a. Inspection Scope

The inspectors evaluated whether the licensee maintained gaseous and liquid effluent processing systems and properly mitigated, monitored, and evaluated radiological discharges with respect to public exposure. The inspectors verified that abnormal radioactive gaseous or liquid discharges and conditions, when effluent radiation monitors are out-of-service, were controlled in accordance with the applicable regulatory requirements and licensee procedures. The inspectors verified that the licensee's quality control program ensured radioactive effluent sampling and analysis adequately quantified and evaluated discharges of radioactive materials. The inspectors verified the adequacy of public dose projections resulting from radioactive effluent discharges. The inspectors interviewed licensee personnel and reviewed or observed the following items:

- Radiological effluent release reports since the previous inspection and reports related to the effluent program issued since the previous inspection
- Effluent program implementing procedures, including sampling, monitor setpoint determinations, and dose calculations
- Equipment configuration and flow paths of selected gaseous and liquid discharge system components, filtered ventilation system material condition, and significant changes to their effluent release points, if any, and associated 10 CFR 50.59 reviews
- Selected portions of the routine processing and discharge of radioactive gaseous and liquid effluents (including sample collection and analysis)
- Controls used to ensure representative sampling and appropriate compensatory sampling
- Results of the inter-laboratory comparison program
- Effluent stack flow rates
- Surveillance test results of technical specification-required ventilation effluent discharge systems since the previous inspection
- Significant changes in reported dose values

- A selection of radioactive liquid and gaseous waste discharge permits
- Part 61 analyses and methods used to determine which isotopes are included in the source term
- Offsite Dose Calculation Manual changes
- Meteorological dispersion and deposition factors
- Latest land use census
- Records of abnormal gaseous or liquid tank discharges
- Groundwater monitoring results
- Changes to the licensee's written program for identifying and controlling contaminated spills/leaks to groundwater
- Identified leakage or spill events and entries made into 10 CFR 50.75 (g) records, if any, and associated evaluations of the extent of the contamination and the radiological source term
- Offsite notifications and reports of events associated with spills, leaks, and groundwater monitoring results
- Audits, self-assessments, reports, and corrective action documents related to radioactive gaseous and liquid effluent treatment since the last inspection

These activities constitute completion of one sample of radioactive gaseous and liquid effluent treatment, as defined in Inspection Procedure 71124.06.

b. Findings

No findings were identified.

2RS7 Radiological Environmental Monitoring Program (71124.07)

a. Inspection Scope

The inspectors evaluated whether the licensee's radiological environmental monitoring program quantified the impact of radioactive effluent releases to the environment and sufficiently validated the integrity of the radioactive gaseous and liquid effluent release program. The inspectors verified that the radiological environmental monitoring program was implemented consistent with the licensee's technical specifications and Offsite Dose Calculation Manual, and that the radioactive effluent release program met the design objective in Appendix I to 10 CFR Part 50. The inspectors verified that the licensee's radiological environmental monitoring program monitored non-effluent exposure pathways, was based on sound principles and assumptions, and validated that doses to members of the public were within regulatory dose limits. The inspectors reviewed or observed the following items:

- Annual environmental monitoring reports and Offsite Dose Calculation Manual
- Selected air sampling and dosimeter monitoring stations
- Collection and preparation of environmental samples
- Operability, calibration, and maintenance of meteorological instruments
- Selected events documented in the annual environmental monitoring report which involved a missed sample, inoperable sampler, lost dosimeter, or anomalous measurement
- Selected structures, systems, or components that may contain licensed material and has a credible mechanism for licensed material to reach ground water
- Records required by 10 CFR 50.75 (g)
- Significant changes made by the licensee to the Offsite Dose Calculation Manual as the result of changes to the land census or sampler station modifications since the last inspection
- Calibration and maintenance records for selected air samplers, composite water samplers, and environmental sample radiation measurement instrumentation
- Inter-laboratory comparison program results
- Audits, self-assessments, reports, and corrective action documents related to the radiological environmental monitoring program since the last inspection

These activities constitute completion of one sample of radiological environmental monitoring program as defined in Inspection Procedure 71124.07.

b. Findings

No findings were identified.

2RS8 Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation (71124.08)

a. Inspection Scope

The inspectors evaluated the effectiveness of the licensee's programs for processing, handling, storage, and transportation of radioactive material. The inspectors interviewed licensee personnel and reviewed the following items:

- The solid radioactive waste system description, process control program, and the scope of the licensee's audit program

- Control of radioactive waste storage areas including container labeling/marketing and monitoring containers for deformation or signs of waste decomposition
- Changes to the liquid and solid waste processing system configuration including a review of waste processing equipment that is not operational or abandoned in place
- Radio-chemical sample analysis results for radioactive waste streams and use of scaling factors and calculations to account for difficult-to-measure radionuclides
- Processes for waste classification including use of scaling factors and 10 CFR Part 61 analysis
- Shipment packaging, surveying, labeling, marking, placarding, vehicle checking, driver instructing, and preparation of the disposal manifest
- Audits, self-assessments, reports, and corrective action reports radioactive solid waste processing, and radioactive material handling, storage, and transportation performed since the last inspection

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of one sample of radioactive solid waste processing, and radioactive material handling, storage, and transportation as defined in Inspection Procedure 71124.08.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Security

40A1 Performance Indicator Verification (71151)

.1 Mitigating Systems Performance Index: Heat Removal Systems (MS08)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of April 2013 through June 2014 to verify the accuracy and completeness of the reported data. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constituted verification of the mitigating system performance index for heat removal systems for Units 1 and 2, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index: Residual Heat Removal Systems (MS09)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of April 2013 through June 2014 to verify the accuracy and completeness of the reported data. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constituted verification of the mitigating system performance index for residual heat removal systems for Units 1 and 2, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.3 Mitigating Systems Performance Index: Cooling Water Support Systems (MS10)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of April 2013 through June 2014 to verify the accuracy and completeness of the reported data. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constituted verification of the mitigating system performance index for cooling water support systems for Units 1 and 2, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

40A2 Problem Identification and Resolution (71152)

.1 Routine Review

a. Inspection Scope

Throughout the inspection period, the inspectors performed daily reviews of items entered into the licensee's corrective action program and periodically attended the licensee's condition report screening meetings. The inspectors verified that licensee personnel were identifying problems at an appropriate threshold and entering these problems into the corrective action program for resolution. The inspectors verified that

the licensee developed and implemented corrective actions commensurate with the significance of the problems identified. The inspectors also reviewed the licensee's problem identification and resolution activities during the performance of the other inspection activities documented in this report.

b. Findings

No findings were identified.

.2 Annual Follow-up of Selected Issues

a. Inspection Scope

The inspectors performed a review of the licensee's corrective action program (CAP) and associated documents to assess the adequacy of corrective actions taken in response to an adverse trend identified with safety-related equipment (i.e. 4 kV and 480 volt switchgear equipment) between January and August, 2014. The inspectors' review was predominantly focused on the results of daily CAP item screenings discussed in Section 4OA2.1 above, but also included the review of specific materials (i.e., human performance stand down packages, special plant communications/event news flashes, etc.) developed by the licensee to address the adverse trend.

This review constituted one follow-up inspection sample for in-depth review as defined in IP 71152.

b. Observations

During the course of the inspection period, the inspectors noted an increasing trend in the incidence of loose or missing fasteners associated with safety-related electrical equipment. The identification of these conditions occurred during routine plant walkdowns, inspections or maintenance activities, and inspector plant status reviews. The inspectors also recognized, as part of their observations, that a lack of an adequate post-maintenance process was one of the contributors associated with the cause of safety-related equipment not being returned to service within their original design configurations. Specific examples associated with the inspectors' evaluation included, but were not limited to, the following:

- January 6, 2014, engineering personnel, during a routine plant walkdown, identified two loose bolts on the Unit 2, 4 kV Bus 2-F exterior cabinet of cubical 52HF15. The subsequent extent of condition of Unit 1 and 2, switchgear resulted in thirty-two notifications related to degraded exterior cabinet fasteners or bolting (Notification 50607683).
- January 30 and February 5, 2014, the inspectors conducted a routine plant status tour and identified numerous exterior cabinet fasteners were loose or missing on Unit 1 and 2, 480 volt switchgear motor control center cabinets (Notifications 50606689, 50607975, 50607976, 50607977, and 50607978). The licensee performed a civil engineering evaluation and determined that the missing or loose fasteners had no adverse effect on the dynamic characteristics

of the motor control center, and that the existing seismic qualifications remained valid.

To address these loose or missing fastener deficiencies, the licensee took the following corrective actions:

- On February 12, 2014, the licensee completed a training performance analysis to evaluate the potential knowledge or skills gap associated with fastener bolting practices related to 4 kV, 12 kV, and 480 volt switchgear panel or bus ducting installation, as documented in Notification 50607683. This evaluation stated, "In summary, the analysis (along with the ACE report on this issue) cited this issue as work plan guidance and procedural guidance being inadequate." The extent of condition also concluded a potential knowledge or skill gap associated with fastener/bolting practices related to 4 kV, 12 kV, and 480 volt switchgear panel or bus ducting installation.
- On February 21, 2014, the licensee concluded in the apparent cause evaluation documented in Notification 50605285 an organizational weakness existed because "a robust process for fastener configuration control does not exist."
- On February 21, 2014, the licensee completed an apparent cause evaluation on loose bolts identified on the outside panel of Unit 2, 4 kV electrical Bus 2-F panel. The cause evaluation found that having loose or missing bolts in these cabinets are contrary to maintenance procedure (MP-E) 60.4, "Post-Maintenance Electrical Panel Walk down." In addition, changes to Procedure AD14.ID4 "Post Maintenance Testing," were made to ensure electrical panels are properly walked down and inspected for loose or missing fasteners prior to returning to service.
- On May 5, 2014, the licensee generated corrective actions to revise electrical panel walkdown instructions and maintenance procedures to ensure (Notifications 50607484 and 50607485) post-maintenance or maintenance verification test are completed following work activities performed within the electric 4 kV switchgear panels.

Although the licensee started taking corrective actions, on June 25, 2014, operators found several additional missing or loose fasteners associated with the interior 4 kV circuit breaker panel (Notification 50636012). The cover plates provide protection to the operator and breaker while the cabinet doors are open. The licensee identified that the interior 4 kV circuit breaker panel covers had been removed as part of maintenance inspection activity and not properly returned to the as-design configuration. The licensee operability determination concluded that seismic qualification of the 4 kV breaker was maintained.

On July 14, 2014, the inspectors met with the licensee engineering staff to discuss the missing or loose interior cabinet fasteners and the bolting seismic operability evaluation. As a result, the licensee initiated a prudent action to inspect all vital 4 kV breakers for the interior front cover fasteners. The inspectors also observed maintenance personnel perform an in-depth inspection of the 4 kV switchgear equipment. From July 30 to August 1, 2014, during investigation of loose bolts on the 4 kV breaker panels,

engineering personnel failed to ensure separate notifications were written when multiple issues were identified as required by OM7.ID1. This licensee documented this issue in its corrective action program as Notification 50641514. After writing the appropriate notifications, on August 5, 2014, the licensee identified an adverse trend related to 4 kV breaker cover fasteners. This adverse trend was documented in Notification 50641971. This issue was documented as an example related to a Green finding in NRC Problem Identification and Resolution Inspection Report 05000275; 05000323/2014007.

The inspectors verified the following attributes during their review of the licensee's corrective actions for the above notifications:

- Complete and accurate identification of the problem in a timely manner commensurate with its safety significance and ease of discovery;
- Consideration of the extent of condition, generic implications, common cause, and previous occurrences;
- Evaluation and disposition of operability/reportability issues;
- Classification and prioritization of the resolution of the problem, commensurate with safety significance;
- Identification of the root and contributing causes of the problem; and
- Identification of corrective actions, which were appropriately focused to correct the problem.

The inspectors discussed the corrective actions and associated evaluations with licensee personnel. These above examples, with the exception of the finding documented in NRC Problem Identification and Resolution Inspection Report 05000275; 05000323/2014007, were evaluated as minor findings in accordance with Manual Chapter 0612, Appendix B. The inspectors also identified, as part of their observations, that the lack of an adequate post-maintenance process was one of the contributors associated with the cause of safety-related equipment not being returned to service within their original design configurations as documented in the following finding.

c. Findings

Inadequate Maintenance Procedure Resulted in Improper Configuration of Safety Related Equipment

Introduction. 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 pre-planned maintenance procedures.

Description. The inspectors' first example is associated with the improper configuration of the safety-related 480 volt switchgear equipment room ventilation. On May 19, 2014, the inspectors performed a plant walkdown of the Unit 1 and Unit 2, 480 volt switchgear rooms. The inspectors identified a notable difference in not just the ambient room but also 480 volt bus temperatures. In particular, the inspectors noted the Unit 2, 2G, 480 volt switchgear room was warmer but also the Unit 2, 480 volt bus reading was about 134 degrees Fahrenheit compared to the Unit 1 buses reading approximately 74 degrees Fahrenheit. The inspectors conveyed these concerns to the control room shift foreman and shift manager. As a result, directions by the shift manager to maintenance personnel resulted in an investigation into the temperature differences.

On May 20, 2014, maintenance personnel discovered, "very little air flow," from the exhaust duct for Unit 2, 480 volt switchgear room and documented the problem in Notification 50629940. The maintenance personnel incorrectly identified the problem as a closed or barely open fire damper. The exact condition or cause of the restricted airflow was not readily apparent because: (1) direct observation of the ventilation ductwork by the maintenance personnel was not possible due to inaccessibility of the exhaust ventilation ductwork, located high in the overhead, and (2) maintenance personnel assumed the problem was likely a fire damper failure because of the recent fire damper inspection performed the previous month. During troubleshooting, the shift manager provided directions to maintenance personnel to perform a visual inspection of the fire damper condition by removing the exhaust vent register that covered it. The as-found configuration confirmed the fire damper was in the correct position, but the normally-opened exhaust register louvers were out of position and closed. The operations shift manager directed the restoration of the register louvers to open and establishing ventilation airflow. This condition caused the inspectors to request additional information related to licensee post-maintenance testing and configuration controls as it related to the safety-related 480 volt switchgear ventilation. On June 17, 2014, the licensee documented the inspectors concerns relating to 480 volt switchgear ventilation airflow and configuration control in Notification 50634738.

Prior to the inspectors identifying this condition, during the period of April 16-18, 2014, maintenance personnel completed Work Order 64407700-0750, "M-70B Inspection, and Testing of Fire Dampers," that inspected and tested fire dampers in the Unit 1 and 2, 480 volt switchgear ventilation ductwork. As documented in Notification 50629940, it was most likely during the inspection of the Unit 2, Bus G exhaust fire dampers, that the exhaust vent register louvers had been unintentionally closed. The inspectors determined the work instructions were not adequate because precautionary notes and steps were not complete enough to restore the ventilation airflow registers to their proper design condition. Consequently, after the satisfactory fire damper testing was completed and the system returned to service, the exhaust registers were left in a closed condition that severely restricted ventilation airflow into the safety-related Unit 2, 480 volt switchgear room. This condition likely contributed to higher than expected ambient room temperatures and associated high temperature alarms.

On July 10, 2014, procedure changes were made to Surveillance Test Procedure STP M-70B, "Inspection and Testing of Fire Dampers," to include match marking of register blades to restore original configuration to ensure design airflow rates. On July 16, 2014, as part of the maintenance preventable functional failure evaluation, engineering personnel measured the Unit 2, 480 volt, Bus G exhaust airflow and found

the airflow within acceptable levels. This issue has been entered into the licensee's corrective action program in Notifications 50634682 and 50631525.

The inspectors' second example was a self-revealing condition related to the improper configuration of the Unit 2, N-32 source range nuclear instrumentation.

Between August 11 and August 16, 2014, maintenance personnel implemented maintenance Work Order 64061067 to support Surveillance Test Procedure STP I-37-N32.B, "Unit 2, Source Range Channel N-32 Calibration," Revision 7 with Unit 2 at full power, as allowed by technical specifications. As part of this work instruction, lifting of control circuit electrical leads became necessary to support testing the P-6 permissive circuit.

On August 14, 2014, Unit 2 was shutdown as required by entry into an unplanned technical specification action statement and placed in hot standby, Mode 3. Prior to Unit 2 being allowed to restart, the N-32 source range instrument was required to be placed back into service in order to meet TS requirements. Unit 2 began start-up procedures on August 16, 2014.

On August 17, 2014, as reactor power was increased, permissive P-6 activated as expected, but source range N-32 did not properly de-energize when operations personnel attempted to block the high-voltage supply to the source range nuclear instrumentation as required by procedures. The licensee identified that the restoration of the lifted electrical leads to the proper configuration was not properly completed in the execution of Work Order 6406106, and subsequently, the source range protective circuitry failed to de-energize as designed during Unit 2 reactor startup. As a result, operators took immediate steps to reduce reactor power to avoid damage to the N-32 source range detector. The licensee cause evaluation identified human performance errors as well as an unclear work instruction as a contributory problem because conditional steps were not complete enough to ensure the safety-related source range nuclear instrumentation performed properly after maintenance. Work Order 60071400 on August 17, 2014, and Notification 50651963 documented immediate corrective actions to restore the N-32 source range P-6 permissive circuit. The licensee also took corrective actions to clarify the procedure steps to ensure circuit configuration controls were complete and comprehensive.

Analysis. The failure to implement properly preplanned maintenance procedures affecting the performance of safety-related equipment, as in the two examples: (1) 480 volt switchgear ventilation registers and (2) source range N-32 nuclear instrumentation, was 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 to ensure its availability.

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 a 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].

Enforcement. Unit 1 and Unit 2, Technical Specification 5.4.1(a), "Procedures," requires, in part, that written procedures shall be established, implemented, and maintained covering activities referenced in Regulatory Guide 1.33, Revision 2, Appendix A, dated February 1978, that include safety-related activities carried out during operation of the reactor plants. Section 9.a, "Procedures for Performing Maintenance," states, "Maintenance that can affect the performance of safety-related equipment should be properly preplanned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances."

Specifically, requirements that written maintenance procedures are properly preplanned and performed on safety-related equipment and to ensure it is returned service; fully restored to the correct configuration and confirm its operational readiness are specified in the following plant standards:

- Procedure CF1.ID1, "Configuration Management," Revision 1
- Procedure AD13.ID4, "Post Maintenance Testing," Revision 22
- Program Directive, MA1, "Maintenance," Revision 5
- Program Directive, AD7, "Work Control," Revision 6

Contrary to the above, two examples were identified where the licensee failed to properly preplan and perform maintenance on safety-related equipment such that it was not returned to as-design configuration to ensure its operational readiness, as specified in the licensee's program and procedures.

Because the licensee entered the issue into its corrective action program as Notification 50662278 and because the finding is of very low safety significance (Green), this violation is being treated as an NCV, consistent with Section 2.3.2.a of the NRC Enforcement Policy: NCV 05000275; 05000323/2014004-02, "Inadequate Maintenance Procedure Resulted in Improper Configuration of Safety Related Equipment."

40A3 Follow-up of Events and Notices of Enforcement Discretion (71153)

1. (Closed) LER 05000275; 05000323/1-2012-007-01: Inadequately Compensated Non-Conformances in the Fire Protection Program

The licensee is in the process of transitioning the plant's fire protection program to a performance-based program by adopting National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor

Electric Generating Plants,” 2001 Edition, in accordance with 10 CFR 50.48(c). Fire areas identified as not meeting the requirements of the current, approved fire protection program have been identified during the transition process. The issues identified are tracked during the transition as variances from deterministic requirements (VFDRs) and adequate compensatory measures must be established and maintained until the transition to the new fire protection program addresses the issues. The licensee event report identified cases where VFDRs did not have compensatory measures established.

The inspector reviewed samples of the proceduralized compensatory measures the licensee established for VFDRs. For fires not requiring evacuation of the control room, the inspector reviewed the operator guidance in Unit 1, Procedure CP-M-10, “Fire Protection of Safe Shutdown Equipment,” Revision 34, addressing VFDRs in a sample of 14 fire areas (1, 3-B-1, 3-B-2, 3-Q-1, 3-BB, 4-A(U1), 4-A-1, 4-A-2, 10, 13-D, 28, 30-A-1, 30-A-2, and 34(U1)). For fires requiring evacuation of the control room, the inspector reviewed the operator guidance in Unit 2, Procedure OP AP-8A, “Control Room Inaccessibility – Establishing Hot Standby,” Revision 30, addressing VFDRs in a sample of two fire areas (6-B-2 and 6-B-3). The inspector concluded that adequate compensatory measures were established for the sampled VFDRs. No findings or violations of NRC requirements were identified. This licensee event report is closed.

.2 (Closed) LER 05000275/1-2013-006-01: Emergency Diesel Generators Valid Start Signal Due to Loss of Startup Power

a. Inspection Scope

The inspectors performed a review of a licensee event report documenting a valid start of the Unit 1 emergency diesel generators on August 15, 2013, following loss of startup power. The inspectors examined associated procedures, work orders, notification reports, and the licensee’s apparent cause evaluation of the event. The enforcement aspects are described below. This licensee event report is closed.

b. Findings

Introduction. The inspectors reviewed a Green self-revealing finding for the licensee’s failure to include appropriate acceptance criteria for determining that important activities have been satisfactorily accomplished. Specifically, the licensee failed to provide appropriate acceptance criteria 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.

Description. In June 2012, the Unit 1 startup transformer load tap changer was overhauled under Work Order 64006965, Reinhausen Overhaul Work Package, in response to a manufacturer recommended inspection frequency of 6 to 7 years. The work order contained directions to verify the tap changer inspection and overhaul was completed per vendor contract and instructions provided in the ABB transformer manual. The work order failed to provide adequate verification criteria to ensure that the proper torque and material was used during the startup transformer load tap changer overhaul. The lack of direction resulted in the vendor failing to properly torque the flex link bolted connections during re-termination of the flex link. The lack of adequate torquing

caused a high resistance bolted connection between the flex link and a stationary contact in the diverter switch.

On August 15, 2013, the 230 kV offsite power was lost to the Startup 1-1 transformer due to a failure of the Startup 1-1 load tap changer diverter switch. The failure of the diverter switch was the result of the high-resistance bolted connection resulting from the inadequate torque used by the vendor during the overhaul performed in 2012. This caused the failure of the attachment bolts between the flex link and stationary contact and resulted in the upper stationary contact falling off and lodging in the diverter switch preventing it from properly operating. This failure of the diverter switch caused a loss of Unit 1, 230 kV offsite power and subsequent start of all the Unit 1 emergency diesel generators (EDGs). The EDGs successfully started on the loss of the startup transformer, but did not load because the associated buses remained energized via the 500 kV auxiliary offsite power supply.

During the subsequent investigation of the loss of 230 kV offsite power, the licensee identified that between July 2012 and July 2013, the load tap changer diverter compartment showed an unexpected increase in the oil analysis for dissolved gases. In addition, between April and May 2013 the control room observed multiple spurious voltage alarms from the transformer. But, due to the alarm's short duration, the licensee was not able to troubleshoot the condition to determine the cause. Both of these indications are indicative of internal arcing consistent with a high resistance connection.

The licensee determined that these indications supported an apparent cause of the failure as being a high-resistance connection in the diverter tank at the attachment bolt between the flex link and stationary contact resulting from an error during the bolt installation and torqueing. Contributing causes identified by the licensee were associated with bolt torqueing techniques, inadequate bolt selection, and inadequate oversight of supplemental personnel.

During review of the licensee's apparent cause evaluation, the inspectors identified that a contributing cause of inadequate operational experience review and implementation should have been identified. On November 17, 2010, the NRC issued Information Notice 2010-025, which discussed operating experience related to inadequate electrical connections and identified that the failure to follow vendor or industry recommended torque requirements often caused connection problems. The information notice was evaluated by the licensee in Notification 50363143 and resulted in no additional actions in that the licensee's evaluation determined that existing procedures and drawings would be approved and issued for use to perform related activities, and they would provide detailed directions to ensure adequate electrical connection. Contrary to this statement, the licensee did not provide detailed directions in Work Order 64006965 for the re-termination of the Unit 1 startup transformer load tap changer diverter switch flex lead terminations.

Analysis. 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 is 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; in that the organization did not implement a process of planning, controlling, and executing work activities such that nuclear safety is the overriding priority [H.5].

Enforcement. This finding does not involve enforcement action because no violation of a regulatory requirement was identified. This was entered into the licensee's corrective action program as Notification 50578636. Because this finding did not involve a violation and was of very low safety significance, it is identified as FIN 05000275/2014004-03, "Failure to Provide Adequate Procedural Guidance Resulting in a Loss of Unit 1 230 kV Off-site Power."

.3 Inadequate Procedure Results in Unnecessary Main Steam Safety Valve Lift

a. Inspection Scope

The inspectors reviewed the event listed below for plant status and mitigating actions to: (1) perform an independent evaluation of operator and plant responses; (2) evaluate performance of mitigating systems and licensee actions; and (3) confirm that the licensee properly classified the event in accordance with emergency action level procedures and made timely notifications to NRC and state/governments, as required.

- August 15, 2014, Unit 2 forced outage to comply with technical specification action associated with two emergency diesel generator inoperable

b. Findings

Introduction. The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee failure to prescribe a procedure appropriate to the circumstances with respect to safety-related atmospheric dump valves and main steam safety valves (MSSV). Specifically, control of atmosphere steam dump valves was not appropriate for a rapid plant shutdown resulting in unnecessary lifting of a spring-loaded MSSV.

Description. On August 14, 2014, Unit 2 completed a rapid power reduction using Procedure AP-25, "Rapid Load Reduction or Shutdown," Revision 10. As a result of taking the main turbine-generator unit off-line (i.e. turbine trip), all four of the pressure control valves in Group I (10 percent steam dump valves) opened and one spring-loaded main steam safety lifted as steam generator pressure peaked. The licensee post-event review did not identify any degraded condition associated with the lifting of MSSV relief valve RV-58 and concluded the event was normal. However, the inspectors questioned

this assessment and began an in-depth evaluation of the event. This evaluation included: key Unit 2 plant data related to post-unit trip (main turbine shutdown), past plant transients, including full power reactor trips as well as recent power reductions, and personnel interviews. The inspectors concluded the lifting of the MSSV RV-58, was preventable and the rapid load reduction Procedure AP-25 failed to include adequate instructions to consider steam dump controller performance and steam generator pressure control prior to main turbine-generator unit shutdown, resulting in the unnecessary lifting of RV-58 with the lowest pressure setpoint.

The inspector's assessment included a review of Diablo Canyon Final Safety Analysis Report Update (FSARU), Revision 21, which addresses certain design aspects related to turbine bypass system. The FSARU states the turbine bypass system is comprised, of atmosphere steam dump or power operated relief valves. Furthermore, the inspectors found these descriptions emphasized the capacity of the steam dump control to maintain steam pressure below the MSSV setpoint. These sections include:

- Section 5.2.1.5, "Design Transients," define the basis of equipment design including paragraph (4) on "Large Step Decrease in Load," states in part: "a step decrease in turbine load from full power of such magnitude that the results is an [sic] rapid increase in reactor coolant average temperature and secondary side steam pressure and temperature automatically initiates a secondary side steam dump system that prevents a reactor shutdown or lifting of steam generator safety valve." (i.e. MSSV)
- Section 10.4.4, "Turbine Bypass System," states in part, the design basis provides the capability of accepting a sudden load reduction of up to 50 percent, without reactor trip or operation of the spring-loaded safety valve (i.e. MSSV) or power operated relief valves.

In addition, the inspectors noted in current license basis documents described in Diablo Canyon Letter, DCL-95-220, states in part, the set point for the lowest set MSSV is limited to (-) 2 percent to prevent the set points for lowest set MSSVs (RV-58 nominal setpoint is 1065 psig) from overlapping with the set point for the 10 percent atmospheric dump valves. Since the no-load pressure of the main steam system is 1005 psig, and the 10 percent atmospheric dump valves are set at 1035 psig, overlapping conditions are not expected.

The inspectors also noted the following standards described in operations procedures:

- OP C-3:IV, "Main Unit Turbine-Turbine Shutdown," Revision 23, states in part, that prior to unit separation from the grid, specific guidance provides key guidance regarding HC-507, steam dump controller. The guidance states, "operator(s) should control SG pressure such that the 10 percent atmosphere dump valves and the main steam safety valves are prevented from lifting."
- OP L-8, "Separating From the Grid While Maintaining Reactor Power 17% and 30%," Revision 14, states in Step 5.9, "While ramping Reactor Power to 20%, monitor steam header pressure and steam generator pressures to ensure that steam pressure remains below the setpoint of the 10 percent Atmospheric steam dumps."

On August 25, 2014, because of the inspector's questions, engineering personnel performed an extensive plant data review and identified one-of-four 10 percent steam dump valve had not opened as expected, during the Unit 2 unit trip transient. This condition contributed to the lifting of the lowest set MSSV because of tolerances in steam pressures overlap. The licensee investigated the inspector concerns and determined the steam pressure had peaked as expected, but that one-of-the-four steam dump valves did not open since pressure controller demand peaked just below the open setpoint. As a result, the steam generator pressure increased to a point that it overlapped with the lowest main steam safety setpoint.

The inspectors continued to express concerns to the licensee related to the Unit 2 rapid down power and independently evaluated the licensee performance. In response to the inspector's concerns, on August 26, 2014, the licensee documented in Notification 50654723, a potential that steps associated with rapid load reduction Procedure (AP-25) were omitted. The licensee noted the Procedure (AP-25) removes the generator from the grid by initiating a Main Generator Unit trip, the induced secondary pressure transient from the unit trip caused main steam safety valve RV-58 lifting during the August 14, 2014, Unit 2 shutdown.

On September 16, 2014, because of inspectors' questions, the licensee recognized improving operator understanding and precise control of the steam dump system may be an enhancement. The licensee documented in Notification 50657850, a request for training analysis to examine if; "A better understanding of the relationship between steam dumps and main turbine control may have prompted controlling steam flow on the steam dumps prior to the unit trip." In addition, the inspectors concluded, after several interviews with the licensee operation staff, an organizational acceptance of lifting of MSSVs during rapid load reduction transients. The licensee was aware from previous plant events to expect lifting of MSSVs and considered this condition as normal. The inspectors determined the licensee's lack of a questioning attitude and complacency were the major contributors toward an inadequate procedure and unnecessary lifting of a MSSV.

Analysis. The inspectors determined that the licensee's failure to ensure appropriate procedures to properly control steam generator pressure and prevent unnecessary lifting of MSSV was a performance deficiency. This performance deficiency was determined to be more than minor because it affected the Mitigating Systems cornerstone attribute of procedural quality and the objective of ensuring the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. 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 a mitigating structure, system, or component that did not affect operability or functionality.

The inspectors concluded that this finding affected the cross-cutting aspect of human performance, associated with avoiding complacency, because the licensee failed to recognize during rapid load reductions the inherent risk of lifting a main steam safety and did not recognize or plan with adequate procedures, for a condition with a potential latent problem [H.12].

Enforcement. Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," requires in part, that activities affecting quality shall be prescribed by documented procedures of a type appropriate to the circumstances, and shall be accomplished in accordance with these procedures.

Station operating procedures describe requirements to maintain steam header pressures below the main steam safety valve setpoint:

- OP C-3:IV, "Main Unit Turbine-Turbine Shutdown, Revision 23, instructions on separating the main turbine generator from the system states, in part, "prior to unit separation from the grid, guidance should be previewed on Steam Dump Controller such that the 10 percent atmosphere dump valve and the main steam safety valves are prevented from lifting."
- OP L-8, "Separating From the Grid While Maintaining Reactor Power 17% and 30%," Revision 14, states in Step 5.9, "While ramping Reactor Power to 20%, monitor steam header pressure and steam generator pressures to ensure that steam pressure remains below the setpoint of the 10 percent Atmospheric steam dumps. (1020 psig)."

Contrary to the above, on August 15, 2014, the licensee failed to adequately control steam pressure to prevent a MSSV from lifting, as required in operating procedures. Specifically, during a rapid load reduction of Unit 2, the procedure steps necessary to properly control steam generator pressure were not adequate to ensure steam header pressure remained below the MSSV setpoint. Because this violation is of very low safety significance and was entered into the corrective action program as Notification 50662279, this violation is being treated as a NCV consistent with Section 2.3.2.a of the NRC Enforcement Policy:

NCV 05000323/2014004-04, "Inadequate Procedure Results in Unnecessary Main Steam Safety Valve Lift."

These activities constitute completion of three event follow-up samples, as defined in Inspection Procedure 71153.

.4 (Open) Unit 2 Two Inoperable Emergency Diesel Generators and Notice of Enforcement Discretion 14-4-001

On August 10, 2014, at 6:56 a.m., emergency diesel generator 2-2 was removed from service for a planned maintenance outage. During the maintenance, a diesel fuel oil inlet to fuel header capscrew was discovered broken. An extent of condition review was performed and a similar capscrew was discovered to have an ultrasonic test indication on diesel generator 2-3. Diesel generator 2-3 was declared inoperable August 14, 2014, at 4:31 p.m., and DCP Unit 2 entered Technical Specification 3.8.1, Condition E, Required Action E.1, to ensure at least two diesel generators were operable. The capscrew on diesel generator 2-3 was replaced, but during preparations to return the diesel generator to service, a separate, non-related failure of the engine driven fuel oil booster pump shaft seal occurred. As required by Technical Specification 3.8.1, Condition H, Action H.1, operators shut the unit down and placed the unit in Mode 3, Hot Standby.

Technical Specification 3.8.1, Condition H, Required Action H.2 also required the unit to be in Mode 5 in 36 hours. Enforcement discretion was requested by the licensee to permit additional time to make repairs and restore diesel generator 2-3 to operable status before entry into Mode 5 within 36 hours, as required. An additional 3 hours was requested to restore diesel generator 2-3 such that the completion time of Required Action H.2 would expire at 9:31 a.m. on August 16, 2014.

A notice of enforcement discretion (NOED) was granted by the NRC staff at 2:45 p.m. on August 14, 2014. The condition causing the need for this NOED was corrected by the licensee with the restoration of diesel generator 2-3 to operable status, allowing the licensee Unit 2 to exit Technical Specification 3.8.1, Required Action H.2, and the NOED on August 14, 2014, at 6:00 p.m. On August 15, 2014, emergency diesel generator 2-2 was restored to operable status at 2:21 p.m. on August 17, 2014.

Consistent with NRC policy, the NRC agreed not to enforce compliance with the specific technical specifications in this instance, but will further review the cause(s) that created the apparent need for enforcement discretion to determine if there is a performance deficiency, if the issue is more than minor, or if there is a violation of requirements. This issue will be tracked as an unresolved item (URI) 05000275/2014004-05; "Notice of Enforcement Discretion 14-4-001 for a Loss of Both Required Offsite Power Circuits."

4OA6 Meetings, Including Exit

Exit Meeting Summary

On July 10, 2014, the inspectors presented the radiation safety inspection results to Mr. E. Halpin, Chief Nuclear Officer, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

The inspector obtained the final annual cycle results while on site and exited with Mr. B. Overton, Requalification Program Lead, on August 11, 2014. The inspector did not review any proprietary information during this inspection.

On September 12, 2014, the inspector conducted a telephonic exit meeting to present the results of the in-office inspection of changes to the licensee's emergency plan and implementing procedures to Mr. J. Summy, Director of Engineering & Technical Services, and other members of the licensee staff. The licensee acknowledged the issues presented.

On October 7, 2014, the resident inspectors presented the inspection results to Mr. B. Allen, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

B. Allen, Site Vice President
A. Arsene, Fire Protection Engineering
T. Baldwin, Manager, Regulatory Services
A. Bates, Director, Engineering Services
J. Climer, Technician, Chemistry and Radiation Protection
K. Cortese, Manager, Chemistry Engineering
R. Gagne, Radwaste Supervisor, Radiation Protection
Y. Gagne, Supervisor, Radiation Protection
C. Gans, Chemical Engineer, Chemistry
P. Gerfas, Assistant Director, Station Director
M. Ginn, Manager, Emergency Preparedness
E. Halpin, Chief Nuclear Officer
D. Hampshire, Supervisor, Fire Protection Engineering
A. Heffner, NRC Interface, Regulatory Services
J. Hinds, Director, Quality Verification
K. Hinrichsen, Instrument Foreman, Radiation Protection
T. Irving, Manager, Radiation Protection
T. King, Director, Nuclear Work Management
J. Knemeyer, Supervisor, Chemistry Engineering
B. Lopez, Engineer, Regulatory Services
J. Loya, Supervisor, Regulator Services
J. MacIntyre, Director, Maintenance Services
C. Miller, Principal Engineer, Radiation Protection
W. Morgan, Technician, Chemistry and Radiation Protection
J. Morris, Senior Advising Engineer
J. Nimick, Director, Operations Services
K. O'Neil, Radiation Monitor Systems Engineer, Engineering
B. Overton, Requalification Training Lead
L. Sewell, Supervisor, Radiation Protection
J. Simmons, Supervisor, Chemistry
R. Simmons, Manager, Electrical Maintenance
J. Summy, Senior Director, Engineering and Projects
J. Welsch, Station Director R. West, Manager, ICE Systems
B. Wong, Fire Protection Engineering
M. Wright, Manager, Mechanical Systems Engineering

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000275/2014004-05 URI Notice of Enforcement Discretion 14-4-001 for a Loss of Both Required Offsite Power Circuits (Section 4OA3.4)

Opened and Closed

05000275/2014004-01 NCV Failure to Document Degraded Conditions in the Corrective Action Process (Section 1R15)
 05000323/2014004-01
 05000275/2014004-02 NCV Inadequate Maintenance Procedure Resulted in Improper Configuration of Safety Related Equipment (Section 4OA2.2)
 05000323/2014004-02
 05000275/2014004-03 FIN Failure to Provide Adequate Procedural Guidance Resulting in a Loss of Unit 1 230 kV Off-site Power (Section 4OA3.2)
 05000323/2014004-04 NCV Inadequate Procedure Results in Unnecessary Main Steam Safety Valve Lift (Section 4OA3.3)

Closed

05000275;
 05000323/1-2012-007-01 LER Inadequately Compensated Non Conformances in the Fire Protection Program (Section 4OA3.1)
 05000275/1-2013-006-01 LER Emergency Diesel Generators Valid Start Signal Due to Loss of Startup Power (Section 4OA3.2)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
OP O-28	Intake Management	15
OP O-28	Intake Management	16
OP J-2:VIII	Guideline for Reliable Transmission Service for DCP	24
MA1.ID23	Periodic Review of Intake Preparedness for High Debris Loading Events	3

Notifications

50634601 50639077

Section 1R04: Equipment Alignment

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision / Date</u>
OP J-6B:I	Diesel Generator 1-1 – Make Available	35
OP J-6B:I	Diesel Generator 2-1 Make Available	September 23, 2013
OP J-6B:I-A	U2, Diesel Generator 2-1 – Alignment Checklist	July 26, 2012
OP J-6C	Diesel Fuel Oil Transfer System	February 4, 2013
OP-D-1:11	Unit 1; Auxiliary Feed water System – Alignment Verification For Plant Startup	32

Notifications

50639414 50617535 50627219

Drawing

<u>Number</u>	<u>Title</u>	<u>Revision</u>
106703	OVID Unit 2 Auxiliary Feedwater System	50

Section 1R05: Fire Protection

Procedures

<u>Number</u>	<u>Title</u>	<u>Date</u>
111906-11	Fire Protection Turbine Building El. 85'	June 30, 2007
111906-8	Fire Protection Turbine Building El. 119'	June 30, 2007

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
TB-17	Pre-fire Zone Drawing, Turbine Building 104 foot Elevation, Unit 2	4
TB-18	Pre-fire Zone Drawing, Turbine Building 104 foot Elevation, Unit 2	2

Section 1R06: Flood Protection Measures

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
DCM T-12	Pipe Break, HELB/MELB, Flooding and Missiles	17B
CF4.ID7	Temporary Alteration	26

Notification

5656738

Section 1R07: Heat Sink Performance

Procedure

<u>Number</u>	<u>Title</u>	<u>Revision</u>
PEP M-234	CCW Heat Exchanger Performance Test	17

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision / Date</u>
WCAP-12526	Auxiliary Salt Water and Component Cooling Water Flow and Temperature Study for Diablo Canyon Units 1 and 2	1
	DCPP CCW 1-1 and 1-2 Heat Exchanger Tests – Pre 1R18	February 26, 2014
DCM S-14	Component Cooling Water System	27
DCM S-17B	Auxiliary Saltwater System	21

Section 1R11: Licensed Operator Requalification Program and Licensed Operator Performance

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
TQ2.ID4	Training Program Implementation	36
OP1.DC10	Conduct of Ops	43
TQ2.DC15	Licensed Operator Annual/Biennial Exam Development and Administration	4
OP L-4	Normal Operations at Power	72

OP L-5	Plant Cooldown from Minimum Load to Cold Shutdown	82
AP-25	Rapid load Reduction or Shutdown	10

Section 1R12: Maintenance Effectiveness

Notifications

50631525 50634537

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
PRA13-06	Unit 2 230-kV Unavailable Due to Startup Transformer 2-1 Maintenance	1
AD7.ID14	Assessment of Integrated Risk	0

Notifications

50231071 50643322 50643324 50643321 50643326
50643325

Work Order

60059564

Section 1R15: Operability Determinations and Functionality Assessments

Notifications

50636587 50636677 50636637 50636012 50605355
50592094 50272601 50636744 50652361

Section 1R18: Plant Modifications

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
108034 Sheet 16	Pressure Instrument Systems	111
108017 Sheet 3B	Component Cooling Water	80
441686 Sheet 1	Electrical Diagram of Connections	21

663191 Sheet 312	Wiring Diagram Panel 39 & 149	6
106717 Sheet 9	Auxiliary Saltwater	188

Work Orders

60070843 60070844

Section 1R19: Post-Maintenance Testing

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
STP M-9A1	Diesel Engine Generator 2-1 Routine Surveillance Test	2
STP P-AFW-21	Routine Surveillance Test of Turbine Driven Auxiliary Feedwater Pump 2-1	26

Notifications

50639414 50617535 50640458 50640513 50640721

Work Order

64107781

Section 1R22: Surveillance Testing

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
MP E-101A	Infrared Thermography Inspections	7
MP E-64.1A	Molded Case Circuit Breaker Testing	41
STP P-AFW-11	Routine Surveillance Test of Turbine-Driven Auxiliary Feedwater Pump 1-1	33
STP M-78B	Snubber Functional Testing	20

Notifications

50614960 50270745 50326488 50577500 50638130
50407093 50614201

Work Orders

60071003 64110635

Work Order

<u>Title</u>	<u>Revision</u>
Investigation High Bus Work Temperatures	0

Section 1EP4: Emergency Action Level and Emergency Plan Changes

Procedure

<u>Number</u>	<u>Title</u>	<u>Date</u>
50.54(q)	Emergency Plan Evaluation 2014-008 "E-Plan Appendix D, Cat R"	May 13, 2014

Section 1EP6: Drill Evaluation

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
CP-M-13	Personnel Injury with Radioactive Contamination or Personnel Overexposure	3
XI1.ID2	Regulatory Reporting Requirements and Reporting Process	39
EP EF-1	Activation and Operation of the Technical Support Center	47
CP-M-15A	Attachment 10, Assessment	12

Notifications

50654593 50657245

Section 2RS5: Radiation Monitoring Instrumentation

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
CY2.ID1	Radioactive Effluent Controls Program	11
MP I-1.3-8	Setup Canberra Multichannel Analyzer to Check Discriminator Bias – RMS Channel	6
RCP D-923	Thermo SAM-9/SAM-12 Small Articles Monitor Operation	14

STP I-104B5	Discriminator Check of CCW Discharge Headers Radiation Monitors RM-17A & RM-17B	5A
STP I-39-R30.B	Containment High Range Area Radiation Monitor RM-30/RM-31 Calibration	11
MP I-RD01	Eberline Model RO-2 and RO-2A Ion Chamber Calibration	6
MP I-RD03	Calibration of Eberline 6112B Teletector G-M Survey Instrument	3
MP I-RD37	Calibration of Ludlum 9-2 Ion Chamber Survey Instrument	0
MP I-RD41	Thermo RadEye G Calibration	1

Audits and Self-Assessments

<u>Number</u>	<u>Title</u>	<u>Date</u>
50539740	Chemistry QC Program Self-Assessment	February 12, 2013
140370017	2014 Radiation Protection Programs Audit	May 6, 2013

Notifications

50480566	50480569	50496101	50498590	50546938
50553435	50555317	50569921	50583556	50589812
50596669	50599125	50623769	50598777	50599125
50601094	50601060	50507921	50508661	

Effluent and Area Radiation Monitor Calibration Records

<u>Number</u>	<u>Title</u>	<u>Date</u>
64063108	0-RM-18 Liquid Rad Waste Discharge	March 28, 2013
64059504	2-RM-23 Steam Generator Blowdown Discharge	July, 22, 2013
64054672	1-RM-24 Plant Vent – Iodine	October 18, 2013
64029235	1-RM-87 Plant Vent – Extended Range Noble Gas	October 18, 2013
64053028	2-RM-14R Plant Vent – Noble Gas	April 25, 2013
64058276	1-FR-12 Plant Vent – Flow	August 13, 2013
64031582	1-RM-30 Containment High Range Monitor	February 7, 2013

Stationary Radiation Monitor Calibration Records

<u>Number</u>	<u>Title</u>	<u>Date</u>
RP 05.13.009	GEM 5 (Security Bldg.)	January 14, 2014
RP 05.13.007	GEM 5 (U1 140' Access/Egress)	May 20, 2014
RP 05.12.010	ARGOS 5 (U1 140' Access/Egress)	May 21, 2014
RP 06.25.004	SAM 12 (U1 140' Access/Egress)	August 1, 2013
RP 04.36.007	AMS 4 (U1 140' FHB)	March 12, 2014
RP 04.36.001	AMS 4 (U1 100' AUX)	June 6, 2014
RP 04.36.026	AMS 4 (U2 100' AUX)	January 15, 2014
#97-2391	WBC – 85' Access	December 30, 2013
#97-5119	WBC – Dosimetry Office	December 12, 2013

Portable Instrument Calibration Records

<u>Number</u>	<u>Title</u>	<u>Date</u>
7201205	EPD-N2 MK2.5	July 26, 2013
7201288	EPD-N2 MK2.0	July 26, 2013
RP 03.09-003	Eberline RO-2	December 2, 2011
RP 03.09-002	Eberline RO-2	April 23, 2014
RP 03.07-001	Thermo 6112B	February 12, 2013
RP 03.07-002	Thermo 6112B	February 24, 2014
RP 03.32-002	RadEye G	June 20, 2013
RP 03.32-001	RadEye G	March 14, 2014
RP 03.30-001	Ludlum 9-2 Dose Rate Meter	January 27, 2014
RP 03.30-001	Ludlum 9-2 Dose Rate Meter	March 18, 2014

Miscellaneous Documents

<u>Title</u>	<u>Date</u>
Unit 2 System Health Report (1Q 2014)	June 3, 2014
Unit 1 System Health Report (1Q 2014)	June 3, 2014
2014 Dry Active Waste Stream Analysis	April 14, 2014

Section 2RS6: Radioactive Gaseous and Liquid Effluent TreatmentProcedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
CAP A-6A	Gaseous Radwaste Release Permit Generation Using REMS	1
CAP A-6B	Gaseous Radwaste Postrelease Summary Update Using REMS	0
CAP A-8	Off-Site Dose Calculations	36
CAP E-2:VI	Sampling Primary Chemistry Lab Fume Hood Exhaust	0
CAP E-5:1	Liquid Radwaste and Miscellaneous Discharge Sampling	8
CAP E-6:III	Secondary Sampling at 85' Auxiliary Building	1
CAP Q-1	Chemical Laboratory Quality Control	27
CAP Q-6	Radiochemical Cross-Check Program	3
CY2.ID1	Radioactive Effluent Controls Program	11
CY2	Radiological Monitoring and Controls Program	7
STP M-41	Fuel Handling Building Ventilation System – SOP and Halide Penetration Tests	7
STP M3A	Auxiliary Building Ventilation System – SOP and Halide Penetration Tests	11

Notifications

50504075	50551346	50577630	50629022	50545801
50497902	50622490	50577167	50601451	50505246
50624472	50333890			

Release Permits

<u>Number</u>	<u>Title</u>	<u>Date</u>
U1 2012-17	Containment	April 21, 2012
U2 2013-48	Containment	July 3, 2013
U0 2012-16	Liquid Radwaste	March 16, 2012
U0 2013-21	Liquid Radwaste	February 26, 2013

Ventilation System Filter Testing Records

<u>Number</u>	<u>Title</u>	<u>Date</u>
64069260	Unit 1, Auxiliary Building Ventilation System	February 15, 2014
64033791	Unit 1, Fuel Handling Building	February 15, 2013
64051122	Unit 2, Auxiliary Building Ventilation System	February 13, 2013
64040808	Unit 2, Fuel Handling Building	November 21, 2013

Section 2RS7: Radiological Environmental Monitoring Program

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
CY2	Radiological Monitoring and Controls Program	7
CY2.ID1	Radioactive Effluent Controls Program	11
RP1.ID11	Environmental Radiological Monitoring Procedure	12A
CAP A-8	Offsite Dose Calculations	36
RCP EM-1	Radiological Environmental Biological Sampling	12
RCP EM-2	Radiological Environmental Air Sampling	14
RCP EM-3	Use of Panasonic Environmental Thermoluminescent Dosimeters	7
RCP EM-4	Area TLD Monitoring	3
RCP EM-5	DCPP Groundwater Sampling	4
RCP EM-21	GPI Well Maintenance Plan	0
STP-I-40-M559.B	Primary Meteorological Wind Direction, Wind Speed, and Air Temperature/ DT Cal	33
STP-I-40-M569.B	Backup Meteorological Wind Direction, Wind Speed, and Air Temperature/ DT Cal	18
OP K-17	Meteorological Tower Operations	2
MP I-40-M.1	Battery Powered Backup Meteorological System	6A
MP I-40-Y538	Primary Meteorology System Precipitation Channel YT-538 Calibration	8
RP1.ID13	DCPP Ground Water Protection Initiative Program	3
TS5.ID3	Buried Pipe and Tanks Program	5

TS5.DC4	Component Engineering Program	3
AR PK15-05	Ambient Air Temperature PPC Annunciator Response Unit 1	21
AR PK15-05	Ambient Air Temperature PPC Annunciator Response Unit 2	16

Notifications

50519417	50619029	50615012	50614805	20609559
50600291	50598509	50584618	50582121	50581368
50581350	50581111	50579394	50578137	50577933
50577933	50576048	50573151	50561508	50547562
50543440	50543146	50536885	50536222	50536221
50536220	50535972	50535939	50535935	50519920
50519919	50519418	50508628	50492071	50450314
50638090	50579027	50640025	50610547	50481027

Audits, Self-Assessments

<u>Number</u>	<u>Title</u>	<u>Date</u>
	EPRI Groundwater Protection Program Groundwater Protection Initiative Self-Assessment	July 2013
140370017	2014 Radiation Protection Programs Audit	May 6, 2014
	Diablo Canyon Power Plant Dosimetry Program Audit	2012
	2014 DCCP Dosimetry Laboratory Annual Management Review	
	National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NVLAP) On-site Assessment Report Signature Sheet	April 16, 2013
	NUPIC Audit/Survey of GEL Laboratories, LLC	December 13, 2011
	NUPIC Audit/Survey of GEL Laboratories, LLC	April 16, 2012

Annual Reports

<u>Title</u>	<u>Date</u>
XOQDOQ Analysis for Calendar Year 2013 Based on the 2009-2013 Joint Frequency Distribution of Wind and Stability	March 2014
2011 Annual Radiological Environmental Operating Report Diablo Canyon Power Plant	April 16, 2012
2012 Annual Radiological Environmental Operating Report Diablo Canyon Power Plant	April 17, 2013
2013 Annual Radiological Environmental Operating Report Diablo Canyon Power Plant	April 17, 2014

Meteorological Tower Calibrations

<u>Order</u>	<u>Title</u>	<u>Date</u>
64095485	Backup Met Facility Equipment Calibration	June 25, 2013
64100771	Backup Met Facility Equipment Calibration	December 26, 2013
64096905	Cal Primary Met Instrumentation Channel (PME)	November 4, 2013
64106214	Cal Primary Met Instrumentation Channel (PME)	April 24, 2014
64050067	Primary Met Rain Gauge Calibration	June 19, 2012
64074729	Precipitation Channel Check	June 5, 2013

Section 2RS08: Radioactive Solid Waste Processing, and Radioactive Material Handling, Storage, and Transportation

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
CAP A-8	Off-Site Dose Calculations	36
DPP PC-14	Use of ISIP for Waste Classification and Shipping Type Determination of Consolidated Packages	9
RCP D-612	Sorting Potentially Contaminated Trash Generated in the RCA	6
RCP D-631	Radioactive Material Shipments	10
RCP RW-1	Collection and Packaging of Low-Level Radioactive Waste	14
RCP RW-3	Radioactive Waste Nuclide Fractions and Correlation Factor Determination	18
RCP RW-7	Burial Site Disposal Criteria and Classification of Radwaste	13

RP1.DC3	Transportation Security Plan	3
RP2.DC1	Radioactive Waste Classification Program	5
RP2.DC2	Radwaste Solidification Process Control Program	15
RP2.DC3	Radwaste Dewatering Process Control Program	9

Audits and Self-Assessments

<u>Number</u>	<u>Title</u>	<u>Date</u>
140370017	2014 Radiation Protection Programs Audit	May 6, 2014
50629782-13	2014 NRC IP 71124.08, Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	July 3, 2014

Notifications

50498598	50503346	50506765	50512143	50515684
50520921	50526301	50527001	50541499	50547178
50555309	50565402	50565831	50576370	50598541
50608936	50625387	50596747	50617866	50629834
50497287	50505278	50506412	50507105	50518488
50520383	50526773	50530260	50533494	50537867
50552265	50560239	50562127	50577074	50578599
50589841				

Surveys

<u>Number</u>	<u>Title</u>	<u>Date</u>
19716	OSGSF – Cover REMP Clean and Inspect Sumps	February 29, 2012
34673	Radwaste Building – 115’ – Truck Bay Monthly Survey	May 2, 2014
35489	RMS-14-068 CCW Sample Shipment to Assay Tech	July 9, 2014
35491	14-K-042 U2 SFP Resin Trap K-Filter Changeout	July 9, 2014
35503	OSGSF Radiological Update	July 9, 2014
35505	14-K-042 U2 SFP Resin Trap Filter Process into Liner 13-F-001	July 10, 2014

Radioactive Material Shipments

<u>Number</u>	<u>Title</u>	<u>Date</u>
RWS-12-001	Radioactive Material LSA-II; UN 3321	March 28, 2012
RWS-13-001	Radioactive Material LSA-II; UN 3321	April 17, 2013
RWS-13-002	Radioactive Material LSA-II; UN 3321	May 28, 2013
RWS-13-005	Radioactive Material LSA-II; UN 3321	September 24, 2013
RWS-13-006	Radioactive Material LSA-II; UN 3321	November 13, 2013

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Revision / Date</u>
DCL-13-042	2012 Annual Radioactive Effluent Release Report	April 30, 2013
DCL-14-039	2013 Annual Radioactive Effluent Release Report	April 30, 2014
RWIAA	RAM Shipping/Radwaste Academics - Training	August 23, 2012
	Updated Safety Analysis Report – Chapter 9: Auxiliary Systems	21
	Updated Safety Analysis Report – Chapter 11: Solid Radwaste Systems	11
	Updated Safety Analysis Report – Chapter 12: Radiation Protection	21
	Updated Safety Analysis Report – Chapter 13.5: Plant Procedures and Programs	21
	2012 Radioactive Shipment Log	2012
	2013 Radioactive Shipment Log	2013
	2014 Radioactive Shipment Log	2014

Section 40A2: Problem Identification and Resolution

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
STP I-37-N32.B	Source Range N32 Channel Calibration	7
STP M-70B	Inspection and Testing of Fire Dampers	16
AD13.ID4	Post-Maintenance Testing	22A
AD7.ID12	Work Management Process	3

AD7.ID16	Tool Pouch and Minor Maintenance Program	0
AD7.DC8	Work Planning	45A
CF1.ID1	Configuration Management	1
AD7	Work control	6
MA1	Maintenance	5
MA1.DC54	Conduct of Maintenance	6
MA1.ID26	Troubleshooting	0A
MA1.ID17	Maintenance Rule Monitoring Program	27
OP1.ID6	Plant Status Control	10
OP.DC16	Control of Equipment Not Required by the Technical Specifications	12
OP1.DC17	Control of Equipment Required by Technical Specification or Designated Programs	27
OM7.ID1	Problem Identification and Resolution	46
ER1.ID1	Equipment Reliability Process	4A

Notifications

50636587	50636677	50656159	50652322	50629940
50631525	50634537	50625650	50634682	

Work Orders

64061067	64107700
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Miscellaneous

<u>Number</u>	<u>Description</u>	<u>Revision</u>
DCM S-37	Design Criteria Memorandum	11B

Section 40A3: Follow-up of Events and Notices of Enforcement Discretion

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
Unit 1, CP M-10	Fire Protection of Safe Shutdown Equipment	34

Unit 2 OP AP-84A	Control Room Inaccessibility – Establishing Hot Standby	30
CP M-6	Fire	34
OP1.ID1	Readiness for Restart Program	25
OP O-19	Nuclear Operator Actions Following a Reactor Trip	35
OPC-2:V	Main Steam and Steam Dump Systems- Return to Service	2
OP L-4	Normal Operation at Power	71

Calculations

<u>Number</u>	<u>Title</u>	<u>Part/Version</u>
M-928	10 CFR 50, Appendix R, Safe Shutdown Analysis	019-013
M-944	10 CFR 50, Appendix R, Safe Shutdown Methodology – Time and Manpower Study/Safe Shutdown System Considerations	009/00
M-1088	10 CFR 50, Appendix R, Post-Fire Operator Manual Action Feasibility	04/00

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
PCC2.P0420R	Steam Generator Steam Pressures Following Unit Shutdown Trends	January 1 to August 17, 2014
DCM S-3C	Main Feedwater and Steam Dump Control System	14
LER 1-96-012-00	Licensee Event Report Reactor Trip on Units 1 and 2 Due to Major Western Grid Disturbance	September 9, 1996

Notifications

50636392	50643584	50651963	50607218	50643534
50652090				

Work Orders

64092106	64096409	64006965	64012980
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**The following items are requested for the
Radiation Safety Inspection at
Diablo Canyon Power Plant, Units 1 and 2
July 7 – 10, 2014
Integrated Report 2014004**

Inspection areas are listed in the attachments below.

Please provide the requested information on or before June 9, 2014.

Please submit this information using the same lettering system as below. For example, all contacts and phone numbers for Inspection Procedure 71124.01 should be in a file/folder titled "1- A," applicable organization charts in file/folder "1- B," etc.

If information is placed on *ims.certrec.com*, please ensure the inspection exit date entered is at least 30 days later than the onsite inspection dates, so the inspectors will have access to the information while writing the report.

In addition to the corrective action document lists provided for each inspection procedure listed below, please provide updated lists of corrective action documents at the entrance meeting. The dates for these lists should range from the end dates of the original lists to the day of the entrance meeting.

If more than one inspection procedure is to be conducted and the information requests appear to be redundant, there is no need to provide duplicate copies. Enter a note explaining in which file the information can be found.

If you have any questions or comments, please contact Larry Ricketson at 817-200-1165 or Larry.Ricketson@nrc.gov.

PAPERWORK REDUCTION ACT STATEMENT

This letter does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, control number 3150-0011.

5. Radiation Monitoring Instrumentation (71124.05)

Date of Last Inspection: July 9, 2012

- A. List of contacts and telephone numbers for the following areas:
 - 1. Effluent monitor calibration
 - 2. Radiation protection instrument calibration
 - 3. Installed instrument calibrations
 - 4. Count room and Laboratory instrument calibrations
 - B. Applicable organization charts
 - C. Copies of audits, self-assessments, vendor or NUPIC audits for contractor support, and LERs, written since date of last inspection, related to:
 - 1. Area radiation monitors, continuous air monitors, criticality monitors, portable survey instruments, electronic dosimeters, teledosimetry, personnel contamination monitors, or whole body counters
 - 2. Installed radiation monitors
 - D. Procedure index for:
 - 1. Calibration, use and operation of continuous air monitors, criticality monitors, portable survey instruments, temporary area radiation monitors, electronic dosimeters, teledosimetry, personnel contamination monitors, and whole body counters.
 - 2. Calibration of installed radiation monitors
 - E. Please provide specific procedures related to the following areas noted below. Additional specific procedures will be requested by number after the inspector reviews the procedure indexes.
 - 1. Calibration of portable radiation detection instruments (for portable ion chambers)
 - 2. Whole body counter calibration
 - 3. Laboratory instrumentation quality control
 - F. A summary list of corrective action documents (including corporate and subtiered systems) written since date of last inspection, related to the following programs:
 - 1. Area radiation monitors, continuous air monitors, criticality monitors, portable survey instruments, electronic dosimeters, teledosimetry, personnel contamination monitors, and whole body counters,
 - 2. Installed radiation monitors
 - 3. Effluent radiation monitors
 - 4. Count room radiation instruments
- NOTE: The lists should indicate the significance level of each issue and the search criteria used. Please provide in document formats which are "searchable," so the inspector can perform word searches.
- G. Offsite Dose Calculation Manual, technical requirements manual, or licensee-controlled specifications which lists the effluent monitors and calibration requirements
 - H. Current calibration data for the whole body counters
 - I. Primary to secondary source calibration correlation for effluent monitors
 - J. A list of the point of discharge effluent monitors with the two most recent calibration

dates and the work order numbers associated with the calibrations.

- K. Radiation Monitoring System health report for the previous 12 months

6. Radioactive Gaseous and Liquid Effluent Treatment (71124.06)

Date of Last Inspection: July 9, 2012

- A. List of contacts and telephone numbers for the following areas:
 - 1. Radiological effluent control
 - 2. Engineered safety feature air cleaning systems
- B. Applicable organization charts
- C. Audits, self-assessments, vendor or NUPIC audits of contractor support, and LERs, written since date of last inspection, related to:
 - 1. Radioactive effluents
 - 2. Engineered Safety Feature Air cleaning systems
- D. Procedure indexes for the following areas
 - 1. Radioactive effluents
 - 2. Engineered Safety Feature Air cleaning systems
- E. Please provide specific procedures related to the following areas noted below. Additional specific procedures will be requested by number after the inspector reviews the procedure indexes.
 - 1. Sampling of radioactive effluents
 - 2. Sample analysis
 - 3. Generating radioactive effluent release permits
 - 4. Laboratory instrumentation quality control
 - 5. In-place testing of HEPA filters and charcoal adsorbers
 - 6. New or applicable procedures for effluent programs (e.g., including ground water monitoring programs)
- F. List of corrective action documents (including corporate and subtiered systems) written since date of last inspection, associated with:
 - 1. Radioactive effluents
 - 2. Effluent radiation monitors
 - 3. Engineered Safety Feature Air cleaning systems

NOTE: The lists should indicate the significance level of each issue and the search criteria used. Please provide in document formats which are "searchable," so the inspector can perform word searches.
- G. 2013 and 2014 Annual Radioactive Effluent Release Report, or the two most recent reports.
- H. Current Copy of the Offsite Dose Calculation Manual
- I. Copy of the 2013 and 2014 interlaboratory comparison results for laboratory quality control performance of effluent sample analysis, or the two most recent results.
- J. Effluent sampling schedule for the week of the inspection
- K. New entries into 10 CFR 50.75 (g) files since date of last inspection
- L. Operations department (or other responsible department) log records for effluent monitors removed from service or out-of-service

- M. Listing or log of liquid and gaseous release permits since date of last inspection
- N. A list of the technical specification-required air cleaning systems with the two most recent surveillance test dates of in-place filter testing (of HEPA filters and charcoal adsorbers) and laboratory testing (of charcoal efficiency) and the work order numbers associated with the surveillances
- O. System Health Report for radiation monitoring instrumentation. Also, please provide a specific list of all effluent radiation monitors that were considered inoperable for 7 days or more since July 9, 2012. If applicable, please provide the relative Special Report and condition report(s). moreover
- P. A list of all radiation monitors that are considered § 50.65/Maintenance Rule equipment.
- Q. A list of all significant changes made to the Gaseous and Liquid Effluent Process Monitoring System since the last inspection. If applicable, please provide the corresponding UFSAR section in which this change was documented.
- R. A list of any occurrences in which a non-radioactive system was contaminated by a radioactive system. Please include any relative condition report(s).

7. Radiological Environmental Monitoring Program (71124.07)

Date of Last Inspection: July 9, 2012

- A. List of contacts and telephone numbers for the following areas:
 - 1. Radiological environmental monitoring
 - 2. Meteorological monitoring
- B. Applicable organization charts
- C. Audits, self-assessments, vendor or NUPIC audits of contractor support, and LERs, written since date of last inspection, related to:
 - 1. Radiological environmental monitoring program (including contractor environmental laboratory audits, if used to perform environmental program functions)
 - 2. Environmental TLD processing facility
 - 3. Meteorological monitoring program
- D. Procedure index for the following areas:
 - 1. Radiological environmental monitoring program
 - 2. Meteorological monitoring program
- E. Please provide specific procedures related to the following areas noted below. Additional Specific Procedures will be requested by number after the inspector reviews the procedure indexes.
 - 1. Environmental Program Description
 - 2. Sampling, collection, and preparation of environmental samples
 - 3. Sample analysis (if applicable)
 - 4. Laboratory instrumentation quality control
 - 5. Procedures associated with the Offsite Dose Calculation Manual
 - 6. Appropriate QA Audit and program procedures, and/or sections of the station's QA manual (which pertain to the REMP)
- F. A summary list of corrective action documents (including corporate and subtiered systems) written since date of last inspection, related to the following programs:
 - 1. Radiological environmental monitoring
 - 2. Meteorological monitoring

NOTE: The lists should indicate the significance level of each issue and the search criteria used. Please provide in document formats which are "searchable" so that the inspector can perform word searches.
- G. Wind Rose data and evaluations used for establishing environmental sampling locations
- H. Copies of the 2 most recent calibration packages for the meteorological tower instruments
- I. Copy of the 2013 and 2014 Annual Radiological Environmental Operating Report and Land Use Census and current revision of the Offsite Dose Calculation Manual, or the two most recent reports.
- J. Copy of the environmental laboratory's interlaboratory comparison program results for 2013 and 2014, or the two most recent results, if not included in the annual radiological environmental operating report

- K. Data from the environmental laboratory documenting the analytical detection sensitivities for the various environmental sample media (i.e., air, water, soil, vegetation, and milk)
- L. Quality Assurance audits (e.g., NUPIC) for contracted services
- M. Current NEI Groundwater Initiative Plan and status
- N. Technical requirements manual or licensee controlled specifications which lists the meteorological instruments calibration requirements
- O. A list of Regulatory Guides and/or NUREGs that you are currently committed to relative to the Radiological Environmental Monitoring Program. Please include the revision and/or date for the committed item and where this can be located in your current licensing basis/UFSAR.
- P. If applicable, per NEI 07-07, provide any reports that document any spills/leaks to groundwater since the last inspection

8. Radioactive Solid Waste Processing, and Radioactive Material Handling, Storage, and Transportation (71124.08)

Date of Last Inspection: July 9, 2012

- A. List of contacts and telephone numbers for the following areas:
 - 1. Solid Radioactive waste processing
 - 2. Transportation of radioactive material/waste
- B. Applicable organization charts (and list of personnel involved in solid radwaste processing, transferring, and transportation of radioactive waste/materials)
- C. Copies of audits, department self-assessments, and LERs written since date of last inspection related to:
 - 1. Solid radioactive waste management
 - 2. Radioactive material/waste transportation program
- D. Procedure index for the following areas:
 - 1. Solid radioactive waste management
 - 2. Radioactive material/waste transportation
- E. Please provide specific procedures related to the following areas noted below. Additional Specific Procedures will be requested by number after the inspector reviews the procedure indexes.
 - 1. Process control program
 - 2. Solid and liquid radioactive waste processing
 - 3. Radioactive material/waste shipping
 - 4. Methodology used for waste concentration averaging, if applicable
 - 5. Waste stream sampling and analysis
- F. A summary list of corrective action documents (including corporate and subtiered systems) written since date of last inspection related to:
 - 1. Solid radioactive waste
 - 2. Transportation of radioactive material/waste

NOTE: The lists should indicate the significance level of each issue and the search criteria used. Please provide in document formats which are "searchable" so that the inspector can perform word searches.

- G. Copies of training lesson plans for 49 CFR Part 172, Subpart H, for radwaste processing, packaging, and shipping.
- H. A summary of radioactive material and radioactive waste shipments made from date of last inspection to present
- I. Waste stream sample analyses results and resulting scaling factors for 2013 and 2014, or the two most recent results.
- J. Waste classification reports if performed by vendors (such as for irradiated hardware)
- K. A listing of all onsite radwaste storage facilities. Please include a summary *or* listing of the items stored in each facility, including the *total* amount of radioactivity and the *highest* general area dose rate.

Although it is not necessary to compile the following information, the inspector will also review:

- L. Training, and qualifications records of personnel responsible for the conduct of radioactive waste processing, package preparation, and shipping