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

February 8, 2017

EA-16-199

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 05000275/2016004 and 05000323/2016004 AND EXERCISE OF ENFORCEMENT DISCRETION

Dear Mr. Halpin:

On December 31, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Diablo Canyon Power Plant, Units 1 and 2. On January 19, 2017, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

NRC inspectors documented one finding of very low safety significance (Green) in this report. This finding involved a violation of NRC requirements. The NRC is treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2.a of the Enforcement Policy.

The inspectors reviewed Licensee Event Report 05000275/323/2015-S01-00 that documented an applicant's failure to disclose potential disqualifying information on a personal history questionnaire on August 9, 2015. This action resulted in a violation of 10 CFR 50.9 that states, in part, that information required to be maintained by the licensee shall be complete and accurate in all material aspects. When licensee personnel became aware of the disqualifying information, they immediately terminated the individual's site access, conducted a review of any work the individual had conducted on the site, and notified the NRC. The inspectors concluded that it was not reasonable for the licensee's staff to foresee and correct this condition prior to the discovery of the information and, therefore, did not identify an associated performance deficiency. The NRC staff determined that this issue was of very low security significance. Based on these facts, I have been authorized, in consultation with the Director, Office of Enforcement, and the Regional Administrator, Region IV, to exercise enforcement discretion in accordance with Section 3.5, "Violations Involving Special Circumstances," of the NRC Enforcement Policy and not issue enforcement action for this violation.

If you contest the violation or significance of the NCV, 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; and the NRC resident inspector at the Diablo Canyon Power Plant.

If you disagree with a cross-cutting aspect assignment 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 U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; and the NRC resident inspector at the Diablo Canyon Power Plant.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

***/RA/***

Jeremy R. Groom, Chief
Project Branch A
Division of Reactor Projects

Docket Nos. 05000275, 05000323
License Nos. DPR-80, DPR-82

Enclosure:
Inspection Report 05000275/2016004 and
05000323/2016004
w/ Attachment: Supplemental Information

DIABLO CANYON POWER PLANT – NRC INSPECTION REPORT 05000275/2016004 and 05000323/2016004 DATED FEBRUARY 8, 2017

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ADAMS ACCESSION NUMBER:

| ☒ SUNSI Review By: JGroom/dll | | ADAMS ☒ Yes ☐ No | ☒ Non-Sensitive ☐ Sensitive | | ☒ Publicly Available ☐ Non-Publicly Available | | Keyword: NRC-002 |
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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION IV**

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|---|---|
| Docket: | 05000275; 05000323 |
| License: | DPR-80; DPR-82 |
| Report: | 05000275/2016004; 05000323/2016004 |
| Licensee: | Pacific Gas and Electric Company |
| Facility: | Diablo Canyon Power Plant, Units 1 and 2 |
| Location: | 7 ½ miles NW of Avila Beach<br>Avila Beach, CA |
| Dates: | October 1 through December 31, 2016 |
| Inspectors: | C. Newport, Senior Resident Inspector<br>J. Reynoso, Resident Inspector<br>P. Elkmann, Senior Emergency Preparedness Inspector<br>S. Graves, Senior Reactor Inspector, Engineering Branch 2<br>M. Phalen, Senior Health Physics Inspector<br>E. Ruesch, J.D., Senior Reactor Inspector<br>E. Schrader, Emergency Preparedness Specialist, NSIR |
| Approved By: | Jeremy R. Groom, Chief<br>Project Branch A<br>Division of Reactor Projects |

Enclosure

## SUMMARY

IR 05000275/2016004, 05000323/2016004; 10/01/2016 – 12/31/2016; Diablo Canyon Power Plant; Maintenance Effectiveness

The inspection activities described in this report were performed between October 1 and December 31, 2016, by the resident inspectors at Diablo Canyon Power Plant and inspectors from the NRC's Region IV office. One finding of very low safety significance (Green) is documented in this report. This finding involved a violation 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: Mitigating Systems

- Green. The inspectors identified a non-cited violation of Technical Specification 5.4.1.a, "Procedures," for the failure to follow Procedure AD7.ID16, "Tool Pouch and Minor Maintenance Program," Revision 2. Specifically, the licensee failed to screen work on the safety-related rupture restraint as acceptable to be worked as tool pouch work or minor maintenance. As a result, a safety-related main steam line rupture restraint (MS-41RR) was not properly returned to service and left in an inoperable condition following maintenance. As corrective actions, the licensee returned MS-41RR to an operable condition and initiated a review of the maintenance database to ensure that work performed on main steam line rupture restraints is completed in accordance with appropriate written inspections. The licensee entered the issue into their corrective action program as Notifications 50872133, 50872056, and 50872789.

  The failure to properly preplan and perform maintenance affecting the performance of safety-related equipment was a performance deficiency. The inspectors determined that the finding was more than minor because it was associated with the configuration control 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, because of not following maintenance procedures, a safety-related main steam rupture restraint was left in a disengaged or inactive configuration such that following a postulated line break, the main steam line would be unrestrained. This resulted in a potential of high-energy pipe impacting structures and components designed to be protected from high-energy pipe whip. Using IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the finding was of very low safety significance (Green) because the finding did not represent an actual loss of function of a mitigating system. Specifically, the single restraint condition would only affect a very limited range of breaks and no risk significant systems would be adversely impacted. The inspectors concluded that this finding affected the cross cutting area of human performance, documentation, because the licensee did not maintain up to date documentation to ensure work planning on safety related equipment are complete,

thorough, accurate, and current such that main steam pipe restraints are maintained within design requirements [H.7]. (Section 1R12)

## PLANT STATUS

Units 1 and 2 began the inspection period at full power.

On October 17, 2016, Unit 1, reduced power to 50 percent for planned maintenance to clean circulating water tunnel and condensers. Unit 1 returned to full power on October 22, 2016.

On October 27, 2016, Unit 2, reduced power to 88 percent power for planned main turbine testing and returned to full power that same day.

On November 10, 2016, Unit 2, reduced power to 55 percent to clean water boxes and condensers because of heavy influx of debris caused by storm seas. Unit 2 returned to full power on November 11, 2016.

Unit 1 and 2 operated at or near full power for the remainder of this inspection period.

## REPORT DETAILS

### 1. REACTOR SAFETY

**Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity**

### 1R01 Adverse Weather Protection (71111.01)

Readiness to Cope with External Flooding

a. Inspection Scope

On December 30, 2016, the inspectors completed an inspection of the station's readiness to cope with external flooding. After reviewing the licensee's flooding analysis, the inspectors chose one plant area that was susceptible to flooding:

- Units 1 and Unit 2, intake structure

The inspectors reviewed plant design features and licensee procedures for coping with 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 credited operator actions could be successfully accomplished.

These activities constituted one sample of readiness to cope with external flooding, as defined in Inspection Procedure 71111.01.

b. Findings

No findings were identified.

## 1R04 Equipment Alignment (71111.04)

.1 Partial Walk-Down

a. Inspection Scope

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

- October 13, 2016, Unit 1, emergency diesel generator 1-2
- November 10, 2016, Unit 2, residual heat removal pump 2-1
- November 14, 2016, Unit 1, turbine drive auxiliary feedwater pump 1-2

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.

.2 Complete Walk-Down

a. Inspection Scope

On October 11, 2016, the inspectors performed a complete system walk-down inspection of the Unit 1, residual heat removal system. The inspectors reviewed the licensee's procedures and system design information to determine the correct system lineup for the existing plant configuration. The inspectors also reviewed outstanding work orders, open condition reports, in-process design changes, temporary modifications, and other open items tracked by the licensee's operations and engineering departments. The inspectors then visually verified that the system was correctly aligned for the existing plant configuration.

These activities constituted one complete 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:

- October 7, 2016, Unit 1, fire area RA-3, auxiliary building 73 foot elevation
- October 14, 2016, Unit 2, fire area AB-1, auxiliary building 54 foot and 64 foot elevations
- October 24, 2016, Unit 1, fire area TB-3, turbine building 85 foot elevation
- December 13, 2016, Unit 2, diesel generator fire areas, turbine building 85 foot elevation
- December 30, 2016, Units 1 and 2, saltwater intake fire area 30-A, 18 foot elevation

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 November 29, 2016, 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 area containing risk-significant structures, systems, and components (SSCs) that were susceptible to flooding:

- Unit 1, residual heat removal pump rooms

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.

In addition, on November 11, 2016, the inspectors completed an inspection of underground bunkers susceptible to flooding. The inspectors selected underground vaults that contained risk-significant or multiple-train cables whose failure could disable risk-significant equipment:

- Units 1 and Unit 2, 12 kV basements and associated vault/pull boxes

The inspectors observed the material condition of the cables and splices contained in the rooms and looked for evidence of cable degradation due to water intrusion. The inspectors verified that the cables and vaults met design requirements.

These activities constituted completion of one flood protection measures sample and one bunker/manhole sample, as defined in Inspection Procedure 71111.06.

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 November 29, 2016, the inspectors observed simulator training for 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 simulator training scenario.

These activities constituted 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

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. The inspectors observed the operators' performance of the following activities:

- October 21-22, 2016, Unit 1, control room observation of power ascension following condenser tube plugging and tunnel cleaning, including the pre-job brief
- October 27, 2016, Unit 2, rod testing

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

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

b. Findings

No findings were identified.

## 1R12 Maintenance Effectiveness (71111.12)

.1 Routine Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed one instance of degraded performance or condition of safety-significant SSCs:

- October 3 - December 16, 2016, main steam and feedwater pipe rupture restraints performance criteria review

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 one maintenance effectiveness sample, as defined in Inspection Procedure 71111.12.

b. Findings

Introduction. The inspectors identified a Green non-cited violation of Technical Specification 5.4.1.a, "Procedures," for the failure to follow Procedure AD7.ID16, "Tool Pouch and Minor Maintenance Program," Revision 2. Specifically, the licensee failed to screen work on the safety-related rupture restraint as acceptable to be worked as tool pouch work or minor maintenance. As a result, a safety-related main steam line rupture restraint (MS-41RR) was not properly returned to service and left in an inoperable condition following maintenance.

Description. On September 20, 2016, the inspectors discovered the Unit 2, main steam line 3 rupture restraint MS-41RR in a configuration contrary to design drawings. The inspectors identified a tie rod expansion nut not properly tightened and a wedge coupling assembly not fully engaged.

The design function of the main steam rupture restraint is to limit the movement of main steam piping following a postulated break at the turbine building interface. The restriction of movement is needed to protect SSCs from the effects of high-energy pipe whip. Since the main steam lines are installed near safety-related components, the inspectors were concerned with the ability of the rupture restraint to perform its design function of providing pipe whip restraint to the floor slab above the Unit 2 component cooling water heat exchanger and nearby turbine building structures and components.

The inspectors discussed the configuration of main steam line restraint MS-41RR with the shift manager who documented the nonconforming condition in Notification 50872056. The shift manager requested engineering personnel evaluate the as-found condition of the rupture restraint to determine its operability. Civil engineering performed walkdowns to verify the condition of the rupture restraint and took immediate actions to tighten the tie rod nut and reassemble the wedge coupling to a hand tighten condition as

specified in design drawings. These actions restored the rupture restraint to an operable condition.

On November 10, 2016, the licensee completed an apparent cause evaluation for the non-conforming configuration of main steam line restraint MS-41RR. The licensee concluded the last inspection of main steam line restraint MS-41RR occurred in 2009, and maintenance was performed on this rupture restraint on October 14, 2015, to address a loose nut. However, the work was not properly completed because the maintenance planning process failed to correctly identify the main steam line component as safety-related which resulted in the task being assigned as minor maintenance-tool pouch.

The licensee's cause evaluation also determined that the maintenance data base did not properly designate main steam line restraint MS-41RR as safety-related. As a result of this improper classification, the licensee failed to provide adequate work instructions during the maintenance that occurred on October 14, 2015, because they considered the maintenance "tool pouch work," in accordance with procedure AD7.ID16, "Tool Pouch and Minor Maintenance Program," Revision 2. Tool pouch work does not require written instructions. The licensee concluded that the lack of appropriate maintenance work instructions resulted in maintenance personnel not correctly reassembling main steam line restraint MS-41RR, resulting in the incorrect configuration discovered by the inspectors on September 20, 2016. The licensee's corrective actions included a change to the maintenance database to create an appropriate equipment designator that ensures rupture restraints are designated as safety related.

In addition, because the as-found condition was not consistent with UFSAR design, a past operability assessment was required. On December 13, 2016, the licensee completed an extensive analysis to determine the impact of the incorrect configuration associated with main steam line restraint MS-41RR. The past operability assessment applied a nonlinear, large deformation, dynamic analysis of the main steam line using finite element analysis. The evaluation confirmed there was a minimum impact to safety because of the unrestrained main steam line. The evaluation also concluded the inactive rupture restraint would have allowed unrestraint pipe movement of more than 160 inches. The inspectors expressed concerns of the potential impact of Unit 2 feedwater line because of the unrestrained main steam line pipe movement. In response, the licensee conducted further evaluation and determined that impact from a thinner wall main steam piping would not damage the integrity of the thicker wall feedwater piping.

Analysis. The failure to properly preplan and perform maintenance affecting the performance of safety-related equipment was a performance deficiency. The inspectors determined that the finding was more than minor because it was associated with the configuration control 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, because of not following maintenance procedures, a safety-related main steam rupture restraint was left in a disengaged or inactive configuration such that following a postulated line break, the main steam line would be unrestrained. This resulted in a potential for high-energy pipe impacting structures and components designed to be protected from high-energy pipe whip. Using IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating

Systems Screening Questions," the inspectors determined the finding was of very low safety significance (Green) because the finding did not represent an actual loss of function of a mitigating system. Specifically, the single restraint condition would only affect a very limited range of breaks and no risk significant systems would be adversely impacted. The inspectors concluded that this finding affected the cross-cutting area of human performance, documentation, because the licensee did not maintain up to date documentation to ensure work planning on safety-related equipment are complete, thorough, accurate, and current such that main steam pipe restraints are maintained within design requirements [H.7].

Enforcement. 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. Regulatory Guide 1.33, Section 9.a, requires, in part, that 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. Contrary to the above, on October 14, 2015, the licensee failed to properly preplan and perform maintenance on safety-related equipment in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances. Specifically, the licensee performed maintenance on safety-related main steam line restraint MS-41RR under procedure AD7.ID16, "Tool Pouch and Minor Maintenance Program," Revision 2 without using document instructions appropriate to the circumstances. As such, following maintenance, main steam line restraint MS-41RR was not returned to its as-designed configuration resulting in its inoperability. Because this issue is of very low safety significance, and the licensee entered the issue into their corrective action program as Notifications 50872133, 50872056, and 50872789, this violation is being treated as a non-cited violation, consistent with Section 2.3.2.a of the NRC Enforcement Policy. NCV 05000323/2016004-01, "Failure to Follow Maintenance Procedure Resulted in Improper Configuration of Safety Related Equipment"

.2 Quality Control

a. Inspection Scope

On December 20 – 21, 2016, the inspectors reviewed the licensee's quality control activities through a review of parts installed in the Unit 1 and Unit 2 emergency diesel generators that were purchased as commercial-grade parts but were dedicated prior to installation in a quality-grade application.

These activities constituted completion of one quality control sample, 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 four 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:

- October 11, 2016, Unit 2, elevated risk during centrifugal charging pump 2-2 maintenance
- October 25, 2016, Unit 1, elevated risk during turbine driven auxiliary feedwater pump 1-1 maintenance
- November 11, 2016, Unit 2, elevated risk during emergency diesel generator 2-2 maintenance
- December 13-15, Units 1 and 2, elevated risk during 230 kV radial feed conditions and planned maintenance on component cooling water and auxiliary saltwater pumps

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.

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 constituted completion of four 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 five operability determinations that the licensee performed for degraded or nonconforming SSCs:

- October 3, 2016, operability determination of Unit 2, RHR-8701/8702 open alarm
- October 3 - December 16, 2016, operability determination of Units 1 and 2, main steam rupture restraints in partially disassemble condition
- October 10, 2016, operability determination of Unit 2, emergency core cooling system interlock failure apparent cause evaluation update

- November 17, 2016, operability determination of Unit 1, penetration area torn containment annular seal

- December 14, 2016, operability determination of Unit 2, turbine-driven auxiliary feedwater pump water in bearing oil

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 constituted completion of five operability and functionality review samples, as defined in Inspection Procedure 71111.15.

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:

- October 11, 2016, Unit 2, centrifugal charging pump 2-2, coupling inspection and post maintenance testing

- October 19, 2016, Unit 2, component cooling water pump 2-1, 4 kV breaker relay calibration and post maintenance testing

- October 25, 2016, Unit 1, turbine driven auxiliary feedwater pump 1-1, FCV-152 trip mechanism inspection and post maintenance testing

- November 9, 2016, Unit 1, residual heat removal pump 1-1, motor testing, inspection, and post maintenance testing

- December 22, 2016, Unit 2, emergency diesel generator 2-2, flexible boot replacement and post maintenance testing

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

b. Findings

No findings were identified.

**1R22 Surveillance Testing (71111.22)**

a. Inspection Scope

The inspectors observed four 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:

- October 4, 2016, Unit 2, exercising residual heat removal pump 2, suction valve 8700B, per procedure STP V-3M4B

Other surveillance tests:

- October 27, 2016, Unit 2, exercising full length control rods, per procedure STP R-1A
- November 22, 2016, Unit 2, exercising atmospheric dump valves, per procedure STP V-3R1
- December 15, 2016, Unit 1, reactor coolant system chemical and volume control system influent sample

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 tests satisfied appropriate acceptance criteria. The inspectors verified that the licensee restored the operability of the affected SSCs following testing.

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

b. Findings

No findings were identified.

**Cornerstone: Emergency Preparedness**

**1EP1 Exercise Evaluation (71114.01)**

a. Inspection Scope

The inspectors observed the November 2, 2016, biennial emergency preparedness exercise to verify the exercise acceptably tested the major elements of the emergency plan and provided opportunities for the emergency response organization to demonstrate key skills and functions. The exercise demonstrated the licensee's capability to implement its emergency plan by simulating:

- loose parts in the reactor vessel that created fuel damage

- a vital electrical bus lockout and failure
- an unexpected trip of the main turbine, causing a reactor trip signal, with a failure of the reactor to trip on an automatic signal or manual actions
- a small break loss of coolant accident in containment
- failures of inboard and outboard isolation valves on a containment purge line, creating an unfiltered radiological release to the environment via auxiliary building ventilation

During the exercise the inspectors observed activities in the control room simulator and the following dedicated emergency response facilities:

- Technical Support Center
- Operations Support Center
- Emergency Operations Facility

The inspectors focused their evaluation of the licensee's performance on the risk-significant activities of event classification, offsite notification, recognition of offsite dose consequences, and development of protective action recommendations.

The inspectors also assessed recognition of, and response to, abnormal and emergency plant conditions, the transfer of decision-making authority and emergency function responsibilities between facilities, on-site and offsite communications, protection of emergency workers, emergency repair evaluation and capability, and the overall implementation of the emergency plan to protect public health and safety and the environment. The inspectors reviewed the current revision of the facility emergency plan, emergency plan implementing procedures associated with operation of the licensee's emergency response facilities, procedures for the performance of associated emergency functions, and other documents as listed in the attachment to this report.

The inspectors attended the post-exercise critiques in each emergency response facility to evaluate the initial licensee self-assessment of exercise performance. The inspectors also attended a subsequent formal presentation of critique items to plant management.

The inspectors reviewed the scenarios of previous biennial exercises and licensee drills conducted between June 2014 and October 2016, to determine whether the November 2, 2016, exercise was independent and avoided participant preconditioning in accordance with the requirements of 10 CFR 50, Appendix E, IV.F(2)(g). The inspectors also compared observed exercise performance with corrective action program entries and after-action reports for drills and exercises conducted between June 2014 and October 2016 to determine whether identified weaknesses had been corrected in accordance with the requirements of 10 CFR 50.47(b)(14), and 10 CFR 50, Appendix E, IV.F.

The inspectors discussed the integrated exercise with staff at the Federal Emergency Management Agency (FEMA), Region IX, to determine whether the exercise scenario supported the FEMA exercise evaluation objectives and the results continued to support that participants could adequately protect the health and safety of the public.

These activities constituted one exercise evaluation sample as defined in Inspection Procedure 71114.01.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors performed an on-site review of Diablo Canyon Power Plant Emergency Plan, Appendix F, Revision 4.04, including a review of OM10.ID2, 50.54(q) Effectiveness Evaluation Form 2016-25, dated September 20, 2016. This revision added the work control center as a reporting location for the on-shift phone talker (communicator).

This revision was compared to its previous revision, 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 inspectors verified that the revision did not decrease 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, this revision is subject to future inspection.

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

b. Findings

No findings were identified.

## 1EP8 Exercise Evaluation – Scenario Review (71114.08)

a. Inspection Scope

The licensee submitted the preliminary exercise scenario for the November 2, 2016, biennial exercise to the NRC on September 1, 2016, in accordance with the requirements of 10 CFR 50, Appendix E, IV.F(2)(b). The inspectors performed an in-office review of the proposed scenario to determine whether it would acceptably test the major elements of the licensee's emergency plan and provide opportunities for the emergency response organization to demonstrate key skills and functions. The inspectors discussed the preliminary scenario with staff at FEMA, Region IX, to determine whether the preliminary scenario supported the FEMA exercise evaluation objectives.

These activities constituted completion of one exercise scenario evaluation sample as defined in Inspection Procedure 71114.08.

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**

### 4OA1 Performance Indicator Verification (71151)

.1 Reactor Coolant System Specific Activity (BI01)

a. Inspection Scope

The inspectors reviewed the licensee's reactor coolant system chemistry sample analyses for the period of October 2015 through September 2016 to verify the accuracy and completeness of the reported data. The inspectors observed a chemistry technician obtain and analyze a reactor coolant system sample on December 15, 2016. 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 reactor coolant system specific activity performance indicator for Units 1 and 2, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.2 Reactor Coolant System Total Leakage (BI02)

a. Inspection Scope

The inspectors reviewed the licensee's records of reactor coolant system total leakage for the period of October 2015 through September 2016 to verify the accuracy and completeness of the reported data. The inspectors observed the performance of reactor coolant system leakage surveillance procedure STP R-10C, "Reactor Coolant System Water Inventory Balance," on December 16, 2016. 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 reactor coolant system leakage performance indicator for Units 1 and 2, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.3 Drill/Exercise Performance (EP01)

a. Inspection Scope

The inspectors reviewed the licensee's evaluated exercises and selected drill and training evolutions that occurred between July 2015 and September 2016 to verify the

accuracy of the licensee's data for classification, notification, and protective action recommendation opportunities. The inspectors reviewed a sample of the licensee's completed classifications, notifications, and protective action recommendations to verify their timeliness and accuracy. The inspectors used Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data. The specific documents reviewed are described in the attachment to this report.

These activities constituted verification of the drill/exercise performance indicator as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.4 Emergency Response Organization Drill Participation (EP02)

a. Inspection Scope

The inspectors reviewed the licensee's records for participation in drill and training evolutions between July 2015 and September 2016 to verify the accuracy of the licensee's data for drill participation opportunities. The inspectors verified that all members of the licensee's emergency response organization in the identified key positions had been counted in the reported performance indicator data. The inspectors reviewed the licensee's basis for reporting the percentage of emergency response organization members who participated in a drill. The inspectors reviewed drill attendance records and verified a sample of those reported as participating. The inspectors used Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data. The specific documents reviewed are described in the attachment to this report.

These activities constituted verification of the emergency response organization drill participation performance indicator as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.5 Alert and Notification System Reliability (EP03)

a. Inspection Scope

The inspectors reviewed the licensee's records of Alert and Notification System tests conducted between July 2015 and September 2016 to verify the accuracy of the licensee's data for siren system testing opportunities. The inspectors reviewed procedural guidance on assessing Alert and Notification System opportunities and the results of periodic alert and notification system operability tests. The inspectors used Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data. The specific documents reviewed are described in the attachment to this report.

These activities constituted verification of the alert and notification system reliability performance indicator as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

## 4OA2 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 Semiannual Trend Review

a. Inspection Scope

The inspectors reviewed the licensee's corrective action program, performance indicators, system health reports, margin management program reports, and other documentation to identify trends that might indicate the existence of a more significant safety issue. The inspectors verified that the licensee was taking corrective actions to address identified adverse trends. The inspectors also reviewed the licensee's progress in addressing cross-cutting issues associated with work processes and design margins.

These activities constituted completion of one semiannual trend review sample, as defined in Inspection Procedure 71152.

b. Observations and Assessments

In general, the licensee had identified trends and appropriately addressed them in their corrective action program. The inspectors evaluated the licensee trending methodology and observed that the licensee had performed detailed reviews and documented adverse trends. The licensee routinely reviewed cause codes, involved key organizations, operating experience, key words, and system links to identify potential trends in their data. The inspectors compared the licensee process results with the results of the inspectors' daily screening. The inspectors noted the licensee implementing actions to address a trend of three NRC findings associated with design margin aspects and identified a need to perform a common cause evaluation associated

with human performance issues (Notification 50850467). The inspectors also noted the licensee identified a missed opportunity for adverse trends not being recognized in 2015 and documented this condition (Notification 50842764).

c. Findings

No findings were identified.

.3 Annual Follow-up of Selected Issues

a. Inspection Scope

The inspectors selected three issues for an in-depth follow-up:

- On October 6, 2016, radiation monitor reliability.

  The inspectors noted an increased trend of radiation monitor deficiencies and failures over the inspection period. As part of the inspection, the inspectors assessed the licensee's problem identification threshold, cause analyses, extent of condition reviews, and compensatory actions associated with these failures and deficiencies. The inspectors verified that the licensee appropriately prioritized the planned corrective actions and that these actions were adequate to correct the conditions. The inspectors also verified that radiation monitor failures were appropriately being monitored, trended, and corrected in accordance with licensee maintenance rule procedures and processes.

- On October 15, 2016, safety-related pipe whip restraint operability and reportability documentation and timeliness.

  The inspectors reviewed the licensee's immediate operability determination and reportability determination associated with a safety-related pipe whip restraint that was discovered to be inoperable. The inspectors assessed the licensee's timeliness and documentation of their determination of operability as well as the adequacy and timeliness of their determination of reportability of the whip restraint.

  The inspectors identified a minor violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," because PG&E did not perform an timely Immediate Operability Determination (IOD) of a safety-related plant SSC. Specifically, PG&E procedure OM7.ID12, "Operability Determination," Revision 35, requires that an IOD be completed "within a shift and no longer than 24 hours." Contrary to the above, the licensee did not document an IOD within 24 hours of identification of a degraded safety-related SSC. The performance deficiency was considered to be minor because it could not be reasonably viewed as a precursor to a significant event, if left uncorrected, would not have the potential to lead to a more significant safety concern, and did not adversely affect its associated cornerstone objective. The licensee entered the issue into their corrective action program as Notification 50878573.

- During an in-office inspection from November 14 through November 28, 2016, the inspectors reviewed the six, cyber security-related findings documented in

Inspection Report 05000275/2014406 and 05000323/2014406, "INSPECTION OF IMPLEMENTATION OF INTERIM CYBER SECURITY MILESTONES 1-7," for in-depth follow-up review. The licensee had recently performed significant revisions to their cyber security program, including revisions to program documents, procedures, and changes to program personnel. The inspectors reviewed a sample of updated program documents and procedures, updated critical digital asset listings, closure packages associated with the issues identified in the interim milestone report, causal evaluations, training documents, completed work order documents, and corrective action documents.

The inspectors assessed the licensee's extent of condition reviews, causal evaluations, compensatory actions, and pending and completed corrective actions. The inspectors verified that the licensee appropriately prioritized the corrective actions and that these actions were appropriate.

These activities constituted completion of three annual follow-up samples as defined in Inspection Procedure 71152.

b. Findings

No findings were identified.

**4OA3 Follow-up of Events and Notices of Enforcement Discretion (71153)**

(Closed) LER 05000275; 05000323/2015-S01-00: Unescorted Authorized Access Granted to Individual Who Had Falsified Information on personal history questionnaire

On October 28, 2015, the licensee was notified by access authorization personnel at Vogtle Electric Generating Plant, Units 3 and 4, regarding an individual who had been denied access at their site on September 16, 2014. Vogtle Electric Generating Plant, Units 3 and 4, was a construction site and not using the Personnel Access Data System (PADS) at the time of the denied access. It was not until the site made the determination to use PADS that access authorization personnel entering the information of previously denied individuals into the system identified one individual as having access at the Diablo Canyon Nuclear Power Plant.

Upon receiving the information, Diablo Canyon Power Plant personnel conducted a review of the individual's access authorization files and determined the individual's contract had been completed and the individual was no longer working on the site. The licensee determined that the individual had failed to disclose the denial at the Vogtle Units 3 and 4 site and provided false employment information on the personal history questionnaire. The licensee immediately removed all access the individual had to the site and conducted a review of any projects the individual was associated with. The licensee concluded the individual did not operate or manipulate any plant equipment and no deficiencies were identified.

Title 10 CFR 73.56(d)(2), requires, in part, that anyindividual who is applying for unescorted access or unescorted access authorization shall disclose the personal history information that is required by the licensee's access authorization program, including any information that may be necessary for the reviewing official to make a determination of the individual's trustworthiness and reliability. The licensee's reviewing

official used this information when granting the individual unescorted access to the protected area.

Title 10 CFR 50.9(a) requires, in part, that information required by statute to be maintained by the licensee shall be complete and accurate in all material respects. Contrary to the above, on August 9, 2015, the licensee did not maintain information required by statute complete and accurate in all material aspects. Specifically, the licensee maintained a personal history questionnaire provided by a contract individual to gain access to the protected area which included incomplete and inaccurate information.

The violation of 10 CFR 50.9(a), as described above, is normally characterized as Severity Level IV. However, the NRC is exercising enforcement discretion in accordance with Section 3.5 of the NRC Enforcement Policy and will not issue enforcement action for the violation of 10 CFR 50.9 (EA-16-199) for the following reasons: the licensee's actions did not contribute to the individual omitting the information and the actions taken were reasonable to identify and address this matter. Further, because the licensee's actions did not contribute to this violation, it will not be considered in the assessment process or the NRC's Action Matrix. The licensee entered the issue into the corrective action program as Notification 50815389. Specific documents reviewed during this inspection are listed in the attachment.

Licensee Event Report 05000275/323/2015-S01-00 is closed.

These activities constituted completion of one event follow-up sample, as defined in Inspection Procedure 71153.

### 4OA6 Meetings, Including Exit

Exit Meeting Summary

On September 29, 2016, the inspectors discussed the in-office review of the preliminary scenario for the November 2, 2016, biennial exercise, submitted September 1, 2016, with Mr. M. Ginn, Manager, Emergency Preparedness, and other members of the licensee staff. The licensee acknowledged the issues presented.

On November 10, 2016, the inspectors presented the results of the on-site inspection of the biennial emergency preparedness exercise conducted November 2, 2016, to Mr. J. Nimick, Senior Director, Nuclear Services, 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.

On November 28, 2016, the inspectors presented the results of the in-depth review of the cyber security items inspection to Mr. E. Halpin, Senior Vice President, Generation and Chief Nuclear Officer, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors did not review any proprietary information.

On January 19, 2017, the resident inspectors presented the inspection results to Mr. E. Halpin, Senior Vice President, Generation and 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.

## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

Licensee Personnel

B. Ashbrook, Manager, Emergency Services Performance
T. Baldwin, Director, Nuclear Site Services
T. Cuddy, Principal Communications
D. Evans, Director, Security & Emergency Services
P. Gerfen, Senior Director Plant Manager
M. Ginn, Manager, Emergency Planning
S. Guess, Manager, Operations
E. Halpin, Sr. Vice President, Chief Nuclear Officer Generation
H. Hamzehee, Manager, Regulatory Services
A. Heffner, NRC Interface, Regulatory Services
J. Hinds, Director, Quality Verification
L. Hopson, Director Maintenance Services
T. Irving, Manager, Radiation Protection
K. Johnston, Director of Operations
S. Kirven, Manager, Security
B. Lopez, Inspection Coordinator, Regulatory Services
D. Madsen, NRC Interface, Regulatory Services
M. McCoy, NRC Interface, Regulatory Services
J. Morris, Senior Advising Engineer
C. Murry, Director Nuclear Work Management
J. Nimick, Senior Director Nuclear Services
A. Peck, Director, Nuclear Engineering
A. Shatara, Supervisor, Performance Improvement
J. Tyman, Manager, Regulatory Projects
R. Waltos, Assistant Director, Engineering
A. Warwick, Supervisor, Emergency Planning
J. Welsch, Site Vice President

NRC Personnel

C. Rosales-Cooper, Emergency Preparedness Specialist, NSIR

Other Contact

Joanna Berkley, Acting Branch Chief, Technological Hazards Branch, FEMA Region IX

### LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

| | | |
|---|---|---|
| 05000323/2016004-01 | NCV | Failure to Follow Maintenance Procedure Resulted in Improper Configuration of Safety Related Equipment (Section 1R12.1) |

Closed

| | | |
|---|---|---|
| 05000275/2015-S01-00<br>05000323/2015-S01-00 | LER | Unescorted Authorized Access Granted to Individual Who Had Falsified Information on Personal History Questionnaire (Section 4OA3) |

## LIST OF DOCUMENTS REVIEWED

### Section 1R01: Adverse Weather Protection

Procedures

| Number | Title | Revision |
|---|---|---|
| CP M-16 | Severe Weather | 12 |
| MA1.ID23 | Review of Intake Preparedness for High Debris Loading Event | 3 |
| OP O-28 | Intake Management | 22 |
| STP M-70.SWG | Inspection of ECG Swing Type Doors | 4 |

Notifications

| | | | | |
|---|---|---|---|---|
| 50872715 | 50872716 | 50872806 | 50888353 | 50323316 |
| 50888370 | | | | |

### Section 1R04: Equipment Alignment

Procedures

| Number | Title | Revision |
|---|---|---|
| | DCPP units 1 & 2 FSAR Update | 22 |
| CF4.ID8 | Temporary Attachments | 5 |
| OP B-2:I | RHR System Alignment Verification for Plant Startup | 22 |
| OP B-2:I | RHR System Alignment Verification for Plant Startup | 26 |
| OP D-1:II | Auxiliary Feedwater System – Alignment Verification for Plant Startup | 31 |
| OP D-1:IV | Turbine Driven AFW Restart or make Available After an Overspeed Trip | 15 |
| OP J-6B:II-A | Diesel Generator 1-2 – Alignment Checklist | 0 |

Notifications

| | | | | |
|---|---|---|---|---|
| 50874474 | 50874580 | 50874475 | 50874519 | 50801758 |
| 50806917 | 50865601 | | | |

Drawing

| Number | Description | Revision |
|---|---|---|
| 106710 | Sheet 2 | 36 |

**Section 1R05: Fire Protection**

Procedure

| Number | Title | Revision |
|---|---|---|
| 111906-32 | Fire Protection, Intake Structure Lower Level Elev. 18 foot elevation' | 6 |
| OM8.ID4 | Control of Flammable and Combustible Materials | 25 |

Drawings

| Number | Description | Revision |
|---|---|---|
| 0-AB-73 | Fire Plan, Radiological Control Area Elev. 73' Unit 1 & 2 | 8 |
| 0-AB-73 | Fire Plan, Turbine Building Elev. 85' Unit 1 | 8 |
| 111906-16 | Fire Protection, Auxiliary Building Elev. 73' | 8 |
| 2-TB-85 | Turbine Building Elev. 85' | 10 |
| PA-1 | Fire Plan, Intake Structure Area Elev. -2 foot elevation' Unit 1 & 2 | 2 |
| RA-1 | RCA Area Map Aux Bldg 64' and 54' | 8 |

Notifications

| | | | | |
|---|---|---|---|---|
| 50874201 | 50492892 | 50622531 | 50827325 | 50876936 |

**Section 1R06: Flood Protection Measures**

Procedures

| Number | Title | Revision |
|---|---|---|
| | DCPP Units 1 & 2 FSAR | |
| AD7.ID2 | Daily Notification Team (DRT) & Standard Plant Priority Assignment Scheme | 25 |
| DCM No. T-12 | Pipe Break (HELB/MELB), Flooding and Missiles | 21 |
| PG&E Spec No. 1950 | Specification for Furnishing and Delivering 5 kV and 15 kV Medium Voltage Power Cable for the Diablo Canyon Nuclear Plant *Units 1 & 2 | 3N |

Notifications

| | | | | |
|---|---|---|---|---|
| 50874492 | 50874494 | 50881169 | 50881221 | 50881279 |
| 50881392 | 50881476 | 50881477 | 50431759 | 50839066 |
| 50875264 | | | | |

Work Orders

| | |
|---|---|
| 60034496 | 60094599 |

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

Procedures

| Number | Title | Revision |
|---|---|---|
| E2ECA21-C | Instructor Lesson Faulted Steam Generators | 20 |
| OP E-4:1 | Circulating Water Prepare for Service | 85 |
| OP L-4 | Normal Operation at Power | 90 |
| OP1.DC10 | Conduct of Operations | 47 |

**Section 1R12: Maintenance Effectiveness**

Procedures

| Number | Title | Revision |
|---|---|---|
| AD9.DC2 | Purchase Classification and Documentation Requirements | 9 |
| CF3.ID13 | Replacement Part Evaluation and CITE | 26 |
| MA1.NE1 | Maintenance Rule Monitoring Program –Civil Implementation | 5 |
| NDE VT 3-1 | Visual Examination of Component and Piping Supports | 2 |
| OM7.ID13 | Technical Evaluations | 6 |
| QCP 10.1 | Receipt Inspection Program | 16 |
| QCP 10.2 | Inspection Activities | 22 |
| QCP 10.22 | Supplemental Verification Activities at Receipt | 1 |

Notifications

| | | | | |
|---|---|---|---|---|
| 50882125 | 50882140 | 50883028 | 50872056 | 50873088 |
| 50872223 | 50872278 | | | |

**Section 1R13: Maintenance Risk Assessments and Emergent Work Control**

Procedures

| Number | Title | Revision / Date |
|---|---|---|
| | Centrifugal Charging Pump 2-2 Risk Management Actions | November 26, 2013 |
| AD7.DC6 | On-Line Maintenance Risk Management | 24 |
| AD7.ID14 | Assessment of Integrated Risk | 7 |
| AD7.ID14 | Assessment of Integrated Risk | 9 |
| OP O-36 | Protected Equipment Postings | 13A |
| OP1.DC17 | Control of Equipment Required by Technical Specifications | 31 |

Notifications

| | | | |
|---|---|---|---|
| 50876469 | 50883138 | 50878421 | 50844484 |

Work Order

64140840

Drawing

| Number | Title | Revision |
|---|---|---|
| 106714 | Component Cooling Water Drawing | 59 |

**Section 1R15: Operability Determinations and Functionality Assessments**

Procedures

| Number | Title | Revision |
|---|---|---|
| AD7.ID16 | Tool Pouch and Minor Maintenance Program | 2 |
| MA1.ID26 | Troubleshooting | 3 |
| MIP M-3.0 | Refabrication/Modification of Rupture Restraints | 0 |
| OM7.ID7 | Emerging Issues and Event Investigation | 18A |

Notifications

| | | | | |
|---|---|---|---|---|
| 50856513 | 50881588 | 50488388 | 50526287 | 50614930 |
| 50623935 | 50872133 | 50872056 | 50874475 | 50874519 |
| 50874580 | 50356033 | 50852180 | 50858653 | |

Work Orders

64128640 60002068

Miscellaneous

| Number | Title | Revision |
|---|---|---|
| 14078101-RADR-002-1 | Shaw Technical Report – Control Room Doses Following a LOCA, Support of POA to Address Control Room Ventilation System Mods | 1 |
| DCI-EH-37182 | GE/GW Area Ventilation System Exhaust Modification Design Change Implementation | 3 |
| P-H-37182 | GE/GW Area Ventilation System Exhaust Modification Design Change Notice | 5 |

Drawings

| Number | Title | Revision |
|---|---|---|
| 460218 | Civil-Pipe Restraint Turbine Building | 7 |
| 686378-324 | Civil- Pipe Restraint Modifications | 1 |

**Section 1R19: Post-Maintenance Testing**

Procedures

| Number | Title | Revision |
|---|---|---|
| AD7.DC8 | Work Planning | 47 |
| MP E-63.6A | Maintenance of SF6 4 kV circuit breaker | 24 |
| MP M-3.7A | Terry Turbine Trip Valve FCV-152 Maintenance | 9 |
| MP M-56.23 | Coupling Inspection and Maintenance | 15 |
| OP J-6B:V | Diesel Generators – Manual Operation of DG 2-2 | 31 |
| STP P-AFW-11 | Routine Surveillance Test of Turbine-Driven Auxiliary Feedwater Pump 1-1 | 35 |
| STP P-CCP-22 | Routine Surveillance Test of Centrifugal Charging Pump 2-2 | 25 |

Work Orders

| | | | | |
|---|---|---|---|---|
| 60085166 | 64117806 | 64105851 | 64138521 | 64072054 |
| 64117979 | 60090043 | 64140463 | 60096050 | |

Notifications

| | | | | |
|---|---|---|---|---|
| 50819222 | 50561791 | 50834197 | 50868755 | 50402373 |
| 50875426 | 50809622 | 50882140 | | |

**Section 1R22: Surveillance Testing**

Procedures

| Number | Title | Revision / Date |
|---|---|---|
| | Unit 2 STP R-1A Risk Management Plan | October 27, 2016 |
| CAP C-24 | Preparing Gas samples for Analysis | 15 |
| CAP C-93 | Varian 3800 gas Chromatograph Analysis | 7 |
| CAP D-6 | Specific Activity Determination in Liquid Samples | 14 |
| Cap E-1:IV | CVCS Influent Sampling | 9 |
| OP AP-12B | Control Rod Misalignment | 16 |
| OP AP-12C | Dropped Control Rod | 15 |
| STP R-1A | Exercising Full Length Control Rods | 23 |
| STP V-3M4B | Exercising RHR Pump 2 Suction Valve 8700B | 4A |
| STP V-3R1 | Exercising 10 percent Atmospheric Dump Valves PCV-19,20,21,22 and Isolation Valves | 1 |

Notifications

| | | | | |
|---|---|---|---|---|
| 50870357 | 50865926 | 50866480 | 50866024 | 50866481 |
| 50854998 | 50880307 | 50880726 | 50880728 | |

**Section 1EP1: Exercise Evaluation (71114.01)**

Procedures and Documents

| Number | Title | Revision / Date |
|---|---|---|
| | Diablo Canyon Nuclear Power Plant Emergency Plan | 4.07 |
| | Evaluation Report for the Exercise conducted August 10, 2016 | |
| | Evaluation Report for the Exercise conducted January 27, 2016 | |

Procedures and Documents

| Number | Title | Revision / Date |
|---|---|---|
| | Evaluation Report for the Exercise conducted June 15, 2016 | |
| | Evaluation Report for the Exercise conducted June 29, 2016 | |
| | Evaluation Report for the Exercise conducted June 3, 2015 | |
| | Evaluation Report for the Exercise conducted March 11, 2015 | |
| | Evaluation Report for the Exercise conducted March 15, 2016 | |
| | Evaluation Report for the Exercise conducted March 2, 2016 | |
| | Evaluation Report for the Exercise conducted September 9, 2015 | |
| | Nuclear Emergency Response Communications, October 1, 2016, through January 1, 2017 | |
| EP-EF-1 | Activation and Operation of the Technical Support Center | 52 |
| EP-EF-2 | Activation and Operation of the Operational Support Center | 39 |
| EP-EF-2 Attachment 5 | Site Radiation Protection Coordinator Checklist | July 19, 2016 |
| EP-EF-3 | Activation and Operation of the Emergency Operations Facility | 44 |
| EP-G-1 | Emergency Classification and Emergency Plan Activation | 44 |
| EP-G-3 | Emergency Notification of Off-Site Agencies | 59 |
| EP-G-4 | Assembly and Accountability | 29 |
| EP-RB-10 | Protective Action Recommendations | 19 |
| EP-RB-2 | Emergency Exposure Guidelines | 8 |
| EP-RB-2 Attachment 9.3 | OSC Site Radiation Protection Coordinator Checklist | July 20, 2010 |
| EP-RB-3 | Stable Iodine Thyroid Blocking | 7 |
| Form 69-20437 | Command and Control Turnover Checklist | May 5, 2014 |
| Form 69-20509 | Site Radiation Protection Coordinator Checklist | July 19, 2016 |
| OM4.ID14 | Notification Review Team | 27 |

Procedures and Documents

| Number | Title | Revision / Date |
|---|---|---|
| OM7.ID1 | Problem Identification and Resolution | 49 |

Notifications

| | | | | |
|---|---|---|---|---|
| 50636392 | 50636998 | 50656222 | 50656762 | 50689935 |
| 50706886 | 50795647 | 50795728 | 50830142 | 50830598 |
| 50831644 | 50845960 | 50877556 | 50877621 | 50877622 |
| 50877739 | 50877640 | 50877797 | 50877799 | 50877823 |
| 50877825 | 50877827 | 50877828 | 50877829 | 50877870 |
| 50877878 | 50877927 | 50692558 | 50831033 | 50877653 |
| 50877824 | 50877872 | | | |

**Section 1EP4: Emergency Action Level and Emergency Plan Changes (71114.04)**

No additional documents were reviewed.

**1EP8 Exercise Evaluation – Scenario Review (71114.08)**

No additional documents were reviewed.

**Section 4OA1: Performance Indicator Verification**

Procedures

| Number | Title | Revision |
|---|---|---|
| AWP-EP-001 | Emergency Preparedness Performance Indicators | 20 |
| AWP O-001 | NRC Performance Indicators: RCS Specific Activity | 12 |
| CY2.ID1 | Radioactive Effluent Controls Program | 13 |
| STP R.10C | Reactor Coolant System Water Inventory Balance | 12 |

Notifications

| | | | | |
|---|---|---|---|---|
| 50803881 | 50803882 | 50809974 | 50824589 | 50838477 |

Other

| Number | Title |
|---|---|
| | PG&E DCPP Performance Indicator Program 2015 Reactor Coolant System Does Equivalent Iodine |

Other

| Number | Title |
|---|---|
| | PG&E DCPP Performance Indicator Program 2016 Reactor Coolant System Does Equivalent Iodine |
| RCS Leakage Cycle 20 Data Unit 1 and 2 | October 28, 2015 through December 2, 2016 |

**Section 4OA2: Problem Identification and Resolution**

Procedures

| Number | Title | Revision |
|---|---|---|
| AWP SP-002 | Cyber Security Assessment Process (Partial review as related to milestone 1-7 implementation only) | 5 |
| AWP SP-005 | Cyber Security Scan Station Maintenance (Partial review as related to milestone 1-7 implementation only) | 3 |
| AWP SP-006 | Critical System Determination | 2 |
| AWP SP-007 | Critical Digital Asset Determination | 4 |
| AWP SP-009 | Hardening and Evaluation of Mobile Devices Used With Critical Digital Assets | 1 |
| AWP SP-012 | DCPP Cyber Security Ongoing Monitoring and Assessment (Partial review as related to milestone 1-7 implementation only) | 0 |
| AWP SP-013 | Preparation and Control of Portable Media and Mobile Devices | 0 |
| CF2.ID10 | Control of Portable Media and Mobile Devices | 4 |
| CS1 | Cyber Security Program | 0 |
| CS1.ID19 | Use of Portable Media and Mobile Devices | 0 |
| MA2.ID1 | Use and Control of Measuring and Test Equipment (M&TE) | 16 |
| MA2.ID1 | Use and Control of Measuring and Test Equipment (M&TE) | 18 |
| OM11.ID9 | Visitor Escorts | 10 |
| OM15.ID10 | Performance Monitoring Program | 0 |
| TS5.ID2 | Margin Management | 5 |
| MA1.ID17 | Maintenance Rule Monitoring Program | 31 |
| OM7.ID12 | Operability Determination | 35 |

Procedures

| Number | Title | Revision |
|---|---|---|
| OM10.ID6 | Equipment Important to Emergency Response (EITER) | 4 |

Notifications

| | | | | |
|---|---|---|---|---|
| 50634990 | 50839497 | 50636167 | 50635709 | 50658294 |
| 50861706 | 50634188 | 50636168 | 50636166 | 50876588 |
| 50861451 | 50635093 | 50824398 | 50636169 | 50874875 |
| 50837897 | 50849502 | 50813807 | 50697798 | 50847850 |
| 50842764 | 50841508 | 50873709 | 50857601 | 50830125 |
| 50831929 | 50867146 | 50882362 | 50888288 | 50888314 |
| 50870728 | 50870729 | 50870757 | 50872056 | 50872198 |
| 50872676 | 50872819 | 50873717 | 50873861 | 50873959 |
| 50874095 | 50874216 | 50875856 | 50875873 | 50875877 |
| 50882361 | | | | |

Miscellaneous Documents

| Number | Title | Revision / Date |
|---|---|---|
| | Cyber Security Milestone 2 NCV Closure Documentation | 1 |
| | Cyber Security Milestone 3 NCV Closure Documentation | 1 |
| | Cyber Security Milestone 4 NCV Closure Documentation | 1 |
| | Cyber Security Milestone 5 NCV Closure Documentation | 1 |
| | Cyber Security Milestone 6 NCV Closure Documentation | 1 |
| | Cyber Security Milestone 7 NCV Closure Documentation | 1 |
| | DCPP Cyber Security Defensive Architecture Diagram | NA |
| | Event Notification #52260 | |
| | Milestone Two Critical System and CDA Determination Process Description | NA |
| | Radiation Monitoring System – System Health Report | |
| CYBERSEC001 | Cyber Security Assessment Team (CSAT) Training | 1 |
| CYBERSEC003P | Cyber Security Training – Technical Training for Operations | May 13, 2013 |

Miscellaneous Documents

| Number | Title | Revision / Date |
|---|---|---|
| JITTOP1612 | Obvious Signs of Cyber Tampering | October 20, 2016 |
| MDCT1601I | 2016 I&C CORE TOPICS SESSION 1 | October 17, 2016 |

Work Order

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