



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

**REGION IV
1600 EAST LAMAR BOULEVARD
ARLINGTON, TEXAS 76011-4511**

May 10, 2019

Mr. James M. Welsch
Vice President Nuclear Generation
and Chief Nuclear Officer
Pacific Gas & Electric Company
Diablo Canyon Power Plant
P.O. Box 56, Mail Code
Avila Beach, CA 93424

**SUBJECT: DIABLO CANYON POWER PLANT, UNITS 1 AND 2 – NRC INTEGRATED
INSPECTION REPORT 05000275/2019001 AND 05000323/2019001**

Dear Mr. Welsch:

On March 31, 2019, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Diablo Canyon Power Plant, Units 1 and 2. On April 4, 2019, 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 three findings of very low safety significance (Green) in this report. Two 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 Enforcement Policy.

If you contest the violations or significance or severity of the violations documented in this inspection report, 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 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 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/

Mark S. Haire, Chief
Project Branch A
Division of Reactor Projects

Docket Nos. 50-275 and 50-323
License Nos. DPR-80 and DPR-82

Enclosure:
Inspection Report 05000275/2019001 and
05000323/2019001 w/attachments:
1. RFI Inservice Inspection
2. RFI Occupational Radiation Safety
Inspection

**U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report**

Docket Numbers: 05000275 and 05000323

License Numbers: DPR-80 and DPR-82

Report Numbers: 05000275/2019001 and 05000323/2019001

Enterprise Identifier: I-2019-001-0001

Licensee: Pacific Gas & Electric Company

Facility: Diablo Canyon Power Plant, Units 1 and 2

Location: Avila Beach, California

Inspection Dates: January 1, 2019 to March 31, 2019

Inspectors: R. Alexander, Senior Project Engineer
B. Baca, Health Physicist
L. Carson, Senior Health Physicist
J. Drake, Senior Reactor Inspector
S. Hedger, Emergency Preparedness Inspector
G. Kolcum, Senior Resident Inspector, Columbia
C. Newport, Senior Resident Inspector
J. Reynoso, Resident Inspector

Approved By: Mark S. Haire, Chief
Project Branch A
Division of Reactor Projects

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee’s performance by conducting a Quarterly inspection at Diablo Canyon Power Plant, Units 1 and 2, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC’s program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information. Findings and violations being considered in the NRC’s assessment are summarized in the table below.

List of Findings and Violations

Failure to Promptly Correct an Adverse Condition Related to Reactor Coolant Pump Seal Damage			
Cornerstone	Significance	Cross-cutting Aspect	Report Section
Initiating Events	Green NCV 05000275/2019001-01 Closed	None	71152
The inspectors reviewed a Green, self-revealed non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” for the licensee’s failure to promptly identify and correct a condition adverse to quality. Specifically, prior to February 4, 2019, corrective actions generated as a result of a root cause evaluation did not adequately correct a condition adversely impacting reactor coolant pump seals.			
Inadequate Corrective Actions Leads to Increased Time at Yellow Risk and Lowered Inventory			
Cornerstone	Significance	Cross-cutting Aspect	Report Section
Initiating Events	Green FIN 05000275/2019001-02 Closed	[P.3] - Resolution	71152
The inspectors reviewed a Green, self-revealed finding in that PG&E personnel failed to promptly correct a condition in accordance with OM7.ID1, “Problem Identification and Resolution.” Specifically, personnel did not promptly correct a condition associated with the Unit 1, polar crane variable frequency drive motor used during the removal and replacement of the reactor vessel head from the reactor vessel during refueling outages that was first identified in 2015. This led to a recent event in which the reactor vessel head was suspended above the reactor vessel during a period of yellow outage safety risk with the reactor vessel water level in lowered inventory condition for approximately 6 hours longer than necessary.			

Human Performance Event Leads to Sodium Hydroxide Leak and Loss of Level Indication for Containment Spray System Spray Additive Tank			
Cornerstone	Significance	Cross-cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000323/2019001-03 Closed	[H.12] - Avoid Complacency	71153
<p>The inspectors reviewed a Green, self-revealed non-cited violation of Technical Specification 5.4.1.a, "Procedures," because personnel failed to follow the requirements of MP I-12-L931, "Spray Additive Tank Level Channel 931 Calibration," Revision 2. Specifically, on March 4, 2019, during calibration of a Unit 2, containment spray additive tank level transmitter, PG&E technicians inadvertently removed a venting plug from the wrong level transmitter resulting in a pressurized leak of sodium hydroxide solution from the spray additive tank and the inability to determine the level of the spray additive.</p>			

PLANT STATUS

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

On February 10, 2019, Unit 1 was shut down for a planned refueling outage. On March 16, 2019, Unit 1 returned to operation and began a controlled power ascension, and returned to full power on March 22, 2019.

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

INSPECTION SCOPE

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors performed plant status activities described in IMC 2515, Appendix D, "Plant Status," and conducted routine reviews using IP 71152, "Problem Identification and Resolution." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Impending Severe Weather Sample (IP Section 03.03) (1 Sample)

The inspectors evaluated readiness for impending adverse weather conditions for high ocean swell and heavy debris loading from ocean storms on January 10-11, 2019.

71111.04 - Equipment Alignment

Partial Walkdown (IP Section 02.01) (5 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

- (1) Unit 2, residual heat removal train A on January 14, 2019
- (2) Unit 2, emergency diesel generator 2-2 on January 29, 2019
- (3) Unit 2, emergency diesel generator 2-3 on January 29, 2019
- (4) Unit 1, shutdown cooling train B on February 11, 2019
- (5) Unit 1, reactor vessel refueling level indication system on March 8, 2019

71111.05Q - Fire Protection

Quarterly Inspection (IP Section 03.01) (5 Samples)

The inspectors evaluated fire protection program implementation in the following selected areas:

- (1) Unit 2, auxiliary building 100 foot elevation on January 4, 2019
- (2) Units 1 and 2, intake structure on January 16, 2019
- (3) Unit 1, containment 140 foot elevation on February 26, 2019
- (4) Unit 1, containment 91 foot elevation on March 5, 2019
- (5) Unit 1, containment 117 foot elevation on March 5, 2019

71111.07A - Heat Sink Performance

Annual Review (IP Section 02.01) (1 Sample)

The inspectors evaluated readiness and performance of the Unit 1, component cooling water heat exchangers 1-1 and 1-2 on March 13, 2019.

71111.08P - Inservice Inspection Activities (PWR)

PWR Inservice Inspection Activities (IP Section 03.01) (1 Sample)

The inspectors verified that the reactor coolant system boundary, steam generator tubes, reactor vessel internals, risk-significant piping system boundaries, and containment boundary are appropriately monitored for degradation and that repairs and replacements were appropriately fabricated, examined and accepted by reviewing the following activities from February 18 to February 26, 2019:

03.01.a – Nondestructive Examination and Welding Activities

(1) Dye Penetrant Examination

- a) charging and volume control system, CVCS-1-8435, line 1452
- b) main feedwater system, main feed pump 1-1 impeller

(2) Visual Examination

- a) safety injection system, accumulator fill lines
- b) auxiliary feedwater system, K-561-8 line
- c) auxiliary feedwater system, K-6012-8 line
- d) auxiliary feedwater system, K-638-8 line
- e) pressurizer system, PZR-8010A studs and nuts

(3) Ultrasonic Examination

- a) pressurizer system, girth weld 5

(4) The inspectors directly observed or reviewed records of the following welding activities:

- a) Gas Tungsten Arc Weld – Manual

- chemical volume and control system valve replacement, CVCS-1-8435, line 1452

b) Gas Tungsten Arc Weld – Machine

- Reactor Coolant System. Weld Overlay. Reactor coolant system loop 2A lower cold leg, nozzle to safe-end circumferential weld, WIB-228

03.01.b – Pressurized-Water Reactor Vessel Upper Head Penetration Inspection Activities

Vessel upper head penetration inspection was not required to be performed in this outage.

03.01.c – Pressurized-Water Reactor Boric Acid Corrosion Control Activities

Inspectors reviewed the following boric acid notifications and corrective actions:

50956677	50956730	50988345	50927788
50315950	51008168		

03.01.d – Steam Generator Tube Inspection Activities

The steam generator tube inspections were not required to be performed in this outage.

03.01.e – Identification and Resolution of Problems

The inspectors reviewed 19 notifications that dealt with inservice inspection issues and found that items were entered into the corrective action program at the appropriate level and addressed appropriately.

71111.11Q - Licensed Operator Requalification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (1 Sample)

The inspectors observed and evaluated licensed operator performance in the control room during the following activities:

- (1) Unit 1, plant shutdown for 1R21 refueling outage on February 9-10, 2019
- (2) Unit 2, initiation and alignment of shutdown cooling on February 10, 2019

Licensed Operator Requalification Training/Examinations (IP Section 03.02) (1 Sample)

The inspectors observed and evaluated a crew of licensed operators in the plant's simulator during reactor startup training on March 13, 2019.

71111.12 - Maintenance Effectiveness

Routine Maintenance Effectiveness Inspection (IP Section 02.01) (2 Samples)

The inspectors evaluated the effectiveness of routine maintenance activities associated with the following equipment and/or safety significant functions:

- (1) Unit 1, hot work on control room level recorder resulting in blown fuse on January 16, 2019
- (2) Units 1 and 2, safety-related switchgear room ventilation and cooling changes to equipment on March 26, 2019

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (3 Samples)

The inspectors evaluated the risk assessments for the following planned and emergent work activities:

- (1) Unit 2, emergency diesel generator 2-1 maintenance outage on January 29-30, 2019
- (2) Unit 1, yellow outage risk during drain down for reactor head removal on February 17, 2019
- (3) Unit 1, yellow outage risk during drain down for reactor head installation on March 8, 2019

71111.15 - Operability Determinations and Functionality Assessments

Sample Selection (IP Section 02.01) (6 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

- (1) Unit 1, auxiliary saltwater pump 1-1 vital bus 4 kV circuit breaker loose support bolt on January 9, 2019
- (2) Unit 1, elevated reactor coolant system calculated leakage on February 1, 2019
- (3) Unit 1, valve RHR-1-8726B reach rod failure on February 12, 2019
- (4) Unit 1, valve SI-8982A seat leakage on February 15, 2019
- (5) Unit 1, valve RHR-1-8724A bonnet stud material specification on March 5, 2019
- (6) Unit 1, fuel assembly thimble screw missing on March 12, 2019

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (1 Sample)

The inspectors evaluated the following temporary or permanent modifications:

- (1) Unit 1, emergency diesel generator 1-2 governor controls upgrade on February 5, 2019

71111.19 - Post Maintenance Testing

Post Maintenance Test Sample (IP Section 03.01) (4 Samples)

The inspectors evaluated the following post maintenance tests:

- (1) Unit 1, vital battery charger 1-2, performance testing and load testing on January 16, 2019
- (2) Unit 1, valve RHR-1-8702, thermal overload device replacement on March 7, 2019
- (3) Unit 1, turbine driven auxiliary feedwater pump 1-1, testing following turbine maintenance on March 16, 2019
- (4) Unit 2, centrifugal charging pump 2-3, testing following maintenance on March 26, 2019

71111.20 - Refueling and Other Outage Activities

Refueling/Other Outage Sample (IP Section 03.01) (1 Sample)

The inspectors evaluated refueling outage 1R21 activities from February 9, 2019 to March 18, 2019.

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Containment Isolation Valve (ISO) (IP Section 03.01) (2 Samples)

- (1) Unit 1, containment integrated leak rate testing, per procedure STP M-7, on February 13, 2019
- (2) Unit 1, containment isolation valve testing of penetration 52B associated with the nitrogen system, per procedure STP V-652B, on February 26, 2019

In Service Testing (IST) (IP Section 03.01) (1 Sample)

Unit 1, comprehensive testing of turbine-driven auxiliary feedwater pump 1-1, per STP P-AFW-PS11, on March 19, 2019

Reactor Coolant System (RCS) Leak Detection (IP Section 03.01) (1 Sample)

Unit 1, reactor coolant leakage and water inventory balance evaluation, per STP I-1A, on January 10, 2019

Surveillance Testing (IP Section 03.01) (3 Samples)

- (1) Unit 1, 12 kV bus reactor coolant pump under-frequency and under-voltage calibration and time response test, per procedure STP I-9, on January 15, 2019
- (2) Unit 1, integrated test of engineered safeguards and diesel generators, per procedure STP M-15, on February 14, 2019
- (3) Unit 1, emergency core cooling system check valve leak test, per procedure STP V-5A1, on March 11, 2019

71114.04 - Emergency Action Level and Emergency Plan Changes

Inspection Review (IP Section 02.01-02.03) (1 Sample)

The licensee submitted a copy of the "Emergency Action Level Technical Basis Manual," Appendix D, Revision 5 of the site emergency plan, to the NRC on October 4, 2018. The inspectors conducted an in-office review of the changes from January 25 to February 5, 2019. This evaluation does not constitute NRC approval.

RADIATION SAFETY

71124.01 - Radiological Hazard Assessment and Exposure Controls

Radiological Hazard Assessment (IP Section 02.01) (1 Sample)

The inspectors evaluated radiological hazards assessments and controls. The inspectors reviewed the following documents:

Radiological surveys:

- 66011, Weld Overlay
- 65894, Containment
- 66031, Containment
- 66023, Containment
- 65787, Containment
- 65937, Containment

Risk significant radiological work activities (Radiation Work Permit (RWP)):

- RWP 19-1004: Weld Overlay
- RWP 19-1006: Pressurizer Boric Acid Removal RCS 1-8054B, 9365B, 8033A
- RWP 19-1023: 1R21 Fuel Movement Dose Rate Verification

Air sample survey records:

64476	12/10/18	Particulate Air Sample Filter Storage in Vault 3
61738	05/02/19	17-F-001 Filter Liner Solidification Preps
65063	01/29/19	Weekly D-230 Noble Gas
65176	02/05/19	Weekly D-230 Noble Gas

Instructions to Workers (IP Section 02.02) (1 Sample)

The inspectors evaluated instructions to workers including radiation work permits (RWPs) used to access high radiation areas:

Radiation work permits:

- RWP 19-1020: 64128865-0100 Remove In-core Thermocouples
- RWP 19-1050: 641358461-0100 Inspect RCS Flange for RCS Leakage
- RWP 19-1070: 601109330-0000 RHR Weld Overlay Mobilization
- RWP 19-1004: 64146800-0100 Survey Letdown Line
- RWP 19-1006: 64135120-0020 Unit-1 Core Plate Vacuum

Electronic alarming dosimeter alarms:

- DN 50975426: 04/10/18
- DN 50968587: 03/05/18
- DA 50968669: 03/05/18
- DN 50968145: 03/08/18
- DA 51017812: 02/19/19

Labeling of containers:

- No. 1060, CI-36
- No. 1748, Cs-137
- No. 1750, Sr-90
- No. 1777, Cs-137

Contamination and Radioactive Material Control (IP Section 02.03) (1 Sample)

The inspectors evaluated licensee processes for monitoring and controlling contamination and radioactive material. The inspectors verified the following sealed sources are accounted for and are intact:

- No. 656, Cs-137
- No. 710, Cs-137
- No. 825, Cs-137

Radiological Hazards Control and Work Coverage (IP Section 02.04) (1 Sample)

The inspectors evaluated in-plant radiological conditions during facility walkdowns and observation of radiological work activities.

Radiological work permits for areas with airborne radioactivity:

- RWP 19-1020: 64128865-0100 Remove In-core Thermocouples
- RWP 19-1050: 641358461-0100 Inspect RCS Flange for RCS Leakage
- RWP 19-1070: 601109330-0000 RHR Weld Overlay Mobilization
- RWP 19-1004: 64146800-0100 Survey Letdown Line
- RWP 19-1006: 64135120-0020 Unit-1 Core Plate Vacuum

High Radiation Area and Very High Radiation Area Controls (IP Section 02.05) (1 Sample)

The inspectors evaluated risk-significant high radiation area and very high radiation area controls.

Radiation Worker Performance and Radiation Protection Technician Proficiency (IP Section 02.06) (1 Sample)

The inspectors evaluated radiation worker performance and radiation protection technician proficiency.

71124.03 - In-Plant Airborne Radioactivity Control and Mitigation

Engineering Controls (IP Section 02.01) (1 Sample)

The inspectors evaluated airborne controls and radioactive monitoring. The inspectors reviewed the following systems:

Installed ventilation systems

- Units 1 and 2, auxiliary building ventilation
- Units 1 and 2, control room ventilation
- Unit 2, fuel handling building ventilation

Temporary ventilation system setups

- reactor head stand
- containment 91 foot inside bioshield 1-4
- pressurizer FCV-459 valve work
- reactor coolant pump 1-2 work

Portable or installed monitoring systems

- containment AMS-4 (multiple) and portable grab samplers
- SPING #6 and associated back up AMS-4
- pressurizer FCV-459 valve work
- residual heat removal weld overlay

Use of Respiratory Protection Devices (IP Section 02.02) (1 Sample)

The inspectors evaluated respiratory protection. The inspectors reviewed the following evaluations and tests:

Evaluations for the use of respiratory protection

- ALARA Plan 19-1026, "Unit 1 - 1R21 Lower Reactor Cavity Entries," Revision 0
- ALARA Plan 19-1061, "Unit1 - 1R21 Containment Valves and Breaches," Revision 0
- RWP 19-1020, "1R21 Reactor Disassembly and Reassembly," Revision 0, Respirator Use Evaluation

- RWP 19-1026, "1R21 Lower cavity and Transfer Canal Work, Lower Cavity Decontamination," Revision 0, Respirator Use Evaluation

Respiratory protection use during work activities

- RWP 19-1020, "1R21 Reactor Disassembly and Reassembly," Revision 0
- RWP 19-1061, "1R21 Containment Valves and Breaches," Revision 0

Medical fitness for use of respiratory protection devices

- three contract radiation protection technicians providing work coverage
- three in-house radiation protection technicians providing work coverage
- three on-shift crew A, Unit 1 reactor operators
- two radiation protection supervisors

Observation of donning, doffing and functional test

- three on-shift crew A Unit 1 reactor operators and two radiation protection technicians

Respiratory protection device evaluation

- MaxAir: 082A, 174A, 183A, 186A
- MSA SCBA kits: EP-AAAL088346, EP-AAAL088348, EP-AAAL88354
- Ultra Elite: UEL2004A, UEM0214A, UEM0244A, UES1057A
- Ultra Twin: UTL0382A, UTM0304A, UTM0452A, UTS0362A

Self-Contained Breathing Apparatus for Emergency Use (IP Section 02.03) (1 Sample)

The inspectors evaluated SCBA program implementation.

Status and surveillance records for SCBAs:

<u>Second Stage Serial No.</u>	<u>First Stage Serial No.</u>
EP-APA202352	EAB183440
EP-OAB274213	EAB183439
EP-OAB282747	EAB213170
EP-OAB301743	EAB246744

SCBA fit for on-shift operators

- Three on-shift crew A, Unit 1 reactor operators

SCBA maintenance check:

<u>Second Stage Serial No.</u>	<u>First Stage Serial No.</u>
EP-APA202352	EAB183440
EP-OAB274213	EAB183439
EP-OAB282747	EAB213170
EP-OAB301743	EAB246744

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

IE01: Unplanned Scrams per 7000 Critical Hours Sample (IP Section 02.01) (2 Samples)

- (1) Unit 1, date range: 01/01/2018-12/31/2018
- (2) Unit 2, date range: 01/01/2018-12/31/2018

IE03: Unplanned Power Changes per 7000 Critical Hours Sample (IP Section 02.02) (2 Samples)

- (1) Unit 1, date range: 01/01/2018-12/31/2018
- (2) Unit 2, date range: 01/01/2018-12/31/2018

IE04: Unplanned Scrams with Complications (USwC) Sample (IP Section 02.03) (2 Samples)

- (1) Unit 1, date range: 01/01/2018-12/31/2018
- (2) Unit 2, date range: 01/01/2018-12/31/2018

OR01: Occupational Exposure Control Effectiveness Sample (IP Section 02.15) (1 Sample)

- (1) date range: 01/01/2018 - 12/31/2018

PR01: Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual Radiological Effluent Occurrences (RETS/ODCM) Radiological Effluent Occurrences Sample. (IP Section 02.16) (1 Sample)

- (1) date range: 01/01/2018 – 12/31/2018

71152 - Problem Identification and Resolution

Annual Follow-up of Selected Issues (IP Section 02.03) (2 Samples)

The inspectors reviewed the licensee's implementation of its corrective action program related to the following issues:

- (1) evaluation and corrective actions associated with trends in reactor coolant pump seal leakage on March 5, 2019
- (2) evaluation and corrective actions related to a Unit 1, polar crane main hoist overspeed trip during the reactor vessel head lift on March 9, 2019

71153 – Follow-up of Events and Notices of Enforcement Discretion

Event Follow-up (IP Section 03.01) (1 Sample)

The inspectors evaluated a sodium hydroxide leak from the Unit 2 containment spray system spray additive tank and the licensee's response on March 4, 2019.

OTHER ACTIVITIES – TEMPORARY INSTRUCTION, INFREQUENT, AND ABNORMAL

Evaluation of Diablo Canyon Safety Condition in Light of Financial Conditions

Because Pacific Gas & Electric Corporation, and its subsidiary, Pacific Gas & Electric Company (the licensee) was under bankruptcy protection/reorganization during the inspection period, NRC Region IV conducted special reviews of processes at Diablo Canyon. Using the flexibilities in the baseline inspection program, the inspectors evaluated several aspects of the licensee’s operations to determine whether the financial condition of the licensee impacted plant safety. The factors reviewed during this period included: (1) impact on staffing, (2) corrective maintenance backlog, (3) changes to the planned maintenance schedule, (4) corrective action program implementation, and (5) any reduction in outage scope, including risk-significant modifications. Considering the licensee’s financial difficulties, the inspectors verified that licensee personnel continued to identify problems at an appropriate threshold and enter these problems into the corrective action program for resolution. The inspectors also verified that the licensee continued to develop and implement corrective actions commensurate with the significance of the problems identified.

The special review of processes at Diablo Canyon included continuous reviews by the resident inspectors, as well as the specialist-led baseline inspections completed during the inspection period – emergency preparedness, inservice inspection, and radiation protection – which are documented in this report. During this period, the inspectors did not identify any indications that the licensee’s financial circumstances were adversely affecting plant performance and safety.

INSPECTION RESULTS

Failure to Promptly Correct an Adverse Condition Related to Reactor Coolant Pump Seal Damage			
Cornerstone	Significance	Cross-cutting Aspect	Report Section
Initiating Events	Green NCV 05000275/2019001-01 Closed	None	71152
The inspectors reviewed a Green, self-revealed non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” for the licensee’s failure to promptly identify and correct a condition adverse to quality. Specifically, prior to February 4, 2019, corrective actions generated as a result of a root cause evaluation did not adequately correct a condition adversely impacting reactor coolant pump (RCP) seals.			
<p><u>Description:</u> System interconnections between RCP seal drains, the pressurizer relief tank (PRT), and the radioactive drain collection tank (RCDT) comprise a closed system. RCP seal drains are hard piped to the RCDT and are designed to be free flowing. Evolutions such as draining the PRT into the RCDT can result in pressure imbalances which, if not properly controlled, can result in the ‘backfilling’ of the RCP seal drains. This pressure imbalance can result in RCP seal instability and damage. Damage to the RCP seals can manifest itself through increased calculated RCS leakage.</p> <p>In February 2013, prior to refueling outage 2R17, the 2-2 RCP seals were damaged and required replacement. As a result of this damage, PG&E performed a root cause evaluation and identified a root cause of backfilling of the RCP seals leading to seal damage. The root</p>			

cause generated corrective actions that focused on correcting procedures that could lead to the backfill condition, as well as additional operator training on the RCDDT/PRT system interconnections and draining procedures to prevent such damage from recurring.

On January 8, 2019, prior to the Unit 1 refueling outage 1R21, the inspectors noted increasing trends in reactor coolant system leakage and discussed with PG&E their actions to address this trend. PG&E initially believed that the observed changes to RCS leakage were due to leak rate calculational inaccuracies caused by the increasing frequency of dilutions required at end of core life. Additional review by PG&E prompted by a continued upward trend in identified RCS leakage rate determined the source of the RCS leakage to be from the 1-2 RCP #2 seal. Inspection of the 1-2 RCP seal package during the outage identified seal damage and resulted in the decision being made to replace the seal assembly.

PG&E subsequently determined that the draining of the PRT to the RCDDT while carrying out the actions of alarm response procedure AR PK-05-25, "Pressurizer Relief Tank (PRT) Pressure/Level/Temperature," resulted in the backfilling of the system and damage to the seals. PG&E determined that revisions to this procedure should have been included as a corrective action from the 2013 root cause evaluation but were missed and not included.

Corrective Action(s): After the cause of the RCP seal leakage was identified, PG&E revised Annunciator Response Procedure AR PK-05-25, "Pressurizer Relief Tank (PRT) Pressure/Level/Temperature," to ensure proper control when draining the PRT to the RCDDT during power operations and conducted additional operator training.

Corrective Action Reference(s): Notification 51014929

Performance Assessment:

Performance Deficiency: The inspectors determined that PG&E's failure to promptly identify and correct a degraded condition associated with the reactor coolant pumps seals during draining of the PRT to the RCDDT was a performance deficiency within PG&E's ability to foresee and correct.

Screening: The performance deficiency was more than minor because it impacted the equipment performance attribute of the Initiating Events Cornerstone and its objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the licensee's failure to ensure that appropriate corrective actions were taken in response to RCP seal damage caused by improper system operation in 2013 resulted in RCP seal damage to recur in 2019.

Significance: The inspectors assessed the significance of the finding using Appendix A, "Significance Determination of Reactor Inspection Findings for At - Power Situations." The issue was evaluated in accordance with IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," and determined to be of very low safety significance (Green) since it did not result in exceeding the RCS leak rate for a small break LOCA and did not affect systems used to mitigate a LOCA.

Cross-cutting Aspect: The inspectors did not identify a cross-cutting aspect associated with this finding because it did not reflect current performance.

Enforcement:

Violation: Title 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Contrary to the above, prior to February 4, 2019, the licensee failed to assure that a condition adverse to quality was promptly identified and corrected. Specifically, in conducting a root cause evaluation in 2013 on RCP seal vulnerability to damage when draining the PRT to the RCDT, the licensee failed to adequately identify and correct all pertinent operating procedures.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2.a of the Enforcement Policy.

Inadequate Corrective Actions Leads to Increased Time at Yellow Risk and Lowered Inventory

Cornerstone	Significance	Cross-cutting Aspect	Report Section
Initiating Events	Green FIN 05000275/2019001-02 Closed	[P.3] - Resolution	71152

The inspectors reviewed a Green, self-revealed finding in that PG&E personnel failed to promptly correct a condition in accordance with OM7.ID1, "Problem Identification and Resolution." Specifically, personnel did not promptly correct a condition associated with the Unit 1 polar crane variable frequency drive (VFD) motor used during the removal and replacement of the reactor vessel head from the reactor vessel during refueling outages that was first identified in 2015. This led to a recent event in which the reactor vessel head was suspended above the reactor vessel during a period of yellow outage safety risk with reactor vessel water level in lowered inventory condition for approximately 6 hours longer than necessary.

Description: On March 8, 2019, the Diablo Canyon Power Plant, Unit 1, polar crane main hoist tripped during reactor head installation preventing the reactor vessel head from being raised or lowered. At the time of the trip, the reactor vessel head was suspended approximately 30 feet above the reactor vessel, reactor core, and upper internals. The station was in a yellow risk condition due, in part, to reactor vessel water level being in a lowered inventory condition. The reactor vessel head was in the credited heavy lift load path at all times, and all load drop safety devices on the polar crane functioned as designed.

After the polar crane main hoist trip, refueling outage day shift personnel commenced fact finding and troubleshooting activities. As a conservative measure, the containment equipment hatch was closed, and contingency preparations were made to flood up the refueling cavity. Approximately 6 hours later, shortly after turnover with day shift, outage nightshift subject matter experts recognized the fault was due to a VFD overspeed trip and promptly reset the condition, allowing the head to be lowered to its intended position.

Additional investigation by PG&E, including a review of the corrective action program database, revealed that the polar crane hoist mechanism for both units had suffered from similar VFD overspeed trip conditions on multiple occasions and that a work request had

been generated in 2015 to replace a coupling device found in the VFD with a different type not susceptible to unnecessary overspeed trips. This work request was deleted from the scope of outage 1R19 and moved to 1R20. It was then deleted from the scope of 1R20 and moved to outage 1R21. During outage 1R21, the work was again deleted and deferred to a later outage. Additionally, no formal communication, operating experience, or procedure precautions or notes were generated as a result of the identified condition. These failures to promptly correct a condition associated with the polar crane VFD led to the reactor vessel head being unnecessarily suspended approximately 30 feet above the reactor vessel, core, and upper internals and the station remaining in a yellow risk condition with reactor vessel water level in a lowered inventory state for approximately 6 hours longer than required.

Corrective Action(s): After the event, PG&E performed an evaluation of the event, initiated changes to the applicable procedures, and scheduled work to upgrade the VFD such that similar events will not occur.

Corrective Action Reference: Notification 51017606

Performance Assessment:

Performance Deficiency: The inspectors determined that PG&E's failure to promptly correct a condition associated with the polar crane VFD motor used during the removal and replacement of the reactor vessel head from the reactor vessel during refueling outages was a performance deficiency within PG&E's ability to foresee and correct.

Screening: The performance deficiency was more than minor because it impacted the configuration control attribute of the Initiating Events cornerstone and its objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the failure to promptly correct a condition associated with the polar crane VFD led to an event in which the reactor vessel head was suspended above the reactor vessel during a period of yellow outage safety risk with reactor vessel water level in lowered inventory condition for approximately 6 hours longer than necessary.

Significance: The inspectors assessed the significance of the finding using Appendix G, "Shutdown Safety SDP." Because the plant was shutdown with at least one fuel bundle in the reactor and temperature and pressure within normal decay heat removal conditions, the finding was evaluated in accordance with Attachment 1 of IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," dated May 9, 2014. The finding was determined to be of very low safety significance (Green) since all questions in Attachment 1, Exhibit 2 were answered "NO."

Cross-cutting Aspect: This finding is related to the cross-cutting area of Problem Identification and Resolution – Resolution because PG&E did not take effective corrective actions to address issues in a timely manner commensurate with its safety significance [P.3]. Specifically, PG&E's failure to promptly correct a condition associated with the polar crane VFD led to the reactor vessel head being unnecessarily suspended approximately 30 feet above the reactor vessel, core, and upper internals and the station remaining in a yellow risk condition with reactor vessel water level in a lowered inventory state for approximately 6 hours longer than required.

Enforcement: Inspectors did not identify a violation of regulatory requirements associated with this finding.

Human Performance Event Leads to Sodium Hydroxide Leak and Loss of Level Indication for Containment Spray System Spray Additive Tank

Cornerstone	Significance	Cross-cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000323/2019001-03 Closed	[H.12] - Avoid Complacency	71153

The inspectors reviewed a Green, self-revealed non-cited violation of Technical Specification 5.4.1.a “Procedures,” because personnel failed to follow the requirements of MP I-12-L931, “Spray Additive Tank Level Channel 931 Calibration,” Revision 2. Specifically, on March 4, 2019, during performance of a calibration of a Unit 2 containment spray additive tank level transmitter, PG&E technicians inadvertently removed a venting plug from the wrong level transmitter resulting in a pressurized leak of sodium hydroxide solution from the spray additive tank, and the inability to determine the level of the spray additive tank.

Description: The containment spray system is a safety-related system designed to actuate in the event of certain accident scenarios to minimize peak pressure in containment and to reduce iodine fission product inventory in the containment atmosphere. The spray additive system is a subsystem of the containment spray system that provides a solution of sodium hydroxide to the containment spray pump discharge via a storage tank and an educator. Two redundant level indicators, LI-931 and LI-932, are provided to ensure that the storage tank maintains the technical specification (TS) required level of sodium hydroxide solution, and so that actions can be taken during emergency operation prior to draining the spray additive tank to the point that the containment spray pumps become susceptible to air entrainment and binding.

On March 4, 2019, procedure MP I-12-L931, “Spray Additive Tank Level Channel 931 Calibration,” was being performed on LT-931, one of the two, Unit 2, containment spray system spray additive tank level indicators to ensure its proper functionality. This procedure is used to satisfy a TS surveillance requirement. During performance of this procedure, maintenance technicians inadvertently removed the venting plug from the in-service level indicator, LT-932, instead of the procedurally directed level indicator LT-931. This resulted in a pressurized stream of caustic sodium hydroxide solution coming from the vent plug for approximately 45 minutes and evacuation of the area until emergency response personnel were able to halt the leak. During this time, approximately 300 gallons of sodium hydroxide solution was released from the tank and the Unit 2 containment spray system was declared inoperable until operations personnel could verify that the spray additive tank levels were within TS required limits. The system remained inoperable for approximately 22 hours. Later evaluation determined that the tank level never decreased below the TS required limit. Additionally, had they been called upon during an emergency event, emergency operating procedures for the containment spray system require that the spray additive tank be secured prior to reaching 16 percent level to ensure that the containment spray pumps do not become susceptible to damage from air entrainment and binding. During the approximately 22-hour period prior to restoration of level indication, operations personnel would not have

been able to carry out this requirement due to a lack of valid spray additive tank level indication.

Corrective Action(s): After the leak was stopped and the caustic sodium hydroxide solution was removed from the area, PG&E personnel restored the level transmitter to service and verified that spray additive tank levels were within TS required limits. Additionally, PG&E initiated a cause evaluation and implemented corrective actions including a department level clock reset, station wide communication, and emphasis on the importance of the use of human performance tools prior to any work on station equipment.

Corrective Action Reference(s): Notification 51020536

Performance Assessment:

Performance Deficiency: The inspectors determined that PG&E's failure to follow procedure MP I-12-L931, "Spray Additive Tank Level Channel 931 Calibration," Revision 2, was a performance deficiency within PG&E's ability to foresee and correct.

Screening: The performance deficiency was more than minor because it impacted the equipment performance attribute of the Mitigating Systems cornerstone and its objective to ensure the availability, reliability, and capability of systems that response to initiating events to prevent undesirable consequences. Specifically, the human performance event associated with the containment spray system spray additive tank level transmitter calibration resulted in a pressurized leak of sodium hydroxide solution from the spray additive tank, evacuation of the area, and the inability to detect spray additive tank level (as required by emergency procedures) for approximately 22 hours.

Significance: The inspectors assessed the significance of the finding using Appendix A, "Significance Determination of Reactor Inspection Findings for At - Power Situations." The issue was evaluated in accordance with IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," and determined to be of very low safety significance (Green) since the sodium hydroxide leak and inoperability of the Unit 2 containment spray system did not result in a loss of system function.

Cross-cutting Aspect: This finding is related to the cross-cutting area of Human Performance – Avoid Complacency because PG&E did not recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. This included the implementation of appropriate error reduction tools [H.12]. Specifically, PG&E technicians failed to perform appropriate activity and work site reviews prior to performing work, use appropriate error reduction tools, or consider potential undesired consequences when conducting a level transmitter calibration procedure on the Unit 2 containment spray system.

Enforcement:

Violation: Technical Specification 5.4.1.a, "Procedures," requires, in part, that "maintenance that can affect the performance of safety-related equipment should be properly pre-planned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances." Contrary to the above, on March 4, 2019, PG&E personnel failed to follow the requirements of procedure MP I-12-L931, "Spray Additive Tank Level Channel 931 Calibration," Revision 2. Specifically, on March 4, 2019, during

performance of a calibration of a Unit 2 containment spray additive tank level transmitter, PG&E technicians inadvertently removed a venting plug from the wrong level transmitter resulting in a pressurized leak of sodium hydroxide solution from the spray additive tank, evacuation of the area, and the inability to detect spray additive tank level.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2.a of the Enforcement Policy.

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On February 5, 2019, the inspectors presented the emergency preparedness inspection results to Mr. M. Ginn, Manager, Emergency Preparedness, and other members of the licensee staff.
- On February 26, 2019, the inspectors presented the inservice inspection results to Ms. P. Gerfen, Station Director, and other members of the licensee staff.
- On February 28, 2019, the inspectors presented the baseline radiation protection inspection results to Ms. P. Gerfen and other members of the licensee staff.
- On April 4, 2019, the inspectors presented the quarterly resident inspection results to Mr. J. Welsch, Vice President of Nuclear Generation and Chief Nuclear Officer, and other members of the licensee staff.

DOCUMENTS REVIEWED

71111.01: Adverse Weather Protection

Procedure

<u>Number</u>	<u>Title</u>	<u>Revision</u>
OP O-28	Operations Response to Storms or Biofouling	22

71111.04: Equipment Alignment

Notifications

51012721 51016118

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
MP M-51.5	Testing and Maintenance of Safety/Relief Valves	32
OP A-2:X	RVRLIS Alignment for Refueling Outage	9
OP B-2:1	Residual Heat Removal Alignment Verification	26
OP B-2:V	RHR – Place in Service	37
OP B-2:VI	RHR – Draining the Refueling Cavity	29
OP B-2:VII	Residual Heat Removal System-Fill and Vent	16
OP J-6B:II-A	Diesel Generator 2-3 – Alignment Checklist	0
OP J-6B:III-A	Diesel Generator 2-2 – Alignment Checklist	0

Drawing

<u>Number</u>	<u>Description</u>	<u>Revision</u>
106710-2	RHR – System OVID	43

71111.05: Fire Protection

Notifications

50948204 50996387 51003929

Work Orders

60109333 64136730

Procedure

<u>Number</u>	<u>Title</u>	<u>Revision</u>
PEP 18-03	Containment Fire Water Jumper Installation and Removal	3

Drawings

<u>Number</u>	<u>Description</u>	<u>Revision</u>
PA1/2	Pre-Fire Plans Intake Structure	2
PA26/27	Pre-Fire Plans Containment Building 91' and 117', Unit 1	4
RA-29	Containment Building Elevation 140', Unit 1	4
RA-7	Radiological Control Area & H Block Elev. 100', Unit 2	8

Other

<u>Number</u>	<u>Description</u>	<u>Date</u>
Hot Work Permit 1769		03/09/2019

71111.07: Heat Sink Performance

Notifications

51021896	51018644	51022042
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Work Orders

64220069	64220070
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Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
OP F-2	CCW System	8A
OP F-2: I	CCW Make Available	44

Drawings

<u>Number</u>	<u>Description</u>	<u>Revision</u>
106714	CCW System	59
663212	CCW Mechanical Heat Exchanger Tube Plugging Map, Sheet 1	67

Other

<u>Number</u>	<u>Description</u>	<u>Date</u>
27985	Component Cooling Water Heat Exchangers CCW 1-1 and 1-2 Eddy Current Report	02/2019

71111.08: Inservice Inspection Activities (PWR)

Notifications

50315950	50914808	50915722	50915871
50920366	50920367	50920368	50920369
50921421	50925730	50927788	50928799
50956677	50956730	50998093	50988345
51004997	51008168	51017806	

Work Orders

64025645	60105066	68052869	60100625
60100791	60094591	64132540	60101082

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AD4.ID2	Plant Leakage Evaluation	12
AD7.ID11	Fluid Leak Management Program	5
ER1.ID2	Boric Acid Corrosion Control Program	7
ISI P-SI-18	SIS Test System Piping Pressurization for ISI Inspection	7
ISI X CRDM	Reactor Vessel Top and Bottom Head Visual Inspections	6
ISI_P-AFW-13U1	ISI Pressure Test of AFW Suction Supply Piping Aligned to the Raw Water Storage Reservoir Using a Hydro Pump	2
NDE VT 2-1	Visual Examination During Section XI System Pressure Test	4
NDE_PDI-UT-2	Ultrasonic Examination of Austenitic Piping	13
NDE_PT-1	Visible Dye Liquid Penetrant Examination Procedure	6
NDE_UT-4	Ultrasonic Examination of Pressure Vessel Welds Other than Reactor Vessels	4
NDE_UT-I	Ultrasonic Detection and Sizing of Vessel Nozzle Inside Radius	0
NDE_VT_1-1	Visual Examination of Component Surfaces	2

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
NDE_VT_2-1	Visual Examination During Section XI System Pressure Test	4
NDE_VT_3-1	Visual Examination of Component and Piping Supports	3
OM8.ID4	Control of Flammable and Combustible Materials	29
PD MA3	Special Processes	3
STP M-86	Leak Reduction of Systems Outside Containment Likely to Contain Radioactive Materials following an Accident (NUREG-0737)	22
STP M-87	Operational Leakage of ECCS Recirc Paths Outside Containment	20
STP R 8C	Containment Walkdown for Evidence of Boric Acid Leakage	10

Drawing

<u>Number</u>	<u>Description</u>	<u>Revision</u>
663056	Auxiliary Feedwater Terry Turbine Pump	2

71111.11: Licensed Operator Requalification Program and Licensed Operator Performance

Notification

51016118

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
EOP E-0	Reactor Trip or Safety Injection	45B
JSIM-507	Evaluator Skills	0
OP B-2:V	RHR-Place in Service	37
OP L-4	Normal Operations at Power	97
OP L-5	Plant Cooldown from Minimum Load to Cold Shutdown	105
OP L-5	Plant Cooldown From Minimum Load to Cold Shutdown	105A
OP L-7	Plant Stabilization Following Reactor Trip	25A
TQ2.DC3	Licensed Operator Continuing Training Program	29

71111.12: Maintenance Effectiveness

Notifications

51012969	51021080	50605355	50288884
50636744	51017754		

Other

<u>Number</u>	<u>Description</u>	<u>Revision / Date</u>
DCN 24558	Damper Modifications 4 kV Rooms	11/28/2018
PC-23E1-01	Maintenance Rule Impacted Function	1

71111.13: Maintenance Risk Assessments and Emergent Work Control

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AD7.DC6	On-Line Maintenance Risk Management	26
OP A-2:X	RVRLIS Alignment for Refueling Outages	9
OP O-36	Protected Equipment Postings	18

Other

<u>Number</u>	<u>Description</u>	<u>Revision</u>
	1R21 Outage Safety Plan	0

71111.15: Operability Determinations and Functionality Assessments

Notifications

51011651	51011752	51011572	51010580
51016998	51016118	51016269	51022188
51022414	51020413	51020574	51020501

Work Orders

60116677	60117408
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Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
OM7.ID12	Operability Determinations	38

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
STP I-1B	Routine Daily Checks Required by Licenses	129
STP R-10C	Reactor Coolant System Water Inventory Balance	46

Drawing

<u>Number</u>	<u>Description</u>	<u>Revision</u>
106710	Residual Heat Removal, Sheet 2	36

Other

<u>Number</u>	<u>Description</u>	<u>Date</u>
	Unit 1 Containment Pressure Trend Data	01/2019
	Unit 1 Containment Temperature Trend Data	01/2019
	Unit 1 Radiation Monitor RM-11 (Containment Air Particulate) Trend Data	01/2019
	Unit 1 Radiation Monitor RM-12 (Containment Radiological Gas) Trend Data	01/2019
	Unit 1 RCS Leak Rate Calculation Packages per STP I-1B	01/20/2019 – 01/30/2019
	Unit 1 RCS Leak Rate Calculation Packages per STP R-10C	01/20/2019 – 01/30/2019
	Unit 1 Reactor Coolant Pump 1-1, 1-2, 1-3, and 1-4 Seal No. 1 Leakoff Trend Data	01/2019
	Unit 1 Reactor Coolant Pump 1-1, 1-2, 1-3, and 1-4 Seal Water Inlet Trend Data	01/2019
51011572	Emerging Issue – Elevated Unit 1 RCS Calculated Leak Rates	01/15/2019, 01/29/2019, 01/31/2019

71111.18: Plant Modifications

Notifications

50986428	51015255	51015257	51015176
51015256	51011572		

Work Order

68053881

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
CF3.ID9	Design Change Notice	56
MP M-21.8	Diesel Engine Governor Actuator Maintenance	25
TS3.ID2	Licensing Basis Impact Evaluations	44A

Other

<u>Number</u>	<u>Description</u>	<u>Revision</u>
DCP 25262	EDG Governor Controls Upgrade	0

71111.19: Post-Maintenance Testing

Notifications

51023045	51022989	51018293	51017982
51018598	51019542	51023045	51022989

Work Orders

64159084	64158929	60116970	60116968
64123070	60117148	60102262	64157306

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
MP E-50.1	Thermal Overload Relay and Cubicle Maintenance	53
MP E-57.10C	4 kV Motor Preventative Maintenance Testing	8
MP E-67.3C	Maintenance of Solidstate Controls 400A Vital Station Battery Chargers	11
STP M-12B	Battery Charger Performance Test	17
STP M-83A	Penetration Overcurrent Protection	29A
STP P-ASW-11	Routine Surveillance Test of Turbine-Driven Auxiliary Feedwater pump 1-1	11
STP P-CCP-23	Routine Surveillance Test of Centrifugal Charging Pump 2-3	8

71111.20: Refueling and Other Outage Activities

Notifications

51018584	51018358	51019722	51016530
51019158	51017079	51014929	51016562
51019171	51011572	51016362	51016543
51015960	51017642	51023590	51018335
51016804	51016680	51016126	

Work Order

68053873

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AD8.DC51	Outage Safety Management Control of Off-Site Power Supplies to Vital Buses	18
AD8.DC54	Containment Closure	15
AD8.DC55	Outage Safety Scheduling	42
EOP E-0	Reactor Trip of Safety Injection	45B
ER1.ID2	Boric Acid Corrosion Control Program	7
ISI X-2	Visual Inspection of Reactor Upper Internals	1
MP I-2.28	Activation and Deactivation of the Rx Vsl Refueling Lvl Indication System (RVRLIS)	28A
MP M-45.1	Containment Equipment Hatch Door Opening and Closing	14
MP M-7.6A	Reactor Vessel Upper Internals Removal	15
OM14.ID1	Fatigue Management Rule Program	29
OM14.ID1	Fatigue Management Rule Program	29
OP A-2:II	Reactor Vessel – Draining the RCS to the Vessel Flange – With Fuel in Vessel	49
OP A-2:IX	Reactor Vessel – Vacuum Refill of the RCS	25
OP A-2:X	RVRLIS Alignments for Refueling Outages	9
OP B-1A:VIII	Makeup Control System Operation	60
OP B-2:V	RHR – Place in Service	37
OP B-2:VI	RHR-Draining the Refueling Cavity	29
OP B-8DS2	Core Loading	66

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
OP L-0	Mode Transition Checklists	85
OP L-2	Hot Standby to Startup Mode	44
OP L-4	Normal Operation at Power	97
OP L-5	Plant Cooldown From Minimum Load to Cold Shutdown	105A
OP L-7	Plant Stabilization Following Reactor Trip	25A
OP2.ID1	Clearances	42
STP M-45A	Containment Inspection Prior to Establishing Containment Integrity	34A
STP R-30	Reload Cycle Initial Criticality	19A
STP R-6	Low Power Reload Physics Tests	17
STP R-8C	Containment Walk down for Evidence of Boric Acid Leakage	10

Other

<u>Number</u>	<u>Description</u>	<u>Revision / Date</u>
57725	Containment Equipment Drawing 91&100 foot	32
	1R21 Outage Safety Plan	0
Calculation PRA19-02	Mode Transition With CFCUs 1-4 and 1-4 Unavailable	0
DCPP Form 69- 21350	Fatigue Management Rule Waiver Attachment 3	02/12/2019
EmpCenter Time Entry	Hours Entry Data Sheets	02/18/2019
Security Door History	Door Reader Transactions	02/10/2019

71111.22: Surveillance Testing

Notifications

51016229	51016422	51016489	51016141
51910387	51011572	50910387	51010580
51012111	51012113	51012096	51022989
51023045	51023787		

Work Orders

64222140	64033435	64194016	64136202
64201622	64136401		

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
ER1.ID2	Boric Acid Corrosion Control Program	7
STP I-1B	Routine Daily Checks Required By Licenses	129
STP I-9	12 kV Bus RCP U/F and U/V Channels Calibration and Time Response Test	10
STP M-15	Integrated Test of Engineered Safeguards and Diesel Generators	71
STP M-7	Integrated Leak Rate Test (ILRT) Type A	27
STP M-7E	Containment Penetration Valve Lineup for the Integrated Leakage Rate Test (ILRT)	10
STP M-7W	Containment Structural Integrity Inspection	5
STP P-AFW-PS11	Preservice Testing of Turbine-Driven Auxiliary Feedwater Pump 1-1	7
STP R-10	Reactor Coolant System Leakage Evaluation	12
STP R-10C	Reactor Coolant System Water Balance Inventory	46
STP V-5A1	Emergency Core Cooling System Check Valve Leak Test, Post-Refueling/Post-Maintenance Valves 8819 A-D and 8956 A-D	21
STP V-600	General Containment Isolation Valve Leak Test	28
STP V-654B	Penetration 52B Containment Isolation Valve Leak Testing	11

Drawing

<u>Number</u>	<u>Description</u>	<u>Revision</u>
106709	Safety Injection, Sheet 2	61

Other

<u>Number</u>	<u>Description</u>	<u>Revision</u>
ANSI/ANS-56.8-2002	Containment System Leakage Testing Requirements	2

71114.04: Emergency Action Level and Emergency Plan Changes

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Date</u>
PG&E Letter DCL 16-099	Diablo Canyon Units 1 and 2; Docket No. 50-275, OL-DPR-80; Docket No. 50-323, OL-DPR-82; License Amendment Request 16-04; "Request to Adopt Emergency Action Level Schemes Pursuant to NEI 99-01, Revision 6, 'Development of Emergency Action Levels for Non-Passive Reactors'"	10/25/2016
PG&E Letter DCL-17-055	Docket No. 50-275, OL-DPR-80; Docket No. 50-323, OL-DPR-82; Diablo Canyon Units 1 and 2; Response to NRC Request for Additional Information Regarding License Amendment Request 16-04, "Request to Adopt Emergency Action Level Schemes Pursuant to NEI 99-01, Revision 6, 'Development of Emergency Action Levels for Non-Passive Reactors'"	06/21/2017
PG&E Letter DCL-17-073	Diablo Canyon Units 1 and 2; Docket No. 50-275, OL-DPR-80; Docket No. 50-323, OL-DPR-82; Supplement to License Amendment Request 16-04; Request to Adopt Emergency Action Level Schemes Pursuant to NEI 99-01, Revision 6, "Development of Emergency Action Levels for Non-Passive Reactors"	08/17/2017
PG&E Letter DCL-18-077 PG&E Letter DIL-18-013	Docket No. 50-275, OL-DPR-80; Docket No. 50-323, OL-DPR-82; Diablo Canyon Units 1 and 2; Docket No 72026, Materials License No. SNM-2511; Diablo Canyon Independent Spent Fuel Storage Installation; Emergency Plan Implementing Procedure Update	10/04/2018

71124.01: Radiological Hazard Assessment and Exposure Controls

Notifications

51012602	51012603	51012604	51017804
50975426	50968020	50968587	50969660
50989145	51019595		

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
RCP NISP-RP.05	Access Controls for High Radiation Areas	1
RCP NISP-RP.02	Radiation & Contamination Surveys	0
RCP D-335	Radiation Exposure Reporting	6
RCP D-620	Radioactive Source Control Program	15

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
RCP NISP-RP.04	Radiological Posting & Labelling	1
RP1-1D17	Control & Storage of Non-SNM	0
RP1-1D16	Radiation Work Expectations	12
RP1-1D9	Radiation Work Permits	13
RP1-1D14	Radioactive Material Controls	8
RP1-1D15	Radiological Risk Assessment	5

Audits and Assessments

<u>Number</u>	<u>Description</u>	<u>Date</u>
173180001	2018 Radiation Protection Programs Audit	02/25/2018
QV 180850014	Quality Verification 2R20 Integrated Outage Assessment	04/17/2018
Notification 51012084	NRC Pre-Inspection on Radiological Hazard Assessment and Exposure Controls 71124.01	01/14/2019

Radiation Work Permits

<u>Number</u>	<u>Description</u>	<u>Revision</u>
RWP 19-1004	WO 64146800-0100 Survey Letdown Line	0
RWP 19-1006	WO 64135120-0020 Unit-1 Core Plate Vacuum	0
RWP 19-1020	WO 64128865-0100 Remove In-core Thermocouples	0
RWP 19-1050:	WO 641358461-0100 Inspect RCS Flange for RCS Leakage	0
RWP 19-1070	WO 601109330-0000 RHR Weld Overlay Mobilization	0

Radiological Surveys

<u>Number</u>	<u>Description</u>	<u>Date</u>
65894	Containment	02/24/2019
65937	Containment	02/25/2019
66011	Weld Overlay	02/26/2019
66023	Containment	02/26/2019
66031	Containment	02/26/2019
66787	Containment	02/22/2019

Air Sample Surveys

<u>Number</u>	<u>Description</u>	<u>Date</u>
61738	Air Sample: 17-F-001 Filter Liner Solidification Preps	05/02/2018
64476	Air Sample: Particulate Air Sample Filter storage in Vault 3	12/10/2018
65063	Air Sample: D-230 Noble Gas	01/29/2019
65536	Air Sample: D-230 Noble Gas	02/05/2019

Miscellaneous Documents

<u>Number</u>	<u>Description</u>	<u>Date</u>
	Ready for Issue High, Locked High, and Very High Radiation Area Key Inventory	02/26/2019
GPAA102	DCPP General Employee Training	06/30/2016
NRC Form 748	NSTS Annual Inventory Reconciliation Form	01/08/2019
RPS17J	DCPP Radiological Self-Monitoring	03/18/2014
WO 64178986	Semi-annual Sealed Source Inventory/Leak Test	02/05/2019
WO 64187031	Semi-Annual Sealed Source Inventory/Leak Test	08/18/2018

71124.03: In-Plant Airborne Radioactivity Control and Mitigation

Notifications

50930710	50931849	50934622	50944439
50946792	50947936	50950636	50954291
50960981	50961668	50965343	50966263
50975820	50976449	50978069	50999314
51012085	51013771		

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
OM6.ID10	Respiratory Protection Program	8
PEP M-92	Post LOCA Sampling Center Ventilation Systems DOP and HALIDE Penetration Tests	4
RCP D-410	Issuing Respiratory Protective Equipment	20
RCP D-645	HEPA Integrity Testing	3
RCP D-700	Processing Respiratory Protection Equipment at DCPD	17
RCP D-707A	MSA FireHawk® (NIOSH) Self-Contained Breathing	1A

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
	Apparatus Inspection	
RCP D-709	Posi-Chek3 Tester Operation	2
RCP D-712	MAXAIR Powered Air Purifying Respirator	1
RCP D-732	Respirator Fit Testing	26
RCP D-772	UNICUSIII Cylinder Recharging Station Operation	4
RCP NISP-RP.03	Radiological Air Sampling	1
RCP NISP-RP.08	Use and Control HEPA Filtration and Vacuum Equipment	1
STP M-53	Control Room Ventilation System DOP and Halide Penetration Tests	21A
STP M-6A	Routine Surveillance Testing of Control Room Ventilation System	57
TQ1.DC20	Respirator Training	8

Audits and Self-Assessments

<u>Number</u>	<u>Description</u>	<u>Date</u>
DS-16-008	NUPIC Commercial Grade Survey – F&J Specialty Products	08/02/2016
24229	NUPIC Audit -GEL Laboratories, LLC	11/03/2016
24351	NUPIC Audit - Mirion Technologies (Canberra), Inc.	11/06/2017
24371	NUPIC Audit - Reuter-Stokes LLC	12/21/2017
ASMP SAQH 51012085	Quick Hit Self-Assessment (QHSA) – NRC Inspection 71124.03	01/29/2019

Respirator Testing, Inspection, and Inventory Records

<u>Number</u>	<u>Description</u>	<u>Date</u>
	Weekly Respirator Locker Inventory	01/14/2019
EP-APA202352	Complete SCBA Test	01/09/2019
EP-APA202352	Monthly and Annual Inspection and Maintenance Checklist for MSA Firehawk SCBA	2017-2018
EP-OAB274213	Complete SCBA Test	02/01/2018
EP-OAB274213	Complete SCBA Test	02/02/2017
EP-OAB274213	Monthly and Annual Inspection and Maintenance Checklist for MSA Firehawk SCBA	2017-2018

Respirator Testing, Inspection, and Inventory Records

<u>Number</u>	<u>Description</u>	<u>Date</u>
EP-OAB282747	Monthly and Annual Inspection and Maintenance Checklist for MSA Firehawk SCBA	2017-2018
EP-OAB301743	Complete SCBA Test	02/22/2017
EP-OAB301743	Monthly and Annual Inspection and Maintenance Checklist for MSA Firehawk SCBA	2017-2018

Engineered System Filter Test Records

<u>Number</u>	<u>Description</u>	<u>Date</u>
60076341-5000	STP G-11, "Procedure for Obtaining Charcoal Filer Media for laboratory Testing (Methyl Iodine): Fuel Handling Building Ventilation System," Revision 20 [old charcoal]	01/14/2019
60076341-5010	STP G-11, "Procedure for Obtaining Charcoal Filer Media for laboratory Testing (Methyl Iodine): Fuel Handling Building Ventilation System," Revision 20 [new charcoal]	01/14/2019
60078958-5000	STP G-11, "Procedure for Obtaining Charcoal Filer Media for laboratory Testing (Methyl Iodine): Control Room Ventilation System," Revision 20	04/25/2017
64114011-0100	STP M-53, "Unit 2 Control Room Ventilation System DOP and Halide Penetration Tests," Revision 13	04/19/2017
64114015-0200	STP G-9, "Unit 2 General HEPA Filter Bank Penetration Test: Control Room Ventilation System," Revision 9; and STP G-10, "Unit 1 General Charcoal Filter Bank Penetration Test: Control Room Ventilation System," Revision 8	04/25/2017
64156652-0100	STP G-9, "Unit 1 General HEPA Filter Bank Penetration Test: Fuel Handling Building Ventilation System," Revision 9 [old charcoal]	01/14/2019
64156652-0200	STP G-9, "Unit 1 General HEPA Filter Bank Penetration Test: Fuel Handling Building Ventilation System," Revision 9 [new charcoal]	01/14/2019
64156654-0100	STP G-10, "Unit 1 General Charcoal Filter Bank Penetration Test: Fuel Handling Building Ventilation System," Revision 8 [old charcoal]	01/14/2019
64156654-0200	STP G-10, "Unit 1 General Charcoal Filter Bank Penetration Test: Fuel Handling Building Ventilation System," Revision 8 [new charcoal]	01/14/2019
64156655-0100	STP M-41, "Unit 1 Fuel Handling Building Ventilation System DOP and Halide Penetration Tests," Revision 20 [old charcoal]	01/14/2019

Engineered System Filter Test Records

<u>Number</u>	<u>Description</u>	<u>Date</u>
64156655-0300	STP M-41, "Unit 1 Fuel Handling Building Ventilation System DOP and Halide Penetration Tests," Revision 20 [new charcoal]	01/14/2019
64171179-0010	STP M-3A, "Unit 1 DOP and Halide Penetration Test: Auxiliary Building Ventilation System," Revision 23	02/06/2019
64171179-0040	STP G-9, "Unit 1 General HEPA Filter Bank Penetration Test: Auxiliary Building Ventilation System," Revision 9; STP G-10, "Unit 1 General Charcoal Filter Bank Penetration Test: Auxiliary Building Ventilation System," Revision 8; and STP G-11, "Procedure for Obtaining Charcoal Filter Media for laboratory Testing (Methyl Iodine): Auxiliary Building Ventilation System," Revision 20	02/21/2019

Compressed Air System Testing Records

<u>Number</u>	<u>Description</u>	<u>Date</u>
	Annual UNICUS Internal High-Pressure Storage Cylinders Maintenance and Testing (DCPP Form 69-21535): ACPP1	2018 - 2019
	Annual UNICUS Internal High-Pressure Storage Cylinders Maintenance and Testing (DCPP Form 69-21535): ACPP2	2018 - 2019
	Quarterly ACPP1 BAC 0-1 Trace Analytics CGA G-71. Grade L (SCBA) Air Quality Check	03/13/2017 - 02/18/2019
	Quarterly ACPP2 BAC 0-2 Trace Analytics CGA G-71. Grade L (SCBA) Air Quality Check	03/13/2017 - 11/27/2018

Miscellaneous Documents

<u>Number</u>	<u>Description</u>	<u>Revision / Date</u>
	ALARA Plan 19-1026, "Unit 1, 1R21 Lower Reactor Cavity Entries"	01/29/2019
	ALARA Plan 19-1061, "Unit1, 1R21 Containment Valves and Breaches"	02/01/19
	ALARA Plan 19-1071, "Unit 1, 1R21 RHR Weld Overlay"	01/16/2019
	Respiratory Use Training, Fit Testing, and Medical Evaluation for Selected Staff	01/01/2017 – 02/25/2019
	RWP 19-1020, "Unit 1, 1R21 Reactor Disassembly and Reassembly" Respirator Use Evaluation	01/31/2019

Miscellaneous Documents

<u>Number</u>	<u>Description</u>	<u>Revision / Date</u>
	RWP 19-1026, "Unit 1, 1R21 Lower Cavity and Transfer Canal Work, Lower Cavity Decontamination" Respirator Use Evaluation	01/31/2019
	RWP 19-1061, "Unit 1, 1R21 Containment Valves and Breaches"	0

71151: Performance Indicator Verification

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AWP L-001	NRC Performance Indicators Initiating Events, SSFFs, and MOR	9
NEI 99-02	Regulatory Assessment Performance Indicator Guideline	7
XI1.ID2	Regulatory Reporting Requirements	43
XI1.ID5	Collection and Submittal of NRC Performance Indicators	1

71152: Problem Identification and Resolution

Notifications

51014929	50538422	51014888	51023735
51013122	51011572	51012537	51018347
51018600	51022176	50268718	50403406
50544835	50663799	51017693	50351332
50535340	50662412	50815303	51017606

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AR PK05-25	Annunciator Response PRT PRESS/LVL TEMP	18
OM4.ID14	Notification Review Team (NRT)	31
OM7.ID1	Problem Identification and Resolution	53
OP1.DC40	Operations Equipment Deficiency and Adverse Condition Monitoring	10

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 31500011. The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.

This letter and its enclosure 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, and Requests for Withholding."

**Information Request
December 12, 2018
Notification of Inspection and Request for Information
Diablo Canyon Unit 1
NRC Inspection Report 05000275/2019001**

INSERVICE INSPECTION DOCUMENT REQUEST

Inspection Dates: February 11 - 22, 2019

Inspector: Jim Drake

A. Information Requested for the In-Office Preparation Week

The following information should be sent to the Region IV office in hard copy or electronic format or via a secure document management service, in care of Jim Drake, by January 22, 2019, to facilitate the selection of specific items that will be reviewed during the onsite inspection week. The inspector will select specific items from the information requested below and then request from your staff additional documents needed during the onsite inspection week (Section B of this enclosure). We ask that the specific items selected from the lists be available and ready for review on the first day of inspection. Please provide requested documentation electronically if possible. If requested documents are large and only hard copy formats are available, please inform the inspector(s), and provide subject documentation during the first day of the onsite inspection.

If you have any questions regarding this information request, please call the inspector as soon as possible.

On February 11, 2019, a reactor inspector from the Region IV office will perform the baseline inservice inspection at Diablo Canyon Unit 1, using NRC Inspection Procedure 71111.08, "Inservice Inspection Activities." Experience has shown that this inspection is a resource intensive inspection both for the NRC inspector and your staff. The date of this inspection may change dependent on the outage schedule you provide. In order to minimize the impact to your onsite resources and to ensure a productive inspection, we have enclosed a request for documents needed for this inspection. The information identified on this request (Section A) is to be provided prior to the inspection to ensure that

the inspector(s) are adequately prepared. The section identified as “Documents Upon Request” is intended to provide guidance to the type of information an inspector(s) will be requesting to complete the inspection. It is important that all of these documents are up to date and complete in order to minimize the number of additional documents requested during the preparation and/or the onsite portions of the inspection (i.e., condition reports with attachments).

We have discussed the schedule for these inspection activities with your staff and understand that our regulatory contact for this inspection will be David Madsen of your licensing organization. The tentative inspection schedule is as follows:

Preparation week: January 28 to February 1, 2019

Onsite weeks: February 11 - 22, 2019

Our inspection dates are subject to change based on your updated schedule of outage activities. If there are any questions about this inspection or the material requested, please contact Jim Drake at (817) 200-1558. ([email to: James.Drake@nrc.gov](mailto:James.Drake@nrc.gov))

A.1 ISI/Welding Programs and Schedule Information

1. A detailed schedule (including preliminary dates) of:
 - 1.1. Nondestructive examinations planned for ASME Code Class Components performed as part of your ASME Section XI, risk informed (if applicable), and augmented inservice inspection programs during the upcoming outage.
 - 1.2. Examinations planned for Alloy 82/182/600 components that are not included in the Section XI scope (If applicable)
 - 1.3. Examinations planned as part of your boric acid corrosion control program (Mode 3 walkdowns, bolted connection walkdowns, etc.)
 - 1.4. Welding activities that are scheduled to be completed during the upcoming outage (ASME Class 1, 2, or 3 structures, systems, or components)
2. A copy of ASME Section XI Code Relief Requests and associated NRC safety evaluations applicable to the examinations identified above.
 - 2.1. A list of ASME Code Cases currently being used to include the system and/or component the Code Case is being applied to.
3. A list of nondestructive examination reports which have identified recordable or rejectable indications on any ASME Code Class components since the beginning of the last refueling outage. This should include the previous Section XI pressure test(s) conducted during start up and any evaluations associated with the results of the pressure tests.
4. A list including a brief description (e.g., system, code class, weld category, nondestructive examination performed) associated with the repair/replacement activities of any ASME Code Class component since the beginning of the last outage and/or planned this refueling outage.

5. If reactor vessel weld examinations required by the ASME Code are scheduled to occur during the upcoming outage, provide a detailed description of the welds to be examined and the extent of the planned examination. Please also provide reference numbers for applicable procedures that will be used to conduct these examinations.
6. Copy of any 10 CFR Part 21 reports applicable to structures, systems, or components within the scope of Section XI of the ASME Code that have been identified since the beginning of the last refueling outage.
7. A list of any temporary non-code repairs in service (e.g., pinhole leaks).
8. Please provide copies of the most recent self-assessments for the inservice inspection, welding, and Alloy 600 programs.
9. A copy of (or ready access to) most current revision of the inservice inspection program manual and plan for the current interval.
10. Copy of NDE procedures for NDE that will be used during the outage.
11. Copy of overarching site procedure for welding.

A.2 Reactor Pressure Vessel Head

1. Provide a detailed scope of the planned bare metal visual examinations (e.g., volume coverage, limitations, etc.) of the vessel upper head penetrations and/or any nonvisual nondestructive examination of the reactor vessel head including the examination procedures to be used.
 - 1.1. Provide the records recording the extent of inspection for each penetration nozzle including documents which resolved interference or masking issues that confirm that the extent of examination meets 10 CFR 50.55a(g)(6)(ii)(D).
 - 1.2. Provide records that demonstrate that a volumetric or surface leakage path examination assessment was performed.
2. Copy of current calculations for EDY, and RIY as defined in Code Case N-729-1 that establish the volumetric and visual inspection frequency for the reactor vessel head and J-groove welds.

A.3 Boric Acid Corrosion Control Program

1. Copy of the procedures that govern the scope, equipment and implementation of the inspections required to identify boric acid leakage and the procedures for boric acid leakage/corrosion evaluation.
2. Please provide a list of leaks (including code class of the components) that have been identified since the last refueling outage and associated corrective action documentation. If during the last cycle, the unit was shutdown, please provide documentation of containment walkdown inspections performed as part of the boric acid corrosion control program.

A.4 Additional Information Related to all Inservice Inspection Activities

1. A list with a brief description of inservice inspection, and boric acid corrosion control program related issues (e.g., PVAR) entered into your corrective action program since the beginning of the last refueling outage. For example, a list based upon data base searches using key words related to piping such as: inservice inspection, ASME Code, Section XI, NDE, cracks, wear, thinning, leakage, rust, corrosion, boric acid, or errors in piping examinations.
2. Provide training (e.g. Scaffolding, Fall Protection, FME, Confined Space) if they are required for the activities described in A.1 through A.3.
3. Please provide names and phone numbers for the following program leads:

Inservice inspection (examination, planning)
Containment exams
Reactor pressure vessel head exams
Snubbers and supports
Repair and replacement program
Licensing
Site welding engineer
Boric acid corrosion control program

DOCUMENTS UPON REQUEST

Inservice Inspection / Welding Programs and Schedule Information

1. Updated schedules for inservice inspection/nondestructive examination activities, including planned welding activities, and schedule showing contingency repair plans, if available.
2. For ASME Code Class welds selected by the inspector please provide copies of the following documentation (as applicable) for each subject weld:
 - Weld data sheet (traveler).
 - Weld configuration and system location.
 - Applicable welding procedures used to fabricate the welds.
 - Copies of procedure qualification records (PQRs).
 - Welder's performance qualification records (WPQ).
 - Nonconformance reports for the selected welds (If applicable).
 - Radiographs of the selected welds and access to equipment to allow viewing radiographs (if radiographic testing was performed).
 - Preservice and inservice examination records for the selected welds.

- Readily accessible copies of nondestructive examination personnel qualifications records for reviewing.
3. For ultrasonic examination procedures qualified in accordance with ASME Code, Section XI, Appendix VIII, provide documentation supporting the procedure qualification (e.g. the EPRI performance demonstration qualification summary sheets). Also, include qualification documentation of the specific equipment to be used (e.g., ultrasonic unit, cables, and transducers including serial numbers) and nondestructive examination personnel qualification records.

Reactor Pressure Vessel Head

1. Nondestructive personnel qualification records for the examiners who will perform examinations of the reactor pressure vessel head replacement. (If applicable)
2. Drawings showing the following:
 - Reactor pressure vessel head and control rod drive mechanism nozzle configurations
 - Reactor pressure vessel head insulation configuration

Note: The drawings listed above should include fabrication drawings for the nozzle attachment welds as applicable.

Boric Acid Corrosion Control Program

1. Boric acid walk down inspection results, an updated list of boric acid leaks identified so far this outage, associated corrective action documentation, and overall status of planned boric acid inspections.
2. List of boric acid evaluation and corrective action documents associated with the leakage.

Codes and Standards

1. Ready access to (i.e., copies provided to the inspector(s) for use during the inspection at the onsite inspection location, or room number and location where available):
 - Applicable Editions of the ASME Code (Sections V, IX, and XI) for the inservice inspection program and the repair/replacement program.
2. Copy of the performance demonstration initiative (PDI) generic procedures with the latest applicable revisions that support site qualified ultrasonic examinations of piping welds and components (e.g., PDI-UT-1, PDI-UT-2, PDI-UT-3, PDI-UT-10, etc.).
3. Boric Acid Corrosion Guidebook Revision 1 – EPRI Technical Report 1000975.

**The following items are requested for the
Occupational Radiation Safety Inspection
Diablo Canyon**

**Inspection Dates February 25 – March 1, 2019
Integrated Report 2019001**

Inspection areas are listed in the attachments below.

Please provide the requested information on or before February 15, 2019

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 your normal data management system, please ensure the inspection exit date entered is at least 45 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 Louis Carson at (817)200-1221, Louis.Carson@nrc.gov or John O'Donnell at (817)200-1441, John.O'Donnell@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.

1. Radiological Hazard Assessment and Exposure Controls (71124.01) and Performance Indicator Verification (71151)

Date of Last Inspection: March 1, 2018

- A. List of contacts and telephone numbers for the Radiation Protection Organization Staff and Technicians, as well as the Licensing/Regulatory Affairs staff. Please include area code and prefix. If work cell numbers are appropriate, then please include them as well.
- B. Applicable organization charts including position or job titles. Please include as appropriate for your site, Site Management, RP, Chemistry, Maintenance (I&C), Engineering, and Emergency Protection. (Recent pictures are appreciated.)
- C. Copies of audits, self-assessments, LARs, and LERs written since the last inspection date, related to this inspection area
- D. Procedure indexes for the radiation protection procedures and other related disciplines.
- E. Please provide procedures related to the following areas noted below. Additional procedures may be requested by number after the inspector reviews the procedure indexes.
 - 1. Radiation Protection Program
 - 2. Radiation Protection Conduct of Operations, if not included in #1.
 - 3. Personnel Dosimetry
 - 4. Posting of Radiological Areas
 - 5. High Radiation Area Controls
 - 6. RCA Access Controls and Radiation Worker Instructions
 - 7. Conduct of Radiological Surveys
 - 8. Radioactive Source Inventory and Control
 - 9. Fuel Pool Inventory Access and Control
- F. Please provide a list of NRC Regulatory Guides and NUREGs that you are currently committed to relative to this program. Please include the revision and/or date for the commitment and where this may be located in your current licensing basis documents.
- G. Please provide a summary list of corrective action documents (including corporate and sub-tiered systems) since the last inspection date.
 - 1. Initiated by the radiation protection organization
 - 2. Assigned to the radiation protection organization

NOTE: These lists should include a description of the condition that provides sufficient detail that the inspectors can ascertain the regulatory impact, the significance level assigned to the condition, the status of the action (e.g., open, working, closed, etc.) and the search criteria used. Please provide in document formats which are “sortable” and “searchable” so that inspectors can quickly and efficiently determine appropriate sampling and perform word searches, as needed. (Excel spreadsheets are the preferred format.) If codes are used, please provide a legend for each column where a code is used.
- H. List of radiologically significant work activities scheduled to be conducted during the inspection period. (If the inspection is scheduled during an outage, please also include a list of work activities greater than 1 rem, scheduled during the outage with the dose estimate for the work activity.) Please include the radiological risk assigned to each activity.

DIABLO CANYON POWER PLANT, UNITS 1 AND 2 – NRC INTEGRATED INSPECTION
 REPORT 05000275/2019001 AND 05000323/2019001 – May 10, 2019

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 MHerrera, DRMA
 R4Enforcement
 ROP Reports

Electronic Distribution for Diablo Canyon Power Plant

ADAMS ACCESSION NUMBER: ML19130A234

<input checked="" type="checkbox"/> SUNSI Review By: RDA		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available		Keyword:
OFFICE	SRI:DRP/A	RI:DRP/A	C:DRS/EB1	AC:DRS/EB2	C:DRS/OB	C:DNMS/RIB
NAME	CNewport	JReynoso	VGaddy	JDrake	GWerner	GWarnick
SIGNATURE	/RA/	/RA/	/RA/	/RA/	/RA/	/RA/
DATE	05/02/19	05/02/19	05/06/19	05/02/19	05/05/19	05/07/19
OFFICE	C:DRS/IPAT	AC:DRS/RCB	SPE:DRP/A	BC:DRP/A		
NAME	RKellar	NMakris	RAlexander	MHaire		
SIGNATURE	/RA/	/RA/	/RA/			
DATE	05/06/19	05/07/19	05/02/19			

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