



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION IV
1600 EAST LAMAR BOULEVARD
ARLINGTON, TEXAS 76011-4511

January 12, 2024

Paula A. Gerfen
Senior Vice President, Generation
and Chief Nuclear Officer
Pacific Gas and Electric Company
P.O. Box 56
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Avila Beach, CA 93424

SUBJECT: DIABLO CANYON POWER PLANT, UNIT 1 – NRC INSPECTION REPORT
05000275/2023011

Dear Paula A. Gerfen:

On November 30, 2023, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Diablo Canyon Power Plant, Unit 1 and 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.

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


If you contest the violation or the significance or severity of the violation 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 Diablo Canyon Power Plant, Unit 1.

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 Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

P. Gerfen

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Sincerely,



Signed by Taylor, Nicholas
on 01/12/24

Nicholas H. Taylor, Chief
Engineering Branch 2
Division of Operating Reactor Safety

Docket No. 05000275
License No. DPR-80

Enclosure:
As stated

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 REPORT 05000275/2023011

ADAMS ACCESSION NUMBER: **ML24008A244**

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

Docket Number: 05000275

License Number: DPR-80

Report Number: 05000275/2023011

Enterprise Identifier: I-2023-011-0031

Licensee: Pacific Gas and Electric Company

Facility: Diablo Canyon Power Plant, Unit 1

Location: Avila Beach, CA

Inspection Dates: October 09, 2023 to October 13, 2023

Inspectors: P. Cooper, Senior Reactor Inspector
J. Drake, Senior Reactor Inspector
G. Pick, Senior Reactor Inspector
A. Siwy, Senior Project Manager
C. Smith, Senior Reactor Inspector

Approved By: Nicholas H. Taylor, Chief
Engineering Branch 2
Division of Operating Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a NRC inspection at Diablo Canyon Power Plant, Unit 1, 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.

List of Findings and Violations

Failure to Perform ASME Examinations of Unit 2 Containment Moisture Barrier			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Barrier Integrity	Green NCV 05000323-2023011-01 Open/Closed	None (NPP)	71013
The inspectors identified a Green NCV of 10 CFR Part 50.55a, "Codes and Standards," for the licensee's failure to conduct general visual examinations of the moisture barriers to the containment liner in accordance with Subsection IWE of ASME, Section XI. Specifically, the licensee failed to conduct visual examinations of the caulk applied to interior expansion joint locations in the Unit 2 containment.			

Additional Tracking Items

None.

INSPECTION SCOPES

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) 2516, "Policy and Guidance for the License Renewal Inspection Program." 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.

OTHER ACTIVITIES – TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL

71013 - Site Inspection for Plants with a Timely Renewal Application

The inspectors performed Phase 1 of inspection procedure 71013 of Diablo Canyon Power Plant, Unit 1 the week of October 9, 2023, while the plant was shut down for refueling outage 1RF24. This allowed the inspectors to evaluate the material condition of inaccessible areas prior to entry into the period of extended operation and perform inspections associated with aging management programs as described in PG&E Letter DCL 23-020, "Responses to NRC Questions Regarding Diablo Canyon Power Plant License Renewal Efforts," dated March 17, 2023 (ML23076A210).

Specifically, the inspectors reviewed the open items, and any associated corrective actions, from the previous inspection activities related to the 2009 license renewal application, as documented in NRC inspection report(s) 05000275; 05000323/2010008 (ML103220205), NRC 2010 audit report (ML101690321) and the NRC's Safety Evaluation Report with Open Items (ML103270685).

This was the last outage before the expiration date of the Unit 1 original license on November 2, 2024.

The inspectors evaluated the aging management programs (AMPs) and commitments described below and walked down selected areas of the facility while performing phase one of IP 71013.

Site Inspection for Plants with a Timely Renewal Application (1 Sample)

- (1) The inspectors reviewed the licensee's actions to address issues identified in Inspection Reports 05000275/2010008 and 05000323/2010008. These issues were identified during the previously withdrawn license renewal amendment and related to implementation of the licensee's aging management activities, as documented in corrective action documents (SAPNs).

The inspectors reviewed the actions taken to address commitments considered closed or deleted by the licensee at the time of the withdrawal of the original license renewal application. The licensee provided a status of their original application commitments in Letter DCL-23-020, "Responses to NRC Questions Regarding Diablo Canyon Power Plant License Renewal Efforts," dated March 17, 2023. Letter DCL-23-020, Attachment 2, "Current Implementation Schedule for DCPD Commitments Included in Withdrawn License Renewal Application (LRA)," provided the planned implementation dates of commitments not considered closed. These commitments will be reviewed during future inspections.

Review of Items Identified During Withdrawn License Renewal Inspection Procedure 71002

SAPN 50313350 identified that procedures for below grade structures and cable supports/restraints guidelines required enhancement. Specifically, the procedures needed to be enhanced to inspect for drooping or sagging and for cable and cable support damage.

The licensee had issued SAPN 50448441 to track this corrective action. The inspectors confirmed that procedure AWP E-016, "Inspection Guide - Maintenance Rule Structural Monitoring Programs – Civil," dated May 23, 2023, Section 11.2.8 contained the inspection requirement and acceptance criteria. The inspectors identified no concerns.

SAPN 50333175 identified that procedure MPE-101A, "Infrared Thermography Inspections," Revision 6, needed to be corrected to require identifying the metal-enclosed bus duct thermography results as quality records.

The inspectors confirmed that the licensee had included the requirement in revision 7 of procedure MPE-101A. The inspectors determined that the licensee had removed the requirement to consider the thermography results as quality records in revision 8 of the procedure in 2016 when they decided to not pursue license renewal. SAPN 51170875 tracks actions being taken to develop a metal-enclosed bus duct program when the licensee reinitiated the license renewal process.

The licensee developed procedure AWP E-039, "Metal Enclosed Bus Aging Management," Revision 0. Procedure AWP E-039 specified, in part, "Prior to November 2, 2024 (Unit 1) and August 26, 2025 (Unit 2) a sample of the in-scope non-segregated phase MEB accessible bolted connections shall undergo Contact resistance test or thermography (20 percent of the population with a maximum sample of 25) of the accessible connections." Procedure AWP E39, section 6 identified the inspection and testing results as quality records. The inspectors identified no concerns.

SAPN 50335453 identified the need for system engineers to effectively monitor

external corrosion and material condition of structures systems and components during external system walkdowns.

The inspectors determined that the licensee had previously provided training to system engineers in 2012. On October 5, 2023, the licensee initiated SAPN 51207065 that identified the need to provide age-related degradation and aging management training. The licensee plans to train personnel responsible for implementing the aging management programs and individuals who may review, screen, assign, evaluate, or otherwise process site-specific and industry operating experience, such as the department corrective action program coordinators. The inspectors identified no concerns.

SAPN 50336850 documented that NRC inspectors identified elastomer hoses for the compressed air system had not been scoped in as part of license renewal.

The inspectors determined that the licensee developed a 10-year preventative maintenance task to replace the elastomer hoses for backup air bottles in the compressed air system. The inspectors verified that the licensee had replaced the elastomer hoses in 2013 after identification of the issue. In addition, the inspectors determined that they had replaced hoses or had scheduled the hoses for replacement. The inspectors identified no concerns.

SAPN 50341482 identified that an error existed in the original license renewal application in the designator for the in-scope switchyard breakers.

The licensee initiated SAPN 50341709 to correct this issue. The inspectors verified that Letter DCL-10-158, "10 CFR 54.21 (b) Annual Update to the DCP License Renewal Application and License Renewal Application Amendment No. 34," dated December 29, 2010, corrected the numbering errors for the switchyard breakers in the original license renewal application and described that the aging management program documents had been corrected. The inspectors identified no concerns.

SAPN 50341635 identified that the strain gauge cover plates on the exterior of the containment no longer had a watertight seal. The IWL concrete inspections have investigated the condition of the concrete around these cover plates and found there to be no degradation or indications of corrosion of the underlying reinforcing bars.

The inspectors determined that the licensee had specific inspection requirements in procedure NDE VT 3C-1, "Visual Examination of the Containment Concrete Shell," Revision 7. The inspectors verified that the licensee included the configuration of these abandoned strain gauge cover plates and conduit boxes on design drawings.

SAPN 50341717 initiated to identify whether performing inspections of the component cooling water isolation check valves to the reactor coolant pumps (Valves CCW-1-585 and CCW-2-585) provided representative low flow conditions for the closed cooling water system. The licensee determined that the valves would not be suitable as a leading indicator because they were not in low flow areas.

The licensee identified that the component cooling water system design provided a corrosion test loop at the outlet of the letdown heat exchanger. The licensee maintains flow using valve TCV-130, "Letdown Heat Exchanger 1-1 Component

Cooling Water Temperature Control Valve.” The test loop consists of four coupons of representative material exposed to component cooling water. The inspectors reviewed the qualitative test coupon inspection results and determined that the chemistry treatment of the component cooling water system has been effective.

SAPN 50341749 identified cracking of concrete pedestals, cracking of grout, a bent structural member, discoloration of an insulator bell, and rust on some connectors associated with structures for 230 kV and 500 kV transmission lines. SAPN 50341964 documented the evaluation of the indications by civil engineers. The licensee evaluated the hairline crack in the concrete, cracking at the chamfered edge of the grout, spalling at the chamfered edge of the grout, surface rust on a bolt and the slightly bent vertical structural member. The licensee concluded each condition had no structural impact. SAPN 50374633 developed maintenance plans to replace the switchyard insulators.

The licensee replaced the polymer composite and porcelain insulators around the site with RTV coated Sediver glass insulators in 2015-2016. The next planned replacements in 2035. The inspectors determined that the licensee hot washed the 500kV insulators on transmission towers 5-2 and 5-3 (Unit 1) and 5-5, 5-6 and 5-7 (Unit 2) every 6 months between the Main Bank Transformers and the 500kV switchyard. The other 500kV and 230kV insulators are cold washed every 18 months. The inspectors identified no concerns.

SAPN 50341752 identified that the licensee would need to revise their sampling plan from 2 of 26 aluminum bronze saltwater system valves and identified that an appropriate aging management program needed to be identified to evaluate the selective leaching of a buried, gray cast iron fire water system pipe. SAPN 50341966 specified that the original application would be changed to require a sample size of 20 percent up to a maximum of 25 components for each material/environment of concern. A one-time inspection will be conducted within the 5-year period prior to the period of extended operation.

The inspectors identified that the selective leaching program would be implemented as a plant specific program based on their operating experience. The licensee plans to complete periodic inspections of aluminum-bronze and gray cast iron components prior to November 2, 2024, and August 26, 2025, for Units 1 and 2, respectively, and once in each 10-year period during the PEO. The periodic inspections in each inspection period consist of two facets: (1) visual/mechanical, and (2) destructive. The visual/mechanical periodic inspections will consist of a sample of 3 percent of the population or a maximum of 10 components per population at each unit. Both materials will be visually inspected at each unit, and gray cast iron will also be mechanically inspected. The number of destructive examinations will be dependent on population size in accordance with the recommendations set forth by NUREG-2191, “Generic Aging Lessons Learned for Subsequent License Renewal (GALL-SLR) Report.” The inspectors identified no concerns.

SAPN 50341844 identified that the basis for the exceptions and how they met the intent of the fuel oil chemistry aging management program elements needed clarification.

The inspectors reviewed a revised Diablo Canyon aging management program

evaluation report for their fuel oil chemistry program and confirmed that the document provided appropriate basis information for each of the exceptions. The inspectors identified no concerns.

SAPN 50341848 documented that they had not included the service cooling water surge tank nor the fire water piping in the vicinity of the control room pressurization system as a component within the scope of license renewal.

Letter DCL-10-132, "Response to NRC Letter dated September 17, 2010, Request for Additional Information (Set 26) for the Diablo Canyon License Renewal Application," dated October 12, 2010, described that the control room pressurization system supply fans, valves and instrumentation and pipe duct were designed to be located outside in severe weather conditions and could withstand a high energy line break. Consequently, based on the design of the pipe duct to operate in the environment in which it is located, evaluation of nearby nonsafety-related structure, system, and component (SSC) is not required. This is consistent with the guidelines contained in NEI 95-10, Revision 6, Appendix F. The inspectors identified no concerns.

SAPN 50341874 described the need to re-evaluate the one-time inspection sampling plan to identify the appropriate sample size and scope for other potentially susceptible materials. The licensee had initially identified a sample of 35 out of 12000 components. SAPN 50342573 provided specific sampling criteria for the water chemistry, fuel oil, and lubricating oil one-time inspections on a per unit basis.

The inspectors determined that the licensee had re-established their one-time inspection program when they decided to pursue license renewal. Procedure TS1.DC3, "One-Time Inspection Program," Revision 1 provided directions and requirements for implementing the one-time inspection program. The licensee had identified 17 different material and environment groups that required sampling with a total of 286 one-time inspections between the units. The licensee implemented the sampling in accordance with NUREG-1801, "Generic Aging Lessons Learned (GALL) Report," Revision 2. The inspectors identified no concerns.

SAPN 50341877 identified that the licensee needed to revise their Appendix J aging management program description in their license renewal application and aging management program basis document to reflect that they credited their Appendix J testing for ensuring no aging related degradation of their containment seals and gaskets.

The inspectors confirmed that the draft Appendix J aging management program for new license renewal application referred to Section XI IWE for managing the effects of aging for containment seals and gaskets. The inspectors identified no concerns.

SAPN 50341879 identified the need to verify the material for Regulator AIR-I-I-1231A, "Regulator Valve to FCV-633," since it was listed as aluminum but appeared to be a copper alloy and to update the license renewal application. SAPN 50342575 described that the vendor manual identified that stainless steel material provided the pressure retaining portion of the air regulator. The inspectors verified that the license renewal data management tool and the license renewal application identified the correct material as stainless steel.

The inspectors identified no concerns.

SAPN 50341911 identified the need to verify whether the license renewal application correctly identified the material for a magnetic pump to keep positive pressure on the fuel injectors as polyvinyl chloride when the pump was Ryton®. Neither material had any known adverse effects for exposure to fuel oil.

The inspectors reviewed the license renewal application that the licensee maintained at the time of their original withdrawal and confirmed that the licensee had changed the material listed in the application to polyphenylene sulfide. The inspectors identified no concerns.

SAPN 50341936 identified the need to determine whether the licensee can manage the effects of aging in diesel engine jacket water pumps with high chromate levels.

The inspectors determined that the licensee had not had any seal failures and concluded the preventive maintenance tasks provided an appropriate means to address high chromate levels breaking down the seals. The inspectors identified no concerns.

SAPN 50359698 documented the need to revise Procedure MA1.ID20, "Testing and Inspections for the Auxiliary Saltwater System for Compliance with NRC Generic Letter 89-13," Revision 2 to align with the requirements in the license renewal application. Specifically, the license renewal application states that the licensee performs periodic testing of the component cooling water heat exchangers prior to each refueling outage to verify their heat transfer capability. Procedure MA1.ID20, Section 5.7.7a stated "Although there is no commitment to test component cooling water heat exchangers as part of GL 89-13: it is considered prudent to monitor heat transfer performance."

The inspectors determined that the licensee had changed the frequency of the component cooling water heat exchanger performance testing prior to cleaning from a refueling outage to every other refueling outage frequency. SAPN 51144881 documents that the component cooling water heat exchangers had the ability to transfer more than the required amount of heat from the components they served based upon the as-found testing. The evaluation concluded that the maintenance practices and chemistry treatments ensured that the system remained capable of performing its design basis functions. The inspectors determined that the test results documented for the last 10 years for each unit demonstrated that the component cooling water heat exchangers maintained a significant amount of margin. The inspectors identified no concerns.

Review of Actions Taken to Address Commitments Closed at the Time of Withdrawal of the Original Application

Commitment 1 – Valves as Leading Indicator of Corrosion

This commitment described that the licensee would utilize inspections of the CCW supply isolation check valves to the reactor coolant pumps (valves CCW-1-585 and CCW-2-585) as a leading indicator of the condition of the interior of piping components otherwise inaccessible for visual inspection. This periodic internal

inspection will detect loss of material and fouling. The inspections are scheduled to be performed for Unit 1 and for Unit 2 at least once every five years. Plant procedures will be enhanced to include the acceptance criteria.

Following inspector questions, as documented in Inspection Report 05000275/2010008 and 05000323/2010008 (refer to SAPN 50341717 described earlier in this report), the licensee determined that this section of piping was not a low flow area and would not provide a leading indicator of corrosion in the component cooling water system. The licensee indicated that they would inspect the coupons in the low flow areas of their closed cycle treated water systems. The inspectors identified no concerns.

Commitment 7 – Buried Piping and Tanks Aging Management Program

This commitment described that the licensee would implement the Buried Piping and Tanks Inspection Program as described in LRA Section B2.1.18.

The inspectors verified that the licensee deleted this commitment after identifying it as a duplicate of Commitment 52, as described in Letter DCL-16-032, "Update to the Reactor Vessel Internals Program. Cathodic Protection Licensing Basis. and LR-ISG-2015-01 Evaluation for Diablo Canyon Power Plant License Renewal Application (LRA), Amendment 53," dated March 30, 2016. The inspectors identified no concerns.

Commitment 15 – Fuse Holders Aging Management Program

This commitment described that the licensee would implement the Fuse Holders Program as described in LRA Section B2.1.34.

The inspectors determined that Letter DCL-13-119, "10 CFR 54.21 (b) Annual Update to the Diablo Canyon Power Plant License Renewal Application and License Renewal Application Amendment Number 47," dated December 13, 2013, removed this commitment. The licensee described that they included two fuse holders performing a license renewal intended function located outside of active devices would be tested for deterioration of the metallic clamps using thermography. Fuse holder testing will be performed at least once every 10 years, and the first test will be completed prior to the period of extended operation.

The licensee walked down the two in-scope fuse panels and found no aging stressors, including moisture, chemical contamination, oxidation and corrosion, thermal fatigue, vibration, or mechanical fatigue from frequent manipulation. Since the in-scope fuse holders at DCCP are protected from thermal cycling by design as stated in EPRI electrical handbook and there were no other aging effects that required management, these fuse holders do not require aging management. The inspectors identified no concerns.

Commitment 23 – Centrifugal Charging Pump 2-2 Casing

This commitment described that the licensee would replace the current carbon steel with stainless steel clad CCP 2-2 pump casing in the chemical and volume control system with a completely stainless-steel pump casing. The licensee replaced the

pump casing to eliminate the potential for cracking and minimizing corrosion of the pump casing cladding.

The inspectors reviewed replacement part evaluation 8000004594 that changed the material and reviewed Work Order 68011987 that installed the stainless-steel pump casing on centrifugal charging pump 2-2. The inspectors identified no concerns.

Commitment 24 – Implement the Pressurized Thermal Shock (PTS) Rule

This commitment described that the licensee would implement the revised PTS rule (10 CFR 50.61a). In the event that the provisions of 10 CFR 50.61(a) cannot be met, PG&E will implement alternate options, such as flux reduction, as provided in 10 CFR 50.61.

The inspectors determined that the licensee had completed evaluations of the upper shelf energy and pressurized thermal shock for both units that demonstrated they met the requirements of the pressurized thermal shock rule. The licensee completed the evaluations in WCAP-17315-NP, "Diablo Canyon Units 1 and 2 Pressurized Thermal Shock and Upper Shelf Energy Evaluations," Revision 0. The licensee informed the NRC in Letter DCL-11-136, "10 CFR 54.21(b) Annual Update to the DCPD License Renewal Application and License Renewal Application Amendment Number 45," dated December 21, 2011. The licensee determined "The most recent coupon examination results for both units show that the increase in RT_{NDT} in plate and weld materials are bounded by that predicted by Regulatory Guide 1.99 Revision 2 for Units 1 and 2. The results demonstrate that the DCPD reactor vessel material ages consistent with Regulatory Guide 1.99 predictions, and provide a conservative means to satisfy the requirement of 10 CFR 50.61; thus providing assurance of the reactor vessel integrity." The inspectors identified no concerns.

Commitment 25 – Pressure-Temperature Limit and Cold Overpressure Mitigation System

This commitment described that the licensee would re-evaluate the reactor coolant system (RCS) pressure-temperature limits and Cold Overpressure Mitigation System setpoints as necessary to comply with 10 CFR 50, Appendix G.

The licensee previously satisfied the commitment by submitting Letter DCL-13-023, "Reactor Coolant System Pressure and Temperature Limits Report for Units 1 and 2," (ML13072A232), which submitted revision 12 of the pressure-temperature limits report (PTLR) that allowed operation through 27 effective full power years (EFPY).

The inspectors determined that the licensee submitted their PTLR as required by their technical specifications whenever they made changes to the PT limit curves. The inspectors identified no concerns.

Commitment 26 – Remove Missile Shield Hoist Crane

This commitment described that the missile shield hoist crane will be removed from containment during the replacement reactor vessel closure head project. The Unit 2 replacement reactor vessel closure head project was completed during the fifteenth refueling outage beginning October 2009 and Unit 1 replacement reactor vessel

closure head project is planned during the sixteenth refueling outage beginning October 2010.

The inspectors reviewed work orders 68008915 and 68004363 that replaced the reactor vessel heads and removed the missile shield hoist cranes. The inspectors identified no concerns.

Commitment 28 – Replace Unit 1 Reactor Vessel Closure Head

This commitment described that the Unit 1 reactor pressure vessel (RPV) head is planned to be replaced during the sixteenth refueling outage beginning October 2010 and the Unit 2 reactor pressure vessel head was replaced during the fifteenth refueling outage in October 2009. All components penetrating the new reactor vessel closure heads are welded to the inner surfaces of the reactor vessel closure heads including the head vent piping and elbows will be replaced with Alloy 690.

The inspectors reviewed design change packages DCP M-049865, “Diablo Canyon Unit 1 Reactor Vessel Closure Head (RVCH) Replacement,” and DCP M-050862, “Diablo Canyon Unit 2 Reactor Vessel Closure Head (RVCH) Replacement,” that replaced the reactor vessel heads and all components penetrating the reactor vessel closure heads and welded to the inner surfaces including head vent piping and elbows replaced with Alloy 690 for units 1 and 2. The inspectors identified no concerns.

Commitment 29 – Replace Unit 1 and Unit 2 Pressure Housings and Nozzles

This commitment described that the unit 1 and 2 control rod drive mechanism pressure housings, the core exit thermocouple nozzle assemblies, and the thermocouple nozzles will be replaced with the replacement reactor vessel closure heads. The Unit 2 reactor pressure vessel head was replaced during the fifteenth refueling outage beginning October 2009 and Unit 1 reactor pressure vessel head is planned to be replaced during the sixteenth refueling outage beginning October 2010. The replacement components will be qualified through the period of extended operation.

The inspectors reviewed design change packages DCP M-049865, “Diablo Canyon Unit 1 Reactor Vessel Closure Head (RVCH) Replacement,” and DCP M-050864, “Diablo Canyon Unit 2 Reactor Vessel Closure Head (RVCH) Replacement,” that replaced the control rod drive mechanism pressure housings, the core exit thermocouple nozzle assemblies, and the thermocouple nozzles. The inspectors identified no concerns.

Commitment 31 – Unit 2 Gap Repair

This commitment described that the gap between the concrete floor and containment steel liner for Unit 2 will be filled prior to the period of extended operation.

The inspectors reviewed work order 60028624 in which DCPD applied caulking at various locations in Unit 2 between the containment steel liner plate and the concrete operating floor at the 91 foot elevation.

During this inspection and a walk down of Unit 1 containment, the inspectors identified gaps between the containment liner plate and concrete floor. Additionally, the inspectors questioned what devices, if any, acted as a moisture barrier to prevent liquid intrusion into the gap. After discussions, the licensee agreed that the caulking functioned as a containment moisture barrier, but it was not installed in Unit 1. Although the caulking was applied to the gaps in Unit 2, it was not inspected per ASME Section XVI, Subsection IWE. The inspectors documented a non-cited violation related to the licensee's failure to perform requirement inspections of the caulking in Unit 2, and an observation of the condition of the configuration for Unit 1. These items are included in the Inspection Results section of this report.

Commitment 32 – Update Containment Inspection Procedure

This commitment described that the plant procedures will be revised to perform concrete inspections per ASME Section XI Subsection IWL within a 5-year interval.

The inspectors determined that the licensee revised procedure AD5.ID2, "Inservice Inspection Program," to inspect the concrete containment once every five years in accordance with ASME section XI, subsection IWL. The inspectors identified no concerns.

Commitment 34 – Evaluate Reinforced Concrete When Excavated

This commitment described that the work control procedure will be revised to include evaluation of reinforced concrete exposed during excavations.

The inspectors determined that procedure AD7.DC8, "Work Planning," Revision 56, Step 8.26 required using procedure MIP C-15.0, "Excavation and Backfill," for excavation requests and work package requirements. The inspectors identified no concerns.

Commitment 35 – Revise Flux Thimble Tube Acceptance Criteria

This commitment described that the licensee would revise the flux thimble tube inspection program acceptance criteria. Specifically, the revision to the thimble tube inspection program would require a chrome-plated thimble tube to be capped or replaced if the flux thimble tube was repositioned greater than 8 inches.

The inspectors determined that the licensee revised procedure STP R-22, "Thimble Tube Inspection Program," to include acceptance criteria that precludes repositioning a flux thimble tube more than once without capping or replacing. The inspectors identified no concerns.

Commitment 37 – Inspect Titanium Surfaces in the Auxiliary Saltwater System

This commitment described that the external surfaces monitoring program will be revised to include visual inspections of the ASW system to inspect for cracking and leakage of the titanium tubing components in scope for license renewal at intervals no longer than once per refueling cycle.

The inspectors confirmed that Letter DCL-10-151, "Response to Telephone Conference Call Held on November 9, 2010, Between the U.S. Nuclear Regulatory Commission and Pacific Gas and Electric Company Concerning Responses to Requests for Additional Information Related to the Diablo Canyon Nuclear Power Plant. Units 1 and 2, License Renewal Application," dated November 24, 2010, clarified the titanium material in the auxiliary saltwater system was a different grade and not subject to stress corrosion cracking; consequently, the licensee deleted the commitment. The inspectors identified no concerns.

Commitment 38 – Account for Actual Transients Impact on Fatigue Crack Growth Analyses

This commitment described that the actual plant transient cycles related to the structural weld overlay and Model 93A Reactor Coolant Pumps fatigue crack growth analyses will be included in the existing Plant Transient Monitoring Program by January 31, 2011, to ensure that the actual plant transients do not exceed the fatigue analysis limits.

The inspectors determined that the licensee revised procedure STP M-55, "Recording of Cyclic Fatigue or Transients," to include the most limiting values from the structural weld overlay and Model 93A reactor coolant pump fatigue crack growth analyses. The inspectors identified no concerns.

Commitment 40 and 41 – Update Calculation to be Consistent with Procedure NDE VT 3C-1

Commitment 40 specified Calculation No. 2305C will be revised by November 1, 2010, to be consistent with the latest revision of Procedure NDE VT 3C-1.

Commitment 41 specified Calculation No. 2305C acceptance criteria will be consistent with the latest revision of procedure NDE VT 3C-1. Any long-term planning and decisions on potential repair will be made on a case-by-case basis and based on review of trends in the inspection findings and will be implemented via DCCP Corrective Action Program.

The inspectors determined that the licensee revised Calculation 2305C, "Evaluation of Containment Concrete Shell in Support of ASME Section XI, Subsection IWL Program," consistent with nondestructive examination procedure NDE VT 3C-1. The inspectors identified no concerns.

Commitment 42 – Update Structural Inspection Criteria

This commitment described that the Procedure NDE VT 3C-1, “VT-3C Visual Examination of the Containment Concrete Shell,” acceptance criteria will be revised to be consistent with ACI 349.3R Chapter 5 detailed quantitative acceptance criteria.

The inspectors determined that procedure NDE VT 3C-1, Revision 7 included the appropriate inspection criteria. The inspectors identified no concerns.

Commitment 47 – Remove Aluminum Tape from Insulation Panels

This commitment described that the aluminum tape currently installed on the seams of the Unit 1 reflective mirror insulation panels of the pressurizer loop seals is currently scheduled to be removed during the Unit 1 sixteenth refueling outage (1R16), October 2010.

The licensee used aluminum tape on the seams of the insulation covering the loop seal piping to maintain the required loop seal temperature. However, a modification that changed the loop seal from water to steam for the pressurizer safety valves eliminated the need to maintaining a specific loop seal water temperature that allowed removal of the aluminum tape.

The inspectors reviewed the design change and drawing revisions and verified that the licensee had changed the pressurizer loop seal safety valves from a water seal to steam seal, which eliminated the need for aluminum tape. The inspectors identified no concerns.

Commitment 48 – Nonregenerative Heat Exchanger Eddy Current Testing

This commitment described that the licensee would perform 100 percent eddy current testing of one nonregenerative heat exchanger as part of the One-Time Inspection Program within ten years prior to the period of extended operation.

The inspectors determined that the licensee had revised their One-Time Inspection aging management program to adopt the GALL report, Revision 2 requirements for all material/environment combinations, including heat exchangers. The licensee made this change in Letter DCL-14-103, “10 CFR 54.21(b) Annual Update to the Diablo Canyon Power Plant License Renewal Application (LRA) Amendment 48 and LRA Appendix E, ‘Applicant’s Environmental Report-Operating License Renewal Stage, Amendment 1,’” dated December 22, 2014. Letter DCL-14-103, Enclosure 1, Attachment 16 adopted the NUREG-1801, Revision 2 sample size requirements for all components of each material – environment combination. The revised sample size was 20 percent of the population or a maximum of 25 components. The inspectors identified no concerns.

Commitment 50 – Class 1 Makeup to the Spent Fuel Pool

This commitment described that procedures will be enhanced to provide specific valves that need to be repositioned to provide Class I makeup to the spent fuel pool including the correct position of any normally open code break valves.

The inspectors determined that the licensee had added a section into the spent fuel pool operating procedure to provide makeup to the spent fuel pool from the condensate storage tank that included all the required valve manipulations. In addition, the licensee added a section to the spent fuel pool abnormal operating procedure that referenced the section related to makeup from the condensate storage tank. The inspectors identified no concerns.

Commitment 60 – 480V Switchgear Room Ventilation Ducting

This commitment described that the licensee would enhance provisions in the HVAC ducting from the 480V switchgear room that allow water to drain from the exhaust ducting so water cannot enter the 480V switchgear room.

The inspectors verified that the licensee had modified the discharge ventilation ductwork for each of the heating, ventilation, and air conditioning ductwork in each unit to prevent water from entering the 480V switchgear rooms. The inspectors identified no concerns.

Commitment 62 – Unit 2 Diesel Generator Starting Air Upgrades

This commitment described that the implementation for all Unit 2 Diesel Generator Starting Air and Turbocharger Air Compressor upgrades is planned for April 2011.

The licensee implemented the modification to eliminate qualifying the tubing and air compressors as Seismic Category 1. The modification ensures that, if a tubing break occurred in a seismic event, the safety-related air receiver tanks would not lose air pressure.

The inspectors verified that the licensee had relocated all Unit 2 turbocharger air compressor lines and starting air compressor hydraulic unloader sensing lines upstream of a code check valve and seismic support. This change prevented the potential for the nonsafety-related portion of the system impacting the safety-related air receiver tanks during a seismic event. The inspectors determined that Unit 1 Emergency Diesel Generator starting air compressors had already been modified. The inspectors identified no concerns.

Commitment 64 – Inspect WIC-95 (Unit 1 RHR Piping Weld WIC-95)

This commitment described that the licensee would perform a regularly scheduled ISI ultrasonic inspection of WIC-95 during the upcoming 1R17 refueling outage, scheduled for May 2012, to confirm the absence of service-related flaw growth. Should service-related flaw growth be identified in this inspection, the corrective action program will be entered, and appropriate corrective action will be taken in accordance with ASME Section XI Code. In absence of flaw growth, WIC-95 will continue to be inspected at a frequency required by the ISI Program Plan.

The inspectors reviewed the WIC-95 1R17 report for an in-service inspection of piping weld WIC-95 during the unit 1 outage in 2012 which confirmed the absence of service-related flaw growth. The inspectors confirmed that the licensee examined piping weld WIC-95 within the required 10-year frequency and confirmed the absence

of service-related flaw growth. The inspectors identified no concerns.

Commitment 65 – Revise Flux Thimble Tube Procedure to Clarify Technical Basis

This commitment described that the licensee would revise the plant procedure on flux thimble tube inspections to reference this letter and WCAP-12866, "Bottom Mounted Instrumentation Flux Thimble Wear," January 1991, to clarify the technical basis for an adequate margin of safety to ensure that the integrity of the reactor coolant system pressure boundary is maintained. This procedure revision is currently scheduled to be completed prior to December 2011, but will be completed prior to the period of extended operation.

The inspectors determined that the licensee revised procedure STP R-22 to clarify the technical basis for the flux tube thimble wear acceptance criteria. The inspectors identified no concerns.

Commitment 66 – Revise Flux Thimble Tube Procedure to Account for Uncertainties

This commitment described that the licensee would revise its plant procedure to include a 5.1 percent allowance for predictability and a 10 percent allowance to account for instrument and wear scar uncertainty. This procedure will also be revised to include an 80 percent through wall acceptance criterion based upon its plant specific flux thimble tube data wear and NRC acceptance of this 80 percent criterion. In conclusion, based on the WCAP-12866, "Bottom Mounted Instrumentation Flux Thimble Wear," January 1991, 80 percent acceptance criterion, including 5.1 percent predictability uncertainty and 10 percent for eddy current testing instrument and wear scar uncertainty, PG&E will use a net acceptance criterion of 64.9 percent. This procedure revision is currently scheduled to be completed prior to December 2011, but will be completed prior to the period of extended operation.

The inspectors determined the licensee revised procedure STP R-22 to include allowances for predictability, instrument uncertainty, and wear scar uncertainty for the flux tube thimble wear acceptance criteria. The licensee also included the through-wall acceptance criteria and the net acceptance criteria. The inspectors identified no concerns.

Commitment 67 – Update Final Safety Analysis Report to Include Flux Thimble Tube Acceptance Criterion

This commitment described that the licensee would update the final safety analysis report in accordance with 10 CFR 50.71(e) to include the flux thimble tube acceptance criterion. This update is currently scheduled to be included in the next final safety analysis report update but will be completed prior to the period of extended operation.

The inspectors determined that the licensee revised final safety analysis report section 7.7.2.9.2.1, "Flux Thimble Tube Acceptance Criteria," to include flux thimble tube acceptance criteria. The inspectors identified no concerns.

Commitment 68 – Revise Flux Thimble Tube Procedure to Account for Wear

This commitment described that the licensee would revise its plant procedure to require the actual plant flux thimble tube specific wear data versus wear projections be evaluated every refueling outage to ensure it remains consistent with a maximum non-conservative wear projection of 5.1 percent for wear above 40 percent. If the wear projection for a tube is determined to exceed the 5.1 percent under-prediction and has over 40 percent wear the previous cycle, PG&E will enter it into the corrective action program for evaluation and disposition. This procedure revision is currently scheduled to be completed prior to December 2011, but will be completed prior to the period of extended operation.

The inspectors determined the licensee revised procedure STP R-22 to include plant specific wear data and to included guidance to enter an issue into the corrective action program for evaluation and disposition if the previous test value exceeded 40 percent wear and the current value is greater than 5.1 percent more than the previous value. The inspectors identified no concerns.

Commitment 69 – Inspection of Discharge Conduits

This commitment described that the marine growth removal and subsequent inspection of all required areas of the Unit 2 discharge conduit will be completed prior to the period of extended operation. The Unit 2 discharge conduit is currently scheduled to be completed during 2R17 (2013).

The inspectors reviewed work orders 64032568 and 64048068 that documented removing marine growth from the unit 1 and 2 discharge conduits during the refueling outages in 2012 and 2013, respectively. The licensee intended to complete this activity for the unit 1 and unit 2 refueling outages in 2023 and 2024, respectively. The licensee will perform this activity once every five years for each unit in accordance with the American Concrete Institute 349.3R-02, "Evaluation of Existing Nuclear Safety Related Concrete Structures." The inspectors identified no concerns.

Commitment 71 – Intake Structure Maintenance Rule Status

This commitment described that the intake structure will be returned to (a)(2) status prior to the period of extended operation. The intake structure is currently scheduled to be returned to (a)(2) status by the end of 2011.

The inspectors reviewed SAPN 50252917 that detailed the change in maintenance rule status of the intake structure from (a)(1) to (a)(2) after completing the necessary structural repairs. The inspectors determined that the intake structure remained in (a)(2) status since the status changed. The inspectors identified no concerns.

Commitment 73 – Address MRP-227, "Reactor Internals Inspection and Evaluation Guidelines," Action Items

This commitment described that the NRC safety evaluation for MRP-227 contains eight action items for applicants/licensees to consider. Responses to the applicable aging management program plant-specific action items, conditions, and limitations identified in the NRC safety evaluation, Revision 1, on MRP-227 will be submitted to the NRC by December 2015.

The inspectors determined that the licensee provided their response in Letter DCL-15-150, "10CFR 54.21(b) Annual Update to the Diablo Canyon Power Plant License Renewal Application (LRA). Amendment 51." Letter DCL-15-150 provided the licensee plans for addressing the applicable aging management program plant-specific action items, conditions, and limitations identified in the NRC safety evaluation on MRP-227. The inspectors determined that the licensee adopted the generic resolution of these items, as described in procedure TS1.ID11, "Reactor Internals Aging Management Program." The inspectors identified no concerns.

Assessment

Overall, the inspectors determined that the licensee satisfactorily implemented corrective actions identified during the original license application. The licensee effectively used their corrective action program.

Plant Condition Monitoring Walkdowns

The inspectors walked down normally inaccessible areas of the facility looking at the structures, systems, and components for signs of aging, such as corrosion on piping, component supports, and cable trays, water intrusion, structural cracking, and spalling of concrete.

Specific structures, systems, areas, and components walked down and evaluated during this inspection included:

- Refueling water storage tank
- Condensate storage tank
- Intake structure and auxiliary saltwater pump vaults
- Discharge outfall
- Electrical switchgear rooms
- Diesel fuel oil storage tanks
- Turbine building
 - Component cooling water heat exchanger 1-2
 - Air compressors and compressed air system dryers
- Auxiliary Building
 - Residual heat removal pump rooms
 - Centrifugal charging pump rooms
 - Component cooling water pump rooms
- Containment – multiple elevations
 - Containment liner
 - Sump
 - Letdown orifice room
 - Reactor Vessel Head
 - Steam generator platforms

During the walk downs of the areas, the inspectors did not identify any signs of aging that affected the structures, systems, or components.

INSPECTION RESULTS

Failure to Perform ASME Examinations of Unit 2 Containment Moisture Barrier			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Barrier Integrity	Green NCV 05000323-2023011-01 Open/Closed	None (NPP)	71013
<p>The inspectors identified a Green NCV of 10 CFR Part 50.55a, "Codes and Standards," for the licensee's failure to conduct general visual examinations of the moisture barriers to the containment liner in accordance with Subsection IWE of ASME, Section XI. Specifically, the licensee failed to conduct visual examinations of the caulk applied to interior expansion joint locations in the Unit 2 containment.</p> <p><u>Description:</u> During the construction of the containment building, both the concrete floor slab as well as the internal concrete structures were constructed and installed directly on top of the base mat containment liner. Expansion joints were placed along the horizontal interfaces of these concrete structures to reduce internal stressors of the concrete, in order to resist cracking by allowing for independent movement, as well as thermal expansion and contraction. In January 2011, a caulk moisture barrier was applied along the ½-inch concrete gap to prevent moisture from reaching the inaccessible portions of the containment liner in Unit 2. In October 2023, during a walk down of the Unit 1 containment, the inspectors requested NDE reports for the moisture barriers within the interior portions of the Unit 2 containment floor and liner interface. The containment ISI program is required by 10 CFR 50.55a to be implemented in accordance with ASME Section XI, Subsection IWE, "Requirements for Class MC and Metallic Liners of Class CC Components of Light-Water Cooled Plants." Subsection IWE, Table IWE-2500-1, Category E-A, "Containment Surfaces," Item E1.30, "Moisture Barriers," requires a general visual examination of 100 percent of moisture barriers. The reference to moisture barriers is further defined in Note (3) of this table, which states, in part; "Examination shall include moisture barrier materials intended to prevent intrusion of moisture against inaccessible areas of the pressure retaining metal containment shell or liner at concrete-to-metal interfaces and at metal-to-metal interfaces which are not seal welded."</p> <p>Discussions with licensee staff revealed that the interior moisture barriers for Unit 2 were not part of the containment ISI program. The most recent informal inspection of the interior areas occurred during the initial installation in 2011. At the time that the inspectors identified the failure to inspect the interior moisture barriers, no inspections were scheduled to verify the current or future acceptability of these locations, nor was there reasonable assurance that any potential future inspection would meet the requirements and/or minimum standards of ASME XI, Subsection IWE. In response to the identified condition, the licensee added the moisture barriers to the ISI program and operability of the containment liner was determined to be unaffected based on a review of the past two results of the containment integrated leak rate test.</p> <p>Corrective Actions: The issue was entered into the licensee's corrective action program as SAPN 51210819 and 51210689.</p> <p>Corrective Action References: SAPN 51210819 and 51210689.</p> <p><u>Performance Assessment:</u></p> <p>Performance Deficiency: The failure to conduct a general visual examination of 100 percent of the moisture barriers intended to prevent intrusion of moisture against inaccessible areas of the containment liner was a performance deficiency.</p>			

Screening: The inspectors determined the performance deficiency was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. The inspectors determined that this finding was of more than minor significance because the failure to conduct required visual examinations and identify the degraded moisture barriers, which could allow the intrusion of water, if left uncorrected, had the potential to lead to a more significant concern.

Significance: The inspectors assessed the significance of the finding using IMC 0609 Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Specifically, visual examinations of the containment metal liner or moisture barrier provide assurance that the liner remains capable of performing its intended safety function. Exhibit 3 – "Barrier Integrity Screening Questions," dated June 19, 2012, and determined that the finding was of very low safety significance (Green) because it did not represent an actual open pathway in the physical integrity of the reactor containment and did not involve an actual reduction in function of hydrogen igniters in the reactor containment.

Cross-Cutting Aspect: Not Present Performance. No cross-cutting aspect was assigned to this finding because the inspectors determined the finding did not reflect present licensee performance.

Enforcement:

Violation: Title 10 of the Code of Federal Regulations (CFR) Part 50.55a(b), "Codes and Standards," states in part, that systems and components of boiling and pressurized water-cooled nuclear power reactors must meet the applicable requirements of the ASME BPV Code, subject to the conditions in 10 CFR Part 50.55a(b)(2). The 1998 Edition with the 2000 Addenda of ASME BPV Code, Section XI, Subsection IWE, through the latest edition and addenda incorporated by reference in paragraph 10 CFR 50.55a(a) (i.e. 2007 Edition with 2008 Addenda) require examination of moisture barriers in metal containments. Specifically, Table IWE-2500-1, Category E-A, "Containment Surfaces," Item E1.30, "Moisture Barriers," requires a general visual examination of 100 percent of moisture barriers intended to prevent intrusion of moisture against inaccessible areas of the pressure retaining metal containment shell every inspection period. Contrary to these requirements, from May 2011 until present, the licensee failed to perform visual examinations of the moisture barriers in the metal containment shell of Unit 2. Specifically, the licensee failed to inspect the caulking at the expansion joint locations, which provides a moisture barrier to the basement containment liner. In addition, the inspections were not part of the licensee's ISI program thus no inspections were scheduled to verify the current or future acceptability of these moisture barrier locations in accordance with ASME XI, Subsection IWE.

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

Observation: Unit 1 Containment Liner Moisture Barrier	71013
<p data-bbox="212 262 1414 430">During the NRC's 2010 audit of the withdrawn license renewal application (ML101690321), the staff reviewed SAPN 50275027, where the applicant plans to seal the gaps between the concrete floor and the steel liner of the containment structure. However, the scope, details, and schedule for sealing the gaps to minimize the potential for carbon steel liner corrosion at Diablo Canyon Units 1 and 2 was not clearly identified in SAPN 50275027.</p> <p data-bbox="212 464 1414 829">In 2011, the NRC issued the Safety Evaluation Report with Open Items (ML103270685) and noted that the applicant found gaps in isolated spots along the liner plate and floor interface during the Unit 2, 15th refueling outage. The applicant issued notifications documenting the issue. In one of the notifications, the applicant stated that no corrosion was found at the liner and concrete interface and the concrete was in good condition (no cracks or delamination). However, the applicant recommended sealing these gaps to prevent any liquid intrusion into the gaps and minimize the potential for corrosion of the carbon steel liner. By letter dated June 21, 2010, the staff issued RAI B2.1.27-2 asking that the applicant explain how the program will effectively manage aging of the carbon steel containment liner during the period of extended operation if permanent sealing of the gap between the liner plate and concrete is not completed.</p> <p data-bbox="212 863 1414 1129">In its response dated July 19, 2010, the applicant stated that during the period of extended operation, the applicant will continue to perform inspections of the interface between liner plate and concrete floor in accordance with the requirements of its ASME Section XI, Subsection IWE Program. It will evaluate any identified areas of degradation as discussed in the response to RAI B2.1.27-1. The applicant further stated that the ASME Section XI, Subsection IWE Program will continue to effectively manage aging of the carbon steel containment liner due to any gaps between the liner plate and concrete during the period of extended operation as discussed below:</p> <p data-bbox="212 1136 1414 1234">Unit 2—The small gaps between the Unit 2 containment liner plate and concrete floor will be closed by the installation of sealant (caulking). This repair work is currently scheduled for Unit 2 RO 16 (scheduled to start May 2, 2011).</p> <p data-bbox="212 1241 1414 1367">Unit 1—The applicant is currently scheduled to perform an inspection of the Unit 1 containment liner plate during Unit 1 RO 16 (scheduled to start October 4, 2010) to determine if similar conditions exist. Any identified degradation will be evaluated and, as appropriate, entered into the CAP.</p> <p data-bbox="212 1402 1414 1472">In addition, the applicant committed (Commitment No. 31) to complete the Unit 2 gap repair work prior to the period of extended operation.</p> <p data-bbox="212 1507 1414 1898">During this inspection and a walk down of Unit 1 containment, the inspectors identified gaps between the containment liner plate and concrete floor of Unit 1. Additionally, the inspectors questioned what devices, if any, acted as a moisture barrier to prevent liquid intrusion into the gap in Unit 2. After discussions, the licensee agreed that the caulking functioned as a containment moisture barrier, but it was not installed in Unit 1 and therefore not inspected per ASME Section XVI, Subsection IWE. The licensee initiated SAPN 51208554 and SAPN 51210689 to add inspections into the inservice inspection program and a step to nondestructive examination procedure NDE VT GEN, "General Visual Examination of the Containment Liner" to inspect the junction between these locations for Unit 2 on a 40-month frequency as specified by ASME Section XI, Subsection IWE. However, the licensee did not install the moisture barrier caulking in Unit 1. The licensee generated SAPNs 51209569, 5120819, 51208407 and 5120857 in response to this issue. Additionally, the licensee</p>	

inspected the Unit 1 containment liner and concrete floor interface to quantify the size and depth of the gap, and did not identify any corrosion or degradation. Further, the past results of the containment integrated leak tests did not identify any degradation that challenged the safety function of containment.

EXIT MEETINGS AND DEBRIEFS

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

- On November 30, 2023, the inspectors presented the updated inspection results to Paula A. Gerfen and other members of the licensee staff.
- On October 12, 2023, the inspectors presented the inspection results to Adam Peck, Senior Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date	
71013	Calculations	CRPS-2	Evaluation for the CRPS/TSC Duct System in the Turbine Building under Harsh Environment Caused by MSLB at Elevation 85'	0	
	Corrective Action Documents		50313350, 50332273, 50333175, 50335453, 50336850, 50341482, 50341635, 50341717, 50341749, 50341752, 50341844, 50341848, 50341874, 50341877, 50341879, 50341911, 50341936, 50341964, 50341966, 50342570, 50342575, 50344181, 50359698, 50360132, 50374633, 50448440, 50448441, 50548478, 50550893, 50921948, 51101027, 51144881, 51170875		
	Corrective Action Documents Resulting from Inspection		51194829, 51208554, 51209569		
	Drawings	569		Mechanical HVAC Miscellaneous	17
		LR-DCPP-ELEC-592119			1
	Engineering Changes	1000000387		Diesel Engine System	0
		2000000235		Change Pressurizer Safety Valves from Water to Steam Sealed	1
	Engineering Evaluations	PTLR-1		PTLR for Diablo Canyon	12
	Miscellaneous			Safety Evaluation Report Related to the License Renewal of Diablo Canyon Nuclear Power Plant, Units 1 and 2	0
		ML102220524		Diablo Canyon Power Plant - NRC Integrated Inspection Report 05000275/2010003 and 05000323/2010003	08/10/2010
		ML103220205		DIABLO CANYON POWER PLANT - NRC LICENSE RENEWAL INSPECTION REPORT 05000275/2010008 AND 05000323/2010008	11/17/2010
		PG&E Letter DCL-10-077		Response to NRC Letter dated June 21, 2010, Request for Additional Information (Set 5) for the Diablo Canyon License Renewal Application	07/19/2010

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		PG&E Letter DCL-10-120	Response to NRC Letter Dated August 26, 2010, Request for Additional Information (Set 17) for the Diablo Canyon License Renewal Application	09/24/2010
	Procedures	AWP E-039	Metal Enclosed Bus Aging Management	0
		MA1.ID20	Testing/Inspections for Aux Saltwater System NRC Generic Letter 89-13 Compliance	7
		OP AP-22	Spent Fuel Pool Abnormalities	36
		OP B-7:II	Unit 2 SFP - Normal Operation	17
		OP B-7:II	Unit 1 SFP - Normal Operation	16
		PEP M-234	CCW Heat Exchanger Performance Test	22
		TS1.DC2	Selective Leaching Aging Management Program	1
		TS1.DC3	One-Time Inspection Program	1
		TS1.ID11	Reactor Internals Aging Management Program	2
	TS1.ID5	Cable Aging Management	1	
	Work Orders		60031221, 60034485, 60065353, 60075341, 60075342, 60075351, 64006180, 64012392, 64173461, 64175540	