



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

August 26, 2016

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

SUBJECT: DIABLO CANYON POWER PLANT – NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000275/2016009; 05000323/2016009

Dear Mr. Halpin:

On July 14, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed a problem identification and resolution biennial inspection at the Diablo Canyon Power Plant. The inspection team documented the results of this inspection in the enclosed inspection report.

Based on the inspection sample, the inspection team determined that Diablo Canyon's corrective action program, and your staff's implementation of the corrective action program, were adequate to support nuclear safety.

In reviewing your corrective action program, the team assessed how well your staff identified problems at a low threshold, your staff's implementation of the station's process for prioritizing and evaluating these problems, and the effectiveness of corrective actions taken by the station to resolve these problems. The team also evaluated other processes your staff used to identify issues for resolution. These included your use of audits and self-assessments to identify latent problems and your incorporation of lessons learned from industry operating experience into station programs, processes, and procedures. The team determined that your station's performance in each of these areas supported nuclear safety.

Finally, the team determined that your station's management maintains a safety-conscious work environment in which your employees are willing to raise nuclear safety concerns through at least one of the several means available.

NRC inspectors documented one finding (with two examples) of very low safety significance (Green) in this report. This finding involved a violation of NRC requirements. If you contest the violation or significance of the NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement; and the NRC resident inspector. If you disagree with the cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your

E. Halpin

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disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk; with copies to the Regional Administrator, Region IV; and the NRC resident inspector at the Diablo Canyon Power Plant.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA Eric Ruesch Acting for Thomas Hipschman/

Thomas R. Hipschman, Team Leader
Inspection Program and Assessment Team
Division of Reactor Safety

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

Enclosure:
Inspection Report 05000275/2016009;
05000323/2016009
w/ Attachments:
1. Supplemental Information
2. Information Request

cc w/ encl: Electronic Distribution

E. Halpin

- 2 -

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Letter to Edward D. Halpin from Thomas R. Hipschman dated August 26, 2016

SUBJECT: DIABLO CANYON POWER PLANT – NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000275/2016009; 05000323/2016009

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Dockets: 05000275; 05000323

Licenses: DPR-80; DPR-82

Report: 05000275/2016009; 0500323/2016009

Licensee: Pacific Gas and Electric Company

Facility: Diablo Canyon Power Plant, Units 1 and 2

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

Dates: June 27 through July 14, 2016

Team Lead: H. Freeman, Senior Reactor Inspector

Inspectors: J. Larsen, Senior Physical Security Inspector
S. Makor, Reactor Inspector
J. Reynoso, Acting Senior Resident Inspector

Approved By: T. Hipschman, Team Leader
Inspection Program and Assessment Team
Division of Reactor Safety

Enclosure

SUMMARY

IR 05000275/2016009; 05000323/2016009; 06/27/2016 – 07/14/2016; Diablo Canyon Power Plant; Problem Identification and Resolution (Biennial) and Follow-up of Events and Notices of Enforcement Discretion.

The inspection activities described in this report were performed between June 27 and July 14, 2016, by three inspectors from the NRC's Region IV office and a resident inspector at the Diablo Canyon Power Plant. The report documents one finding (with two examples) of very low safety significance (Green). This finding involved a violation of NRC requirements. The significance of inspection findings are indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using IMC 0609, "Significance Determination Process." Cross-cutting aspects are determined using IMC 0310, "Components Within the Cross Cutting Areas." All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

Assessment of Problem Identification and Resolution

Based on its inspection sample, the team concluded that the licensee maintained a corrective action program in which individuals generally identified issues at an appropriately low threshold. Once entered into the corrective action program, the licensee generally evaluated and addressed these issues appropriately and timely, commensurate with their safety significance. The licensee's corrective actions were generally effective, addressing the causes and extents of condition of problems.

The licensee appropriately evaluated industry operating experience for relevance to the facility and entered applicable items in the corrective action program. The licensee incorporated industry and internal operating experience in its root cause and apparent cause evaluations. The licensee performed effective and self-critical nuclear oversight audits and self-assessments. The licensee maintained an effective process to ensure significant findings from these audits and self-assessments were addressed.

The licensee maintained a safety-conscious work environment in which personnel were willing to raise nuclear safety concerns without fear of retaliation.

Cornerstone: Mitigating Systems

- Green. The inspectors assessed a self-revealed, non-cited violation of Technical Specification 5.4.1.a, "Procedures," for the licensee's failure to implement properly preplanned maintenance procedures that affected the performance of safety-related equipment. Specifically, two maintenance procedures associated with the emergency diesel generators' fuel injectors lacked adequate details on specific key mechanical parameters (capscrew bolt torque setup and fuel injection pump alignment) to ensure that maintenance activities were performed in a manner adequate to the circumstances. In both examples, the licensee entered the issues into the corrective action program and corrected the condition to restore the emergency diesel generators to an operable status.

This finding was more than minor because it was associated with the procedure quality attribute of the Mitigating Systems cornerstone and affects the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," issued June 19, 2012, the inspectors determined the finding was of very low safety significance (Green) because the finding did not represent the loss of a system or function, the loss of a train of a technical specification safety system for greater than its allowed outage time, or the loss of a non-technical specification high-safety-significant system for greater than 24 hours. This finding had a cross-cutting aspect in the area of human performance associated with work management – "organization implements a process of planning, controlling, and executing work activities such that nuclear safety is the overriding priority." Specifically, work on the emergency diesel generators fuel oil system components was not effectively planned and executed by incorporating conditions to ensure a successful outcome [H.5]. (Section 4OA2.5)

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution (71152)

The team based the following conclusions on a sample of corrective action documents that were open during the assessment period, which ranged from September 12, 2014, to the end of the on-site portion of this inspection on July 14, 2016.

.1 **Assessment of the Corrective Action Program Effectiveness**

a. Inspection Scope

The team reviewed approximately 175 condition reports (known as notifications), including their associated root cause analyses and apparent cause evaluations, from the nearly 48,000 that the licensee had initiated or closed between September 12, 2014, and July 14, 2016. The majority of these (approximately 40,000) were lower-level notifications that did not require any type of cause evaluations.

The corrective action program is a risk-informed, risk-driven process for identifying, evaluating, and resolving problems, issues, and concerns based on potential consequence and probability of recurrence. It encompasses problem identification and resolution, including equipment, programmatic, organizational, and human performance issues. All issues are entered into the corrective action program as notifications. On-shift operations personnel review the notifications to assess operability impacts on safety-related equipment. Notifications are subsequently reviewed by a management review team and classified by safety-significance and actions for evaluation and resolution.

The inspection sample focused on higher-significance notifications for which the licensee evaluated and took actions to address the cause of the condition. In performing its review, the team evaluated whether the licensee had properly identified, characterized, and entered issues into the corrective action program, and whether the licensee had appropriately evaluated and resolved the issues in accordance with established programs, processes, and procedures. The team also reviewed these programs, processes, and procedures to determine if any issues existed that may impair their effectiveness.

The team reviewed a sample of performance metrics, system health reports, operability determinations, self-assessments, trending reports and metrics, and various other documents related to the licensee's corrective action program. The team evaluated the licensee's efforts in determining the scope of problems by reviewing selected logs, work orders, self-assessment results, audits, system health reports, action plans, and results from surveillance tests and preventive maintenance tasks. The team reviewed daily notifications and attended the licensee's daily notification review team (DRT) and notification review team (NRT) meetings to assess the reporting threshold and prioritization efforts, and to observe the corrective action program's interfaces with the

operability assessment and work control processes. The team's review included an evaluation of whether the licensee considered the full extent of cause and extent of condition for problems, as well as a review of how the licensee assessed generic implications and previous occurrences of issues. The team assessed the timeliness and effectiveness of corrective actions, completed or planned, and looked for additional examples of problems similar to those the licensee had previously addressed. The team conducted interviews with plant personnel to identify other processes that may exist where problems may be identified and addressed outside the corrective action program.

The team reviewed corrective action documents that addressed past NRC-identified violations to evaluate whether corrective actions addressed the issues described in the inspection reports. The team reviewed a sample of closed corrective actions to other corrective action documents to ensure that the ultimate corrective actions remained appropriate and timely.

The team considered risk insights from both the NRC's and Diablo Canyon Power Plant's risk models to focus the sample selection and plant tours on risk-significant systems and components. The team focused a portion of its sample on the safety-related 120V and 480V distribution systems, and containment fan coolers, which the team selected for five-year in-depth review. The team conducted walk-downs of this system and other plant areas to assess whether licensee personnel identified problems at a low threshold and entered them into the corrective action program.

b. Assessments

1. Effectiveness of Problem Identification

During the 22-month inspection period, licensee staff generated approximately 48,000 notifications. The team determined that most conditions that required generation of a notification by Procedure OM7.ID1, "Problem Identification and Resolution," had been appropriately entered into the corrective action program.

Overall, the team concluded that the licensee generally maintained a low threshold for the formal identification of problems and entry into the corrective action program for evaluation. Licensee personnel initiated nearly 2,200 notifications per month during the inspection period. All of the personnel interviewed by the team understood the requirements for notification initiation; all expressed a willingness to enter newly identified issues into the corrective action program at a very low threshold.

2. Effectiveness of Prioritization and Evaluation of Issues

The sample of notifications reviewed by the team focused primarily on issues screened by the licensee as having higher-level significance, including those that received cause evaluations, those classified as significant conditions adverse to quality, and those that required engineering evaluations. The team also reviewed a number of notifications that included or should have included immediate operability

determinations to assess the quality, timeliness, and prioritization of these determinations.

The team noted two examples during the assessment period where the licensee had failed to properly evaluate conditions adverse to quality:

- The NRC documented a non-cited violation in 05000275/2015004-02 for the licensee's failure to determine the cause of a significant condition adverse to quality and to take corrective actions taken to prevent recurrence associated with multiple vibration-induced failures of a weld on a residual heat removal relief valve.
- The NRC documented a non-cited violation in 05000275; 05000323/2016007-04 for the licensee's failure to evaluate the extent of condition for a degraded condition on a nonsafety-related 4160 Vac breaker associated with a cracked holding pawl which could have impacted similar safety-related breakers.

Overall, the team determined that the licensee's process for screening, prioritizing, and evaluating issues that had been entered into the corrective action program supported nuclear safety. The licensee's operability determinations were consistent, accurately documented, and completed in accordance with procedures.

3. Effectiveness of Corrective Actions

In general, the corrective actions identified by the licensee to address adverse conditions were effective. The team noted two instances during the assessment period in which the licensee had failed to properly implement corrective actions:

- The NRC documented a finding in 05000275; 05000323/2015002-06 for the licensee's failure to fully implement corrective actions associated with high voltage insulator flashover which resulted in loss of 230 kV offsite power and start of emergency diesel generators.
- The NRC documented a non-cited violation in 05000275; 05000323/2016007-01 for the licensee's failure to assure that the lack of design verification of 460 Vac motors, which could be overloaded at the maximum allowable diesel generator frequency, was promptly corrected after having been identified in a 2013 apparent cause evaluation and again in a 2015 self-assessment.

Overall, the team concluded that the licensee generally identified effective corrective actions for the problems evaluated in the corrective action program. The licensee generally implemented these corrective actions in a timely manner, commensurate with their safety significance, and reviewed the effectiveness of the corrective actions appropriately.

.2 Assessment of the Use of Operating Experience

a. Inspection Scope

The team examined the licensee's program for reviewing industry operating experience, including reviewing the governing procedures. The team reviewed a sample of approximately 14 industry operating experience communications and the associated site evaluations to assess whether the licensee had appropriately assessed the communications for relevance to the facility. The team also reviewed assigned actions to determine whether they were appropriate.

b. Assessment

Overall, the team determined that the licensee appropriately evaluated industry operating experience for its relevance to the facility. Operating experience information was incorporated into plant procedures and processes as appropriate.

The team further determined that the licensee appropriately evaluated industry operating experience when performing root cause analysis and apparent cause evaluations. The licensee appropriately incorporated both internal and external operating experience into lessons learned for training and pre-job briefs.

.3 Assessment of Self-Assessments and Audits

a. Inspection Scope

The team reviewed a sample of licensee self-assessments and audits to assess whether the licensee was regularly identifying performance trends and effectively addressing them. The team also reviewed audit reports to assess the effectiveness of assessments in specific areas. The specific self-assessment documents and audits reviewed are listed in Attachment 1.

b. Assessment

Overall, the team concluded that the licensee had an effective self-assessment and audit process. The team determined that self-assessments were self-critical and thorough enough to identify deficiencies.

.4 Assessment of Safety-Conscious Work Environment

a. Inspection Scope

The team interviewed 43 individuals in seven focus groups. The purpose of these interviews was (1) to evaluate the willingness of licensee staff to raise nuclear safety issues, either by initiating a notification or by another method, (2) to evaluate the perceived effectiveness of the corrective action program at resolving identified problems, and (3) to evaluate the licensee's safety-conscious work environment. The focus group participants included personnel from operations, security, engineering, instrumentation

and control, electrical maintenance, and contractor organization. The focus group participants were randomly selected in order to obtain a representative opinion for the organization. At the start of each interview, the team verified that no supervisors had been selected to participate in order to minimize the members' hesitancy to share their opinions. To supplement these focus group discussions, the team interviewed the employee concerns program manager to assess his perception of the site employees' willingness to raise nuclear safety concerns. The team reviewed the employee concerns program case log and select case files. The team also reviewed the minutes from the licensee's most recent safety culture monitoring panel meetings.

b. Assessment

1. Willingness to Raise Nuclear Safety Issues

All individuals interviewed indicated that they would raise nuclear safety concerns. All felt that their management was receptive to nuclear safety concerns and was willing to address them promptly. All of the interviewees further stated that if they were not satisfied with the response from their immediate supervisor, they had the ability to escalate the concern to a higher organizational level. Most expressed positive experiences after raising issues to their supervisors. All expressed positive experiences documenting issues in notifications. While little time had elapsed since Pacific Gas and Electric Company had announced their decision not to pursue license renewals, none of those interviewed had seen any change in the prioritization of concerns or in the adequacy or timeliness of implementing corrective actions.

2. Employee Concerns Program

All interviewees were aware of the employee concerns program. Most explained that they had heard about the program through various means, such as posters, training, presentations, and discussion by supervisors or management at meetings. All interviewees stated that they would use employee concerns if they felt it was necessary. All expressed confidence that their confidentiality would be maintained if they brought issues to employee concerns.

3. Preventing or Mitigating Perceptions of Retaliation

When asked if there have been any instances where individuals experienced retaliation or other negative reaction for raising issues, all individuals interviewed stated that they had neither experienced nor heard of an instance of retaliation, harassment, intimidation or discrimination at the site. The team determined that processes in place to mitigate these issues were being successfully implemented.

.5 Findings

Inadequate Maintenance Procedure Affected the Performance of Safety-Related Emergency Diesel Generator

Introduction. The inspectors assessed a Green, self-revealed, non-cited violation of Technical Specification 5.4.1.a, "Procedures," for the licensee's failure to implement properly preplanned maintenance procedures that affected the performance of safety-related equipment. Specifically, two maintenance procedures associated with the emergency diesel generators' fuel injectors lacked adequate details on specific key mechanical parameters (capscrew bolt torque setup and fuel injection pump alignment) to ensure that maintenance activities were performed in a manner adequate to the circumstances.

Description. During a review of root cause evaluations associated with the emergency diesel generators' fuel oil system, the inspectors noted inadequate maintenance procedures were identified as a major cause in circumstances that affected the operability of emergency diesel generators.

The inspectors identified two examples where the licensee had failed to properly implement work instructions to ensure proper preloading on fuel oil header capscrew torque and bolting connections, and to provide adequate maintenance procedures for specific checks on alignment and freedom of motion associated with emergency diesel generator (EDG) fuel injection pump. The following events were considered by the team:

- Concurrent inoperability of two of three Unit 2 EDGs resulting in an unplanned Unit 2 shutdown
- A Unit 1 EDG failure to start during a manual test resulting in an unplanned technical specification entry

In the first example, during a maintenance outage of emergency diesel generator 2-2 on August 23, 2014, the EDG fuel oil system, maintenance technicians found the inlet-to-fuel-header capscrew on Cylinder 1L broken. The licensee found a second capscrew on the EDG 2-3 inlet-to-fuel-header on cylinder 8L cracked during their extent of condition review. That resulted in a concurrent inoperability of two emergency diesels. The licensee concluded inadequate maintenance instructions did not provide details on bolting connection fit-up and proper bolt-up sequence. As a result, the final bolted connection configuration did not have the required gasket crush for a metal-to-metal connection or adequate preload to avoid capscrew fatigue failure. As a corrective action, the licensee revised maintenance procedures with updated vendor maintenance instructions, upgraded capscrew torque values, and provided specific installation sequence into maintenance procedures.

In the second example, emergency diesel generator 1-1 failed to start on September 9, 2015, during a manual test so operations declared the diesel inoperable. The licensee's troubleshooting and extent of condition efforts concluded that the cause of the failure to

start was due to a failure of the EDG fuel oil system. The root cause attributed the failure of the fuel oil system was binding in fuel injection pumps. The licensee found that the procedures regarding the alignment and freedom of motion checks of EDG fuel injection pumps lacked specific criteria, resulting in the misalignment of fuel injection pumps on cylinders 1L, 4L, 1R, and 9R. The licensee initiated actions to revise fuel injection pump alignment and freedom of movement step to prevent reoccurrence.

The team reviewed the licensee's program associated with requirements that maintenance procedures be properly preplanned and performed on safety-related equipment to ensure it is returned to service fully restored to the correct configuration and confirm its operational readiness. Requirements are specified in the following plant standards:

- Procedure CF1.ID1, "Configuration Management," Revision 1
- Procedure AD13.ID4, "Post Maintenance Testing," Revision 22
- Program Directive, MA1, "Maintenance," Revision 5
- Program Directive, AD7, "Work Control," Revision 6
- Program Directive, AD1, "Administrative Controls Program," Revision 16

In particular, Program Directive MA1, Maintenance in Step 4.2.3 (e), "Control of Maintenance Activities," states in part,

Maintenance activities that could affect the proper functioning of quality-related plant equipment shall be performed per approved procedures, instructions, or drawings appropriate to the circumstances.

The team determined the maintenance procedures associated with the emergency diesel generators was not effectively planned and executed by incorporating the key maintenance guidance and conditions to ensure a successful outcome regarding maintenance activities on fuel oil system components.

Analysis: The failure to have adequate work instructions or maintenance procedures to properly torque and perform alignment of components associated with the safety-related emergency diesel generator fuel oil system components is a performance deficiency. The performance deficiency was determined to be more than minor, and therefore a finding, because it was associated with the procedure quality attribute of the mitigating systems cornerstone and affects the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. Additionally, if left uncorrected, it had the potential to lead to a more significant safety concerns in that the failure to include these instructions in work orders could result in additional unplanned operability of emergency diesel generators. Specifically, the lack of adequate maintenance work procedures resulted in unsatisfactory completion of maintenance associated with safety-related diesel generator fuel oil components and affected the performance of safety-related diesel generator including unplanned unavailability. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," issued June 19, 2012, the inspectors determined the finding was of very low safety significance (Green) because the finding

did not represent the loss of a system or function, the loss of a train of a technical specification safety system for greater than its allowed outage time, or the loss of a non-technical specification high-safety-significant system for greater than 24 hours.

This finding had a cross-cutting aspect in the area of human performance associated with work management – “organization implements a process of planning, controlling, and executing work activities such that nuclear safety is the overriding priority.” Specifically, work on the emergency diesel generators fuel oil system components was not effectively planned and executed by incorporating the conditions to ensure a successful outcome [H.5].

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

Specific requirements that written maintenance procedures are properly preplanned and performed on safety-related equipment and to ensure it is returned service; fully restored to the correct configuration and confirm its operational readiness are specified in the plant standards, such as, Program Directive MA1, Maintenance in Step 4.2.3 (e), “Control of Maintenance Activities,” states in part,

Maintenance activities that could affect the proper functioning of quality related plant equipment shall be performed per approved procedures, appropriate to the circumstances.

Contrary to the above, two examples were identified where the licensee failed to appropriately or properly preplan and perform maintenance on safety-related equipment to ensure its operational readiness prior to January 7, 2016, as specified in the licensee’s program and procedures. To address this deficiency, the licensee revised the mechanical maintenance procedure associated with diesel engine fuel injection pump maintenance (MP M-21.11, Revision 15, dated January 7, 2016). Because the licensee entered the issue into their corrective action program as Notifications 50652094 and 50804873 and because the finding is of very low safety significance (Green), this violation is being treated as an NCV, consistent with Section 2.3.2.a of the NRC Enforcement Policy: NCV 05000275; 05000323/2016009-01, “Inadequate Maintenance Procedure affected the Performance of Safety-Related Emergency Diesel Generator.”

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

(Closed) LER 05000323/2-2014-002-00 and -01: Unit 2 Plant Shutdown Required by Technical Specifications

Inspection Scope

On August 13, 2014, while performing scheduled maintenance on Unit 2 emergency diesel generator 2-2, the licensee identified a failed inlet-to-fuel header capscrew on cylinder 1L. As part of subsequent inspections to determine whether similar conditions existed on any of the other plant diesel generator, a degraded capscrew was identified on EDG 2-3 cylinder 8L. Emergency diesel generator 2-3 was declared inoperable at 4:31 p.m. on August 14, 2014, resulting in two of three EDGs being inoperable at the same time. Technical Specifications require ensuring at least two EDGs are operable within 2 hours or be in Mode 3 within the following 6 hours. Although the capscrew was replaced within 2 hours, during restoration of this diesel, a fuel oil leak from a fuel oil booster pump was identified and resulted in a Unit 2 plant shutdown.

Corrective actions included replacement of all capscrew with an improved material design and incorporation of updated vendor guidance and update fuel system priming instructions into station procedures.

This issue was reviewed by the NRC and as documented in NRC Inspection Report 05000275/2016009, 05000323/2016009, the inspectors identified one non-cited violation, NCV 05000275; 05000323/2016009-01, "Inadequate Maintenance Procedure affected the Performance of Safety-Related Emergency Diesel Generator." All corrective actions and required responses have been completed.

No additional deficiencies were identified during the review of the licensee event report.

This licensee event report is closed.

40A6 Meetings, Including Exit

Exit Meeting Summary

On July 14, 2016, the inspectors presented the inspection results to Mr. E. Halpin, Senior Vice President, Generation and Chief Nuclear Officer, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

ATTACHMENTS:

1. Supplemental Information
2. Information Request

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

T. Baldwin, Director, Site Services
M. Barnby, Health Physicist, Radiation Protection
R. Burnside, Manager, Employee Concerns Program
K. Bych, Manager, Technical Support Engineering
A. Clark, Senior Engineer, Design Engineering
J. Cobbs, Shift Manager, Operations
K. Cortese, Senior Manager, Station Director Support
D. Evans, Director, Security & Emergency Services
M. Frauenheim, Manager, Performance Improvement
N. Gaudiuso, Manager, Procurement and Document Services
P. Gerfen, Station Director
E. Halpin, Sr. Vice President, Chief Nuclear Officer
H. Hamzehee, Manager, Regulatory Services
C. Harbor, Director, Compliance Alliance and Risk
A. Heffner, NRC Interface, Regulatory Services
T. Irving, Manager, Radiation Protection
K. Johnston, Director, Operations
S. Kirven, Manager, Security
S. LaForce, Supervisor, Nuclear Corrective Actions Programs
B. Lopez, Engineer, Regulatory Services
J. Love, Maintenance Supervisor, Maintenance
M. McCoy, NRC Interface, Regulatory Services
C. McCune, Engineer, Engineering Fix It Now
J. Morris, Supervisor Compliance, Regulatory Services
E. Nelson, Director, Performance Improvement and Regulatory Projects
P. Nugent, Director, Quality Verification
D. Overland, Assistant Director, Maintenance Services
L. Pulley, Manager, Used Fuel Storage Project
D. Wells, Investigator, Employee Concerns Program
J. Welsch, Vice President Nuclear Generation
M. Zawalick, Chief of Staff
B. Zimkowski, Manager, Security

Other Personnel

D. Glassic, Institute of Nuclear Power Operations
T. Laursen, PI Manager, Fluor/ISS

NRC Personnel

J. Clark, Deputy Director, Division of Reactor Safety, Region IV

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000275;
05000323/2016009-01 NCV Inadequate Maintenance Procedure affected the Performance of Safety-Related Emergency Diesel Generator (4OA2.5)

Closed

05000323/2-2014-002-00 and -01 LER Unit 2 Plant Shutdown Required by Technical Specifications

LIST OF DOCUMENTS REVIEWED

Condition Report (Notification)

50277252	50277252	50302227	50366405	50453829	50465798
50474431	50477501	50477788	50478615	50478616	50478719
50482894	50483146	50483205	50483320	50485827	50486469
50486697	50488636	50488952	50489181	50495206	50495383
50504240	50518972	50519222	50522876	50523403	50523405
50535586	50539235	50543039	50560871	50570487	50570623
50570623	50571052	50576964	50578194	50578636	50585100
50589840	50590243	50595324	50595473	50599765	50599999
50600289	50600810	50607202	50610941	50611376	50622560
50634240	50647974	50652048	50652094	50652322	50654950
50655170	50656004	50656004	50656222	50656750	50656762
50656888	50657159	50657637	50661187	50661720	50661773
50662278	50662278	50662279	50662496	50662498	50662498
50663589	50663810	50669226	50669238	50669932	50671672
50673779	50676359	50680117	50680117	50680273	50680273
50682569	50684755	50685679	50686222	50687469	50690586
50696806	50697379	50697653	50698510	50700965	50700965
50701391	50701391	50702993	50702993	50704194	50704239
50709968	50710852	50710852	50778755	50795499	50802635
50803102	50803333	50804873	50808493	50810838	50811631
50814734	50815101	50815389	50820100	50820370	50820643
50820879	50822426	50824438	50826046	50826190	50826542
50826793	50826941	50826941	50831907	50832266	50832627
50834182	50835394	50835394	50835699	50835699	50835966
50836374	50836689	50836859	50836940	50836940	50838071
50839137	50839242	50839491	50840069	50840266	50840498
50841025	50842765	50845877	50849213	50849543	50849573
50849609	50857690	50858909	50858909	50858909	50859370
50859460	50859460	50859460	50859489	50859648	

(* - Indicates condition report (notification) initiated as a result of inspection activity)

Calculations

<u>Number</u>	<u>Title</u>	<u>Revision</u>
359-DC	SSC-Startup Offsite Power Circuit	10
M-0786	Diesel Generator, Fuel Storage Tanks	18
M-786	EDG Fuel Oil Storage	17

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Date</u>
	OR-Survey-15	June 9, 2015
	Conduct of Operations Assist Visit	July 2015
69-10813-1	Operating Standing Orders	March 10, 2016
DCL-87-102	Long Term Seismic Program- Information on Seismic Fragility Analysis	May 6, 1987
DN 50697867	2015 NRC ISFSI Routine Inspection QHSA	April 15, 2015
	2014 DCPD Security Programs Audit Report	
	2015 Fire Protection Audit Report	
	2015 Emergency Preparedness Audit Report	
	2015 Security Program Audit Report	
	2016 Radiation Protection Programs Audit Report	
SAPN 50828705	Pre-PIR Inspection Self-Assessment Report	

Procedure

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AD1	Administrative Controls Program	16
AD13.ID4	Post-Maintenance Testing	23
AD7.ID2	Daily Notification Review Team (DRT) & Standard Plant Priority Assignment Scheme	25
CF3.ID4	Design Calculations	23

<u>Procedure</u>		
<u>Number</u>	<u>Title</u>	<u>Revision</u>
MA1	Maintenance Program Directives	5
MP E-62.3	Tap Changer Functional Test for Standby-Startup Transformer 21	1
OM11.DC7	Conduct of Security	14
OM4.ID14	Notification Review Team	26
OM4.ID3	Operating Experience Program	27
OM7	Corrective Action Program	6
OM7.ID1	Problem Identification and Resolution	48, 49
OM7.ID12	Operability Determinations	34
OM7.ID3	Root Cause Evaluations	42
OM7.ID4	Apparent Cause Evaluations	33
OP J-2	Offsite Power Sources	10
OP J-2: VIII	Guidelines for Reliable Transmission Service for DCPD	28
RCP D-220	Control of Access to High, Locked High, and Very High Radiation Areas	
SP401	Security Access Control and Personnel Identification	44
STP I-1C	Routine Weekly Checks Required by Licenses	112
STP I-37-N32.B	Source Range N32 Channel Calibration	9
STP M-70B	Inspection and Testing of Fire Dampers	18
TS5.DC6	Technical Task Error Prevention	4
TS5.DC6	Technical Task Error Prevention	4

Licensee Event Report

<u>Number</u>	<u>Description</u>	<u>Date</u>
2014-002-01	Unit 2 Plant Shutdown Required by Technical Specifications	May 7, 2015
2015-001-01	Both Trains of RHR inoperable due to Circumferential Crack on Socket Weld	February 11, 2016
390/2016-003-00	(Watts Bar Nuclear Plant) Technical Specification Surveillance Requirement Not During Emergency Core Cooling System Venting	

Information Request
Biennial Problem Identification and Resolution Inspection
Diablo Canyon Power Plant
April 14, 2016
Inspection Report: 50-275/2016009; 50-323/2016009
On-site Inspection Dates: June 27 – July 15, 2016

This inspection will cover the period from September 12, 2014, through July 15, 2016. All requested information is limited to this period or to the date of this request unless otherwise specified. To the extent possible, the requested information should be provided electronically in word-searchable Adobe PDF (preferred) or Microsoft Office format. Any sensitive information should be provided in hard copy during the team's first week on site; do not provide any sensitive or proprietary information electronically.

Lists of documents ("summary lists") should be provided in a similarly sortable format. Please be prepared to provide any significant updates to this information during the team's first week of on-site inspection. As used in this request, "corrective action documents" refers to condition reports, notifications, action requests, cause evaluations, and/or other similar documents, as applicable to Diablo Canyon Power Plant.

Please provide the following information no later than May 30, 2016:

1. Document Lists

Note: For these summary lists, please include the document/reference number, the document title, initiation date, current status, and long-text description of the issue.

- a. Summary list of all corrective action documents related to significant conditions adverse to quality that were opened, closed, or evaluated during the period
- b. Summary list of all corrective action documents related to conditions adverse to quality that were opened or closed during the period
- c. Summary lists of all corrective action documents that were upgraded or downgraded in priority/significance during the period (these may be limited to those downgraded from, or upgraded to, apparent-cause level or higher)
- d. Summary list of all corrective action documents initiated during the period that "roll up" multiple similar or related issues, or that identify a trend
- e. Summary lists of operator workarounds, operator burdens, temporary modifications, and control room deficiencies (1) currently open and (2) that were evaluated and/or closed during the period
- f. Summary list of safety system deficiencies that required prompt operability determinations (or other engineering evaluations) to provide reasonable assurance of operability

- g. Summary list of plant safety issues raised or addressed by the Employee Concerns Program (or equivalent) (sensitive information should be made available during the team's first week on site—do not provide electronically)

2. Full Documents with Attachments

- a. Root Cause Evaluations completed during the period; include a list of any planned or in progress
- b. Apparent Cause Evaluations completed during the period; include a list of any planned or in progress
- c. Quality Assurance audits performed during the period
- d. Audits/surveillances performed during the period on the Corrective Action Program, of individual corrective actions, or of cause evaluations
- e. Functional area self-assessments and non-NRC third-party assessments (e.g., peer assessments performed as part of routine or focused station self- and independent assessment activities; do not include INPO assessments) that were performed or completed during the period; include a list of those that are currently in progress
- f. Any assessments of the safety-conscious work environment
- g. Corrective action documents generated during the period associated with the following:
 - i. NRC findings and/or violations issued to Diablo Canyon Power Plant
 - ii. Licensee Event Reports issued by Diablo Canyon Power Plant
- h. Corrective action documents generated for the following, if they were determined to be applicable to Diablo Canyon Power Plant (for those that were evaluated but determined not to be applicable, provide a summary list):
 - i. NRC Information Notices, Bulletins, and Generic Letters issued or evaluated during the period
 - ii. Part 21 reports issued or evaluated during the period
 - iii. Vendor safety information letters (or equivalent) issued or evaluated during the period
 - iv. Other external events and/or Operating Experience evaluated for applicability during the period

- i. Corrective action documents generated for the following:
 - i. Emergency planning drills and tabletop exercises performed during the period
 - ii. Maintenance preventable functional failures which occurred or were evaluated during the period
 - iii. Adverse trends in equipment, processes, procedures, or programs that were evaluated during the period
 - iv. Action items generated or addressed by offsite review committees during the period

3. Logs and Reports

- a. Corrective action performance trending/tracking information generated during the period and broken down by functional organization (if this information is fully included in item 3.c, it need not be provided separately)
- b. Corrective action effectiveness review reports generated during the period
- c. Current system health reports, Management Review Meeting package, or similar information; provide past reports as necessary to include ≥ 12 months of metric/trending data
- d. Radiation protection event logs during the period
- e. Security event logs and security incidents during the period (sensitive information should be made available during the team's first week on site—do not provide electronically)
- f. Employee Concern Program (or equivalent) logs (sensitive information should be made available during the team's first week on site—do not provide electronically)
- g. List of training deficiencies, requests for training improvements, and simulator deficiencies for the period

Note: For items 3.d–3.g, if there is no log or report maintained separate from the corrective action program, please provide a summary list of corrective action program items for the category described.

4. Procedures

Note: For these procedures, please include all revisions that were in effect at any time during the assessment period.

- a. Corrective action program procedures, to include initiation and evaluation procedures, operability determination procedures, apparent and root cause evaluation/determination procedures, and any other procedures that implement the corrective action program at Diablo Canyon Power Plant
- b. Quality Assurance program procedures (specific audit procedures are not necessary)

- c. Employee Concerns Program (or equivalent) procedures
- d. Procedures which implement/maintain a Safety Conscious Work Environment

5. Other

- a. List of risk-significant components and systems, ranked by risk worth
- b. Organization charts for plant staff and long-term/permanent contractors
- c. Electronic copies of the UFSAR (or equivalent), technical specifications, and technical specification bases, if available
- d. For each day the team is on site:
Note: These items may be provided on a weekly or daily basis after the team arrives on site.
 - i. Planned work/maintenance schedule for the station
 - ii. Schedule of management or corrective action review meetings (e.g., operations focus meetings, notification screening meetings, CARBs, MRMs, challenge meetings for cause evaluations, etc.)
 - iii. Agendas for these meetings

All requested documents should be provided electronically where possible. Regardless of whether they are uploaded to an internet-based file library (e.g., Certrec's IMS), please provide copies on CD or DVD. One copy of the CD or DVD should be provided to the resident inspector at Diablo Canyon Power Plant; three additional copies should be provided to the team lead, to arrive no later than May 30, 2016:

Harry A. Freeman
U.S. NRC Region IV
1600 East Lamar Blvd.
Arlington, TX 76011-4511

PAPERWORK REDUCTION ACT STATEMENT

This request 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.