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

October 22, 2014

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

SUBJECT: DIABLO CANYON POWER PLANT – NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000275/2014007 AND 05000323/2014007

Dear Mr. Halpin

On September 11, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed a biennial problem identification and resolution inspection at your Diablo Canyon Power Plant, Units 1 and 2. At the conclusion of the inspection, the inspection team discussed the results of this inspection with Mr. Barry Allen, Site Vice President, and other members of your staff. The team documented the results of this inspection in the enclosed 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.

The NRC inspection team documented three findings of very low safety significance (Green) in this report, each of which involved a violation of NRC requirements. If you contest the violations or their significance, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV, the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC resident inspector at the Diablo Canyon Power Plant.

If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region IV, and the NRC resident inspector at the Diablo Canyon Power Plant

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

Sincerely,

/RA/

Geoffrey B. Miller, Chief
Technical Support Branch
Division of Reactor Safety

Docket Nos.: 50-275 & 50-323
License Nos.: DPR-80 & DPR-82

Enclosure: Inspection Report 05000275/2014007
and 05000323/2014007
w/Attachment: Supplemental Information

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Letter to Edward D. Halpin from Geoffrey B. Miller, dated October 22, 2014

SUBJECT: DIABLO CANYON POWER PLANT – NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000275/2014007 AND 05000323/2014007

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Resident Inspector (John.Reynoso@nrc.gov)
Administrative Assistant (Madeleine.Arel-Davis@nrc.gov)
Branch Chief, DRP/A (Wayne.Walker@nrc.gov)
Senior Project Engineer, DRP/A (Ryan.Alexander@nrc.gov)
Acting Senior Project Engineer, DRP/A (Theresa.Buchanan@nrc.gov)
Project Engineer, DRP/A (Thomas.Sullivan@nrc.gov)
Public Affairs Officer (Victor.Dricks@nrc.gov)
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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket(s):	50-275 & 50-323
License:	DPR-80 & DPR-82
Report:	05000275/2014007 & 05000323/2014007
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, California
Dates:	August 25 through September 11, 2014
Team Lead:	E. Ruesch, Branch Chief (Acting)
Inspectors:	C. Alldredge, Project Engineer M. Hayes, Operations Engineer T. Hipschman, Sr. Resident Inspector M. Keefe, Human Factors Specialist
Accompanying Personnel:	M. Anderson, Reactor Operations Engineer L. Micewski, Reactor Operations Engineer
Approved By:	G. Miller, Branch Chief Technical Support Branch Division of Reactor Safety

SUMMARY

IR 05000275/2014007 and 05000323/2014007; 03/23/2012 – 09/11/2014; DIABLO CANYON POWER PLANT; Problem Identification and Resolution (Biennial)

The inspection activities described in this report were performed between August 25 and September 11, 2014, by three inspectors from the NRC's Region IV office, a human factors analyst from NRC headquarters, and the senior resident inspector at Diablo Canyon. The report documents three findings of very low safety significance (Green), each of which was associated with a violation of NRC requirements. The significance of inspection findings is indicated by their color (Green, White, Yellow, or Red), which is determined using Inspection Manual Chapter 0609, "Significance Determination Process." Their cross-cutting aspects are determined using Inspection Manual Chapter 0310, "Aspects within the Cross-Cutting Areas." Violations of NRC requirements are dispositioned in accordance with the NRC Enforcement Policy. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

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. However, the team had concerns with the licensee's backlog of operable but degraded or nonconforming conditions. The team noted two specific examples where the licensee had taken inadequate interim or compensatory actions for longstanding degraded or nonconforming conditions.

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 team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," in that the licensee did not enter degraded conditions into the corrective action process. The first example of this violation occurred in ten identified instances from 2009 to 2012 when technicians failed to document degraded emergency diesel generator fuel injector nozzles in the corrective action program. The second example occurred in July and August 2014 when engineering personnel failed to appropriately document loose bolts on 4.16kV breaker panels in the corrective action program. The licensee documented this issue in the corrective action program as SAPNs 50641514 and 50656750 and issued a communication to the station reminding

personnel of the requirement to initiate notifications even when problems are immediately resolved.

The failure to document unsatisfactory emergency diesel generator fuel injection nozzles and loose 4.16kV switchgear bolts in the corrective action program as required by procedure was a performance deficiency. The performance deficiency was more than minor because it was associated with the human performance attribute of the mitigating systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. It is therefore a finding. Using Inspection Manual Chapter 0609, Appendix A, the team determined that this finding was of very low safety significance (Green) because it did not result in the loss of operability or functionality of a system or train. The inspectors determined this finding has an identification cross-cutting aspect in the problem identification and resolution cross-cutting area because the organization failed to implement a corrective action program with a low threshold for identification (P.1). Specifically, personnel failed to recognize that identified deficiencies were deviations from standards and that degraded conditions were promptly documented in the corrective action program.

- Green. The team identified a Green non-cited violation of 10 CFR 50.36 for the licensee's failure to establish an appropriate surveillance test to demonstrate operability of its emergency diesel generators. After revising its emergency diesel generator loading analysis, the licensee failed to adjust the parameters for the full-load-reject surveillance to ensure the test was performed with the maximum anticipated electrical loading. After the team identified this violation, the licensee entered Surveillance Requirement 3.0.3 and documented the condition in its corrective action program as SAPNs 50657635 and 50657637.

  The licensee's failure to specify the "lowest functional capability or performance level of equipment required for safe operation of the facility" as required by 10 CFR 50.36 was a performance deficiency. This performance deficiency was more than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, the team determined that this finding was of very low safety significance (Green) because it did not result in the loss of operability or functionality of a system or train. This finding has a resolution cross-cutting aspect in the problem identification and resolution cross-cutting area because the licensee failed to take effective corrective actions to address the nonconservative surveillance parameters in a timely manner (P.3). Specifically, the licensee did not take appropriate interim corrective actions to mitigate the issue while more fundamental causes were being assessed.

- Green. The team identified a Green non-cited violation of 10 CFR Part 50 Appendix B Criterion XVI for the licensee's failure to take timely corrective actions. In 2011, the licensee identified a potential path for gas intrusion into the containment spray system, contrary to design basis requirements. The licensee took no interim or compensatory actions while planning its final corrective actions. The licensee documented this condition in its corrective action program as SAPN 50657636.

  The failure to take timely corrective actions as required by 10 CFR 50 Appendix B Criterion XVI was a performance deficiency. This performance deficiency was more than minor because it was associated with the design control attribute of the mitigating systems

cornerstone and it adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609 Appendix A, the team determined that this finding was of very low safety significance (Green) because it did not result in the loss of operability or functionality of a system or train. This finding has a conservative bias cross-cutting aspect in the human performance cross-cutting area because licensee personnel failed to use decision-making practices that emphasized prudent choices over those that were simply allowable (H.14). Specifically, licensee managers failed to take timely action to address degraded conditions commensurate with their safety significance.

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 March 23, 2012, to the end of the on-site portion of this inspection on September 11, 2014.

.1 Assessment of the Corrective Action Program Effectiveness

a. Inspection Scope

The team reviewed approximately 200 notifications (SAPNs), including associated root cause analyses and apparent cause evaluations, from approximately 62,000 that the licensee had initiated or closed between March 23, 2012, and September 11, 2014. The majority of these (approximately 40,000) documented lower-level conditions that did not require cause evaluations. These lower-level notifications were either closed to work orders or handled outside the corrective action program. The inspection sample focused on higher-significance condition reports for which the licensee performed evaluations 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 Condition Reports (CR) and attended the licensee's Notification Review Team (NRT), Daily Notification Review Team (DRT), Corrective Action Review Board (CARB), Performance Improvement Review Board (PIRB), and Plan of the Day (POD) meetings to assess the reporting threshold and prioritization efforts, and to observe the corrective action program's interfaces with the operability assessment, work control, and management 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 corrective actions closed to other corrective action documents to ensure that the ultimate corrective actions remained appropriate and timely. The team also reviewed a sample of SAPNs where the licensee had changed the significance level after initial classification to determine whether the level changes were in accordance with station procedure and whether the conditions were appropriately addressed.

The team considered risk insights from both the NRC's and Diablo Canyon'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 emergency diesel generator (EDG) systems, which the team selected for a five-year in-depth review. The team conducted walk-downs of the EDGs 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 thirty-month inspection period, licensee staff generated approximately 62,000 SAPNs. The team determined that most conditions that required generation of a condition report by the station's Program Directive OM7, "Corrective Action Program," and its progeny procedures had been appropriately entered into the corrective action program.

However, the team identified instances where the licensee had failed to properly identify conditions in accordance with procedures. These examples involved the failure of personnel to recognize a condition requiring initiation of a SAPN while performing maintenance, surveillance testing, or other work activities:

- Though work packages were generally well documented, the team identified several instances where comments were not identified in the remarks section or were unclear, and no SAPN was initiated. In one example, a work order noted that a procedure change was needed, but no SAPN was initiated to document the deficient procedure. This failure to initiate a notification as required by station procedures was a performance deficiency. However, because licensee personnel made the needed procedure change during a subsequent unrelated procedure revision, the team determined that this performance deficiency was minor as defined in Inspection Manual Chapter 0612. The licensee documented this performance deficiency in SAPN 50657104.

- The team identified two additional examples where the licensee did not enter degraded conditions identified during maintenance or troubleshooting into the corrective action process. The first example of this violation occurred in at least ten instances between 2009 to 2012 when technicians failed to document degraded emergency diesel generator fuel injector nozzles in the corrective action program. The second example occurred in July and August 2014 when engineering personnel failed to appropriately document loose bolts on 4.16kV breaker panels in the corrective action program. The team

determined that this performance deficiency was more than minor; it is further discussed in Section 4OA2.5.a below.

The team further identified that the licensee had failed to initiate a SAPN for an issue identified by the NRC during the 2012 problem identification and resolution inspection. During that inspection, the team identified "instances in which the licensee's efforts to evaluate and correct identified problems were documented in several notifications that in many cases were not referenced to each other." Though the licensee failed to document this in a notification as required by XI1.ID4, the team did not observe any current examples of the condition.

Overall, the team concluded that the licensee generally ensured personnel maintained a low threshold for the formal identification of problems and entry into the corrective action program for evaluation. Licensee personnel initiated over 2,000 SAPNs per month during the inspection period. Most of the personnel interviewed by the team understood the requirements for condition report initiation; most expressed a willingness to enter newly identified issues into the corrective action program at a very low threshold. However, in some cases-specifically in the cases discussed above relating to EDG fuel injector testing-personnel had failed to recognize that a test failure was a condition requiring documentation.

2. Effectiveness of Prioritization and Evaluation of Issues

The sample of SAPNs 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 to demonstrate operability or functionality of equipment. 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 that the licensee's evaluation and prioritization efforts had significantly improved over the inspection period. In 2013, the NRC, the licensee's quality verification (QV) organization, and industry peers each identified that the licensee's evaluation and prioritization of identified problems required improvement. Based on the inspection sample, the team concluded that the licensee's efforts to correct these identified performance gaps had been largely successful.

One notable example of this improvement involved the documentation of leaks from emergency diesel generator oil systems. The team identified that over the course of the inspection period, the licensee had used inconsistent methods to track and evaluate the effect of new and cumulative leaks of lube oil and fuel oil on the emergency diesel generators. Notifications initiated at the beginning of the inspection period tended to be qualitative, relying heavily on engineering judgment in documenting the licensee's evaluation of these leaks. More recent notifications identifying leakage tended to be more comprehensive, using quantitative evaluations and considering the aggregate impact of all leaks.

The team identified one example of a prioritization and evaluation deficiency that had not been corrected. Specifically, the licensee's methods of screening for maintenance-preventable functional failures was not consistent with station

procedures. However, the team found no examples where this inconsistent screening had led to misclassification of an equipment failure. Therefore, the team determined that this performance deficiency was minor as defined in Inspection Manual Chapter 0612. The licensee documented this inconsistent process in SAPN 50657101.

Overall, the team determined that the licensee's process for screening and prioritizing 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. The team noted significant improvement in evaluation processes over the inspection period.

3. Effectiveness of Corrective Actions

In general, the corrective actions identified by the licensee to address adverse conditions were effective. However, the team noted a number of instances in which there were significant delays in accomplishing corrective actions.

As of August 20, 2014, the licensee had 29 documented degraded or nonconforming conditions affecting safety-related equipment. The oldest of these was a condition that had been identified in June 2008 (2288 days old). The median age of the outstanding degraded or nonconforming conditions was 1176 days post-identification. The team reviewed a sample of these conditions and noted that some of the longstanding conditions (two of the seven reviewed) had no compensatory measures or interim corrective actions, or that the interim actions taken by the licensee were inadequate:

- On May 14, 2011, the licensee initiated SAPN 50408899 identifying the potential for gas intrusion into the containment spray system. The licensee's design basis requires preventing any ingestion of air into the pump suction during operation. On July 13, 2011, the licensee determined that no interim corrective actions were required while pursuing final resolution. Though the licensee has continued to evaluate its final actions to restore full qualification of the system, as of the conclusion of the on-site portion of this inspection the licensee had taken no actions to mitigate the nonconformance or to restore margin. This issue is further discussed as an NRC-identified finding in Section 4OA2.5.b, below.

- On January 4, 2011, the licensee initiated SAPN 50368801 documenting the NRC's identification of non-conservative diesel generator loading for full-load-rejection surveillance. This surveillance is required by the licensee's technical specifications to be performed every 24 months. As an interim action, the licensee performed a one-time test with more conservative electrical loading on the generator. However, no further compensatory measures were implemented. This issue is further discussed as an NRC-identified finding in Section 4OA2.5.c, below.

The team noted two additional instances of delays in implementing corrective actions following identification of problems:

- The licensee has experienced recurring reactor cavity seal leakage since 2004. Rather than replacing the leaking temporary seal with a permanent one, the licensee has been cleaning the leakage and replacing nuclear instruments when needed. The licensee currently plans to replace the seals during the next outage for each unit (1R19 and 2R19).

- The licensee has experienced several instances of arcing across high-voltage insulators due to the marine environment. The licensee's actions to address these "flashover" events included the implementation of a program to monitor environmental contamination of the insulators. In the 15 months between an October 2012 flashover event and a February 2014 flashover event, the licensee experienced challenges implementing this monitoring program with regard to lightning arrestors. As a result of inconsistent sampling, the licensee obtained misleading data, which led to a delay in full implementation of the monitoring program. However, the licensee determined that even if the contamination monitoring program had been fully effective, it would not have prevented the second flashover event—the program had been monitoring quantity of contamination only; it would not have identified the asymmetrical distribution of contamination that caused the 2014 flashover. These flashover events are further discussed in Section 4OA3 of this report.

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. However, as described above, the team noted that the licensee had a large number of longstanding degraded or nonconforming conditions, some of which had not been appropriately addressed by compensatory measures or interim corrective actions.

.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 19 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 noted that the licensee did not hold formal meetings to screen operating experience communications, which has the potential to create a lack of accountability in performing operating experience reviews that could prevent operating experience from being appropriately screened and integrated into plant processes. However, after meeting with members of the operating experience group, the inspectors concluded the operating experience program was consistently effective at screening operating experience and integrating it into plant processes without review meetings.

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.

The quality verification audits were generally comprehensive and often identified issues for improvement or corrective actions. The team noted that the licensee performs a large number of self-assessments of varying scope. Prior to this inspection, the licensee had identified that some of these self-assessments required improvement to bring them to the quality level of the audits. As a result, the licensee has implemented improvements to its self-assessment program. However, these improvements had not been in place long enough for the team to assess their effectiveness.

.4 Assessment of Safety-Conscious Work Environment

a. Inspection Scope

The team interviewed fifty-seven 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 condition report 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 Maintenance, including Maintenance Support; Operations, Operations Planning, and Operations Support; Radiation Protection and Chemistry; Design Engineering, Project Engineering, Systems Engineering, Technical Support Engineering, and the Licensing Basis Verification Project; Security; and contractors from Enercon Services, Inc. The individuals were selected randomly from specific workgroups based on parameters provided by the team. To supplement these focus group discussions, the team interviewed the Employee Concerns Program (ECP) manager to assess his perception of the site employees' willingness to raise nuclear safety concerns. The team also reviewed ECP files and other documents to assess the safety-conscious work environment (SCWE) at the site.

b. Assessment

1. Willingness to Raise Nuclear Safety Issues

All individuals interviewed indicated that they would raise nuclear safety concerns. Most felt that their management was receptive to nuclear safety concerns and was willing to address them promptly. Most 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. Individuals who had difficulty initiating notifications themselves expressed willingness to raise the issues to their supervisors with confidence that their supervisors would enter the issue into the licensee's corrective action program. All the individuals interviewed expressed positive experiences with bringing issues to their supervisors. All were aware of several other avenues for raising concerns, though the majority explained that because going through their supervisors and using the corrective action program had been effective, they had not had the need to use other avenues.

2. Employee Concerns Program

All interviewees were aware of the ECP. Most explained that they had heard about the program through various means, such as posters, training, presentations, the company website, and discussion by supervisors or management at meetings. Most did not have any personal experience with the ECP because, as noted above, they felt free to raise safety concerns to their supervisors; they did not need to use the ECP. However, there was a generally favorable impression of the program; everyone interviewed stated that they would feel comfortable using it if necessary. Of those who indicated that they had brought issues to the ECP in the past, all stated that the experience was positive and that they would have no issue using the ECP again if needed. None of the individuals interviewed were aware of any issues dealing with breaches of confidentiality by the ECP staff.

The team's review of a sample of ECP files determined that the files were complete. The licensee's ECP staff had fully investigated and documented the issues within the program.

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. Multiple interviewees stated that retaliation is not tolerated at Diablo Canyon.

4. Additional Observations

The team noted two deficiencies in the licensee's implementation of its safety culture or SCWE program requirements:

- Procedure OM16.ID1, "Nuclear Safety Culture and Safety Conscious Work Environment (SCWE)," Revision 5, provides that a Safety Culture assessment should be conducted biennially at the station. However, Diablo Canyon has not conducted a safety culture assessment since February 2012. The licensee identified this deficiency and entered it into the corrective action program as SAPN 50622606. The licensee is planning to perform an assessment in early 2015. The licensee used the results of a corporate survey performed in January 2014 and the results of nuclear safety culture monitoring panel meetings to verify no challenges exist in maintaining a safety-conscious work environment at Diablo Canyon.

- Procedure OM16.ID2, Revisions 1-4, specified that the nuclear safety culture monitoring panel and the safety culture leadership team were required to meet quarterly. Contrary to this procedure requirement, the station only conducted three safety culture monitoring panel meetings and two safety culture leadership team meetings in 2013. The licensee identified that though it had not been meeting procedure requirements, it had been meeting the industry safety culture guidelines of NEI 09-07. The licensee documented this deficiency in SAPN 50628120 and revised its procedure conform with industry recommendations.

The team determined that these two performance deficiencies were of minor significance as defined in NRC Inspection Manual Chapter 0612 Appendix B. The team found no evidence that these performance deficiencies adversely affected Diablo Canyon's safety-conscious work environment.

.5 Findings

a. Failure to Document Degraded Conditions in the Corrective Action Program

Introduction. The team identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," in that the licensee did not enter degraded conditions into the corrective action process. The first example of this violation occurred in ten identified instances from 2009 to 2012 when technicians failed to document degraded emergency diesel generator fuel injector nozzles in the corrective action program. The second example occurred in July and August 2014 when engineering personnel failed to appropriately document loose bolts on 4.16kV breaker panels in the corrective action program.

Description. The inspectors reviewed 20 emergency diesel generator work orders, which included maintenance procedure STP M-21-ENG.1, "Diesel Engine Generator Inspection (Every Refueling Outage)," performed between 2009 and 2014. The work orders comprised all six emergency diesel generators. Thirteen of the work orders

documented testing of the existing fuel injection nozzles as found data. The inspectors identified that in ten of the work orders dating from 2009 to 2012, one or more fuel injector nozzles were identified as unsatisfactory. In all cases, the unsatisfactory fuel injector nozzles were replaced with new ones, and tested satisfactorily. The inspectors noted that technicians did not document the failed injection nozzles in the corrective action program. Contrary to the requirements of Procedure OM7.ID1, "Problem Identification and Resolution," the licensee stated that it was unnecessary because the condition was identified within a maintenance period, and pre- and post-maintenance testing did not result in the emergency diesel generators being declared inoperable. The inspectors determined that in addition to being a procedure violation, the failure to document the degraded conditions of the fuel injectors prevented the licensee from evaluating the extent of the condition or performing trend analysis. The licensee documented this condition in SAPN 50656750 and on September 24, 2014, issued a department-level event report reminding personnel to initiate a notification even if an identified problem is immediately resolved.

From July 30 to August 1, 2014, during an investigation of loose bolts on 4.16kV breaker panels, engineering personnel failed to ensure separate notifications were written when multiple issues were identified as required by Procedure OM7.ID1. The licensee documented this issue in its corrective action program as SAPN 50641514 and wrote the required notifications. After writing the appropriate notifications, on August 5, 2014, the licensee identified an adverse trend related to 4.16kV breaker cover fasteners. This adverse trend was documented in Notification 50641971. Procedure OM7.ID1, "Problem Identification and Resolution," Section 10.2.7 requires that a notification be written when a component or system did not meet expectations as identified by adverse trends or individual observations. Technicians performing maintenance activities on the emergency diesel generators failed to document degraded fuel injector nozzles on at least ten occasions. Additionally, engineers evaluating loose bolts on safety-related 4.16kV switchgear failed to document degraded conditions on multiple occasions.

Analysis. The failure to document unsatisfactory emergency diesel generator fuel injection nozzles and loose 4.16kV switchgear bolts in the corrective action program as required by procedure was a performance deficiency. The performance deficiency was more than minor because it was associated with the human performance attribute of the mitigating systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. It is therefore a finding. Using Inspection Manual Chapter 0609, Appendix A, the team determined that this finding was of very low safety significance (Green) because it did not result in the loss of operability or functionality of a system or train. The inspectors determined this finding has an identification cross-cutting aspect in the problem identification and resolution cross-cutting area because the organization failed to implement a corrective action program with a low threshold for identification (P.1). Specifically, personnel failed to recognize that identified deficiencies were deviations from standards and that degraded conditions were promptly documented in the corrective action program.

Enforcement. Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50 Appendix B Criterion XVI requires in part that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Contrary to this requirement, from February 19, 2009, to August 1, 2014, the licensee failed to establish measures to assure that conditions adverse to quality were promptly identified and

corrected. Specifically, Procedure OM7.ID1, "Problem Identification and Resolution," was established to assure that conditions adverse to quality were promptly identified and corrected. Section 10.2.7 of this procedure provides for the identification of conditions adverse to quality by requiring that a notification be written when a component or system does not meet expectations as identified by adverse trends or individual observations. On multiple occasions between February 2009 and August 2014, the licensee failed to initiate a notification after identifying a degraded safety-related component. The licensee documented this issue in the corrective action program as SAPNs 50641514 and 50656750 and issued a communication to the station reminding personnel of the requirement to initiate notifications even when problems are immediately resolved. Since this violation was of very low safety significance (Green) and was entered into the licensee's corrective action program, it is being treated as a non-cited violation consistent with Section 2.3.2 of the NRC's Enforcement Policy: NCV 05000275/05000323/2014007-01, "Failure to Document Degraded Emergency Diesel Generator Fuel Injector Nozzles in the Corrective Action Program."

b. Nonconservative Technical Specification Surveillance Requirement for Emergency Diesel Generators

Introduction. The team identified a Green non-cited violation of 10 CFR 50.36 for the licensee's failure to establish an appropriate surveillance test to demonstrate operability of its emergency diesel generators. After revising its emergency diesel generator loading analysis, the licensee failed to adjust the parameters for the full-load-rejection surveillance test to ensure the test was performed with the maximum anticipated electrical loading.

Description. Diablo Canyon's technical specifications require that the licensee perform a full-load-rejection test of its emergency diesel generators (EDGs) every 24 months to demonstrate EDG operability. Technical specification (TS) surveillance requirement (SR) 3.8.1.10 requires that the licensee "verify each DG operating at a power factor ≤ 0.87 does not trip and voltage is maintained ≤ 5075 V during and following a load rejection of ≥ 2340 kW and ≤ 2600 kW."

On January 4, 2011, the licensee initiated SAPN 50368801 documenting that the NRC resident inspectors had identified that the loading parameters of SR 3.8.1.10 were nonconservative. Calculation 9000037760-21, dated November 4, 2010, identified the maximum loads on buses fed by the EDGs to be as high as 2710 kW, while SR 3.8.1.10 specified a full-load-rejection test be performed with electrical loading below 2600 kW. The licensee noted that after applying instrument uncertainty to the surveillance test data, actual EDG loading at an indicated 2600 kW could be as low as 2522 kW. Therefore, any EDG with a maximum calculated load greater than 2522 kW had been tested at a nonconservative load value during previous surveillance tests. Four of Diablo Canyon's six EDGs had maximum calculated loads greater than 2522 kW.

As a compensatory measure, the licensee performed a "one-time test" of EDGs, subjecting them to a load rejection from 2800 kW. All four affected EDGs met the acceptance criteria of this "one-time test" on January 14 and 15, 2011. The licensee's planned corrective action was to develop a time-dependent loading calculation and to submit a license amendment request to the NRC, requesting to incorporate the results of the calculation into technical specifications. This license amendment was submitted in

early 2014, more than three years after the nonconservative surveillance requirement was identified.

The licensee implemented no compensatory measures other than the one-time test. When the licensee next performed the full-load-reject surveillance in 2013, the licensee again used the nonconservative 2600 kW loading, stating that "continued testing at the large load would violate TS SR 3.8.1.10." However, this conclusion is contrary to guidance provided in NRC Adminstrative Letter 98-10, which provides the NRC staff's expectations regarding correction of technical specifications when they are found to contain nonconservative values: "Imposing administrative controls in response to an improper or inadequate TS is considered an acceptable short-term corrective action. The staff expects that, following the imposition of administrative controls, an amendment to the TS, with appropriate justification and schedule, will be submitted in a timely fashion."

The team determined that the licensee had failed to take adequate short-term corrective actions by imposing administrative controls in response to an inadequate technical specification surveillance requirement. Further, the license failed to timely submit a technical specification amendment to revise the nonconservative test parameter. This resulted in noncompliance with 10 CFR 50.36(c) requirements that technical specification surveillance requirements assure that the lowest functional performance level of equipment required for safe operation of the facility is met.

Analysis. The licensee's failure to specify the "lowest functional capability or performance level of equipment required for safe operation of the facility" as required by 10 CFR 50.36 was a performance deficiency. This performance deficiency was more than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, the team determined that this finding was of very low safety significance (Green) because it did not result in the loss of operability or functionality of a system or train. This finding has a resolution cross-cutting aspect in the problem identification and resolution cross-cutting area because the licensee failed to take effective corrective actions to address the nonconservative surveillance parameters in a timely manner (P.3). Specifically, the licensee did not take appropriate interim corrective actions to mitigate the issue while more fundamental causes were being assessed.

Enforcement. Title 10 of the *Code of Federal Regulations* (10 CFR) § 50.36(c)(3) requires in part that technical specifications include surveillance requirements to assure that limiting conditions for operation will be met. Limiting conditions for operation are defined in § 50.36(c)(2) as the lowest functional capability or performance levels of equipment required for safe operation of the facility. Contrary to this requirement, from January 2011 through September 2014, the licensee failed to include in its technical specification a surveillance requirement to assure that the lowest functional capability of equipment required for safe operation of the facility was met. Specifically, after determining that the criteria of Surveillance Requirement 3.8.1.10 did not provide for full-load-rejection testing of the emergency diesel generators from the maximum anticipated electrical loading, the licensee failed to amend its surveillance procedure to provide for testing at the most limiting parameters. After the team identified this violation, the licensee implemented Surveillance Requirement 3.0.3 and documented the condition in its corrective action program as SAPNs 50657635 and 50657637. Because the associated finding was of very low safety significance (Green) and because the licensee

entered it into its corrective action program, this violation is being treated as a non-cited violation (NCV), consistent with Section 2.3.2 of the NRC Enforcement Policy: NCV 05000275/2014007-02 and 05000323/2014007-02, "Inadequate Technical Specification Surveillance Requirement for Emergency Diesel Generators."

c. Longstanding Uncorrected and Uncompensated Nonconforming Condition

Introduction. The team identified a Green non-cited violation of 10 CFR Part 50 Appendix B Criterion XVI for the licensee's failure to take timely corrective actions. In 2011, the licensee identified a potential path for gas intrusion into the containment spray system, contrary to design basis requirements. The licensee took no interim or compensatory actions while planning its final corrective actions.

Description. On May 14, 2011, the licensee initiated SAPN 50408899 identifying the potential for gas intrusion into the containment spray (CS) system via the spray additive tank (SAT), from which chemicals are injected into the spray water at the pump suction via an eductor in the containment spray pump miniflow line. The licensee identified that if the SAT were to go empty or a sufficient vortex were to develop with the pumps running, some gas could be entrained in the water at the containment spray pump suction. There is no alarm to prompt an operator to isolate the tank prior to it going empty. The plant's design basis requires preventing any ingestion of air into the pump suction during operation.

To support operability of the containment spray system, the licensee contracted a vendor to perform a bounding calculation. This calculation was performed by scaling existing prototype test data from a similar eductor design to determine the maximum gas entrained by the eductor into the pump suction if the SAT were empty. On June 3, 2011, this calculation concluded that given the evaluated flow of 81 percent of the pump's best efficiency point (BEP), maximum air entrainment in the containment spray process water from an empty SAT would be 1.8 percent void fraction at the pump suction. Generic industry guidance in NEI 09-10, "Guidelines for Effective Prevention and Management of System Gas Accumulation," Revision 1, provided that for steady state pump operation between 40 percent and 120 percent of BEP flow, up to a 2 percent average noncondensible gas void fraction was allowable for typical pumps. For flows outside of this range, the maximum allowable void fraction is 1 percent. Based on the calculated void fraction being less than the allowable average at the specified flow rate, the licensee determined that the containment spray pumps remained operable. The licensee did not evaluate for flows outside of 40-120 percent BEP—or provide justification that such analysis was not required—and did not demonstrate that stratified or slug flow would not develop during transient conditions. [1]

[1] In January 2013, the NRC endorsed Revision 1a of NEI 09-10. This revision qualified the acceptance values that had been provided in Revision 1: "Plants should demonstrate that a dispersed bubbly flow exists at the pump entrance throughout transients and that the average void fraction meets the acceptance criteria." In the final safety evaluation for the endorsement, the NRC stated that when using the NEI 09-10 tables that describe allowable void fractions at pump entrances, "it is the responsibility of individual licensees to . . . demonstrate that a dispersed bubbly flow exists at the pump entrance throughout transients and that the average void fraction meets the acceptance criteria." See ADAMS Accession No. ML13136A129.

On July 13, 2011, the licensee determined that no interim corrective actions were required for this nonconforming condition. The licensee based its justification for continued operation on an incorrect assumption by one or more system engineers that because the system had been determined to be operable, no interim or compensatory actions were required prior to full qualification being restored. At the end of refueling outage 1R18, the licensee's justification for "delaying repair and replacement activities, including . . . compensatory measures" was based on engineering judgment, as documented in Task 9 of SAPN 50408899: "It is our judgment that this non-conformance will not prevent the CS system from performing its design function." The team noted that while the determination of operability appeared to be supported by the available data, the large reduction in margin warranted interim or compensatory actions while final corrective actions were being developed to restore full qualification. Though licensee engineers continued to evaluate and pursue potential solutions, the licensee had failed to implement any corrective actions for over three years following discovery. The team determined that considering the reduction in margin and the incomplete analysis, a delay of over three years to restore full qualification with no interim or compensatory actions was not commensurate with the safety significance of the nonconformance.

Analysis. The failure to take timely corrective actions as required by 10 CFR Part 50 Appendix B Criterion XVI was a performance deficiency. This performance deficiency was more than minor because it was associated with the design control attribute of the mitigating systems cornerstone and it adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609 Appendix A, the team determined that this finding was of very low safety significance (Green) because it did not result in the loss of operability or functionality of a system or train. This finding has a conservative bias cross-cutting aspect in the human performance crosscutting area because licensee personnel failed to use decision-making practices that emphasized prudent choices over those that were simply allowable (H.14). Specifically, licensee managers failed to take timely action to address degraded conditions commensurate with their safety significance.

Enforcement. Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50 Appendix B Criterion XVI requires in part that the licensee establish measures to assure that conditions adverse to quality are promptly identified and corrected. Contrary to this requirement, from May 2011 through September 2014, the licensee failed to establish measures to assure that a condition adverse to quality was promptly corrected. Specifically, the licensee identified in May 2011 the potential for gas intrusion into the containment spray system, a condition adverse to quality, but failed to promptly correct the condition. The licensee documented this condition in its corrective action program as SAPN 50657636. Because the associated finding was of very low safety significance (Green) and because the licensee entered it into its corrective action program, this violation is being treated as a non-cited violation (NCV), consistent with Section 2.3.2 of the NRC Enforcement Policy: NCV 05000275/2014007-03 and 05000323/2014007-03, "Longstanding Uncompensated Nonconforming Condition."

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

(Closed) Licensee Event Report (LER) 05000323/2014-001-00 and LER Update 05000323/2014-001-01: Lightning Arrestor Failure Resulting in Reactor Trip

On February 2, 2014, a high voltage insulator on the Unit 2 Main Bank Transformer arced to ground. When protective relays sensed this line-to-ground fault, they automatically tripped the main generator, which in turn signaled automatic safety features to trip the Unit 2 reactor, as designed. The exact cause of the insulator arc was indeterminate due to the damage to the component caused by the event. The licensee determined that the most likely cause of the arc was an asymmetric distribution of contaminants on the insulator surface, a condition for which there was no prior industry operating experience or guidelines. Other probable causes included heavy deposition of environmental contaminants on the surface of the insulator or manufacturing errors.

The licensee's corrective actions included installing new insulators with increased capability to withstand environmental contamination, periodic cleaning of the insulators, and more frequent condition monitoring. The inspectors determined that the licensee's root cause analysis appeared adequate and corrective actions appropriately addressed probable causes. No findings or violations of NRC requirements were identified.

Licensee Event Report (LER) 05000323/2014-001 is closed.

4OA5 Other Activities

Follow-up inspection of chilling effect letter issued to Enercon Services, Inc.

PG&E contracts with Enercon Services, Inc., (Enercon) to provide some engineering services at Diablo Canyon Power Plant.

On August 19, 2013, the NRC sent a Chilling Effect Letter (CEL) to Enercon (ML13233A212). This CEL was based on an OSHA investigation that substantiated a claim that a former Enercon employee was terminated in retaliation for reporting safety concerns while performing his duties at Wolf Creek Nuclear Operating Company. On September 18th, 2013, Enercon sent a response to the NRC (ML13276A029).

During the inspection, the team interviewed nine employees from Enercon who were working in the engineering department at Diablo Canyon. Based on the interviews, the inspectors identified no indications of a chilled work environment within the Enercon organization at Diablo Canyon. The employees interviewed all indicated that they would raise nuclear safety concerns through multiple avenues, and did not perceive that they would be retaliated against for doing so. They have received training on and use the Diablo Canyon corrective action program and employee concerns program without hesitation. They indicated that retaliation is not tolerated by either Enercon or Diablo Canyon.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On September 11, 2014, the inspectors presented the inspection results to Mr. Barry Allen, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary or confidential information reviewed by the inspectors had been returned or destroyed.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

C. Beard, Technical Support Engineer (ISI)
R. Burnside, ECP Manager
J. Cook, Mechanical Systems Engineer (BOP)
S. Dunlap, Mechanical Systems Engineering Supervisor (BOP)
M. Frauenheim, Performance Improvement Manager
T. Garrity, Corrective Action Programs Supervisor
G. Goelzer, Support Shift Manager
J. Hinds, Quality Verification Director
L. Hopson, Assistant Director Maintenance Services
A. Kadir, Performance SFM
T. King, Nuclear Work Management Director
G. Lautt, Quality Assurance Supervisor
A. Lin, Design Engineer (Mechanical)
B. Lopez, Regulatory Services Engineer
J. Loya, Regulatory Services Supervisor
J. MacIntyre, Maintenance Services Director
J. Morris, Regulatory Services Engineer
M. Sharp, Licensing Basis Verification Project
R. West, ICE Systems Engineering Manager

NRC Personnel

J. Reynoso, Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000275/2014007-01; 05000323/2014007-01	NCV	Failure to Document Degraded Emergency Diesel Generator Fuel Injector Nozzles in the Corrective Action Program (Section 4OA2.5)
05000275/2014007-02; 05000323/2014007-02	NCV	Inadequate Technical Specification Surveillance Requirement for Emergency Diesel Generators (Section 4OA2.5)
05000275/2014007-02; 05000323/2014007-02	NCV	Longstanding Uncompensated Nonconforming Condition (Section 4OA2.5)

Closed

05000323/2014-001-01	LER	Lightning Arrestor Failure Resulting in Reactor Trip (Section 4OA3)

LIST OF DOCUMENTS REVIEWED

Notifications (SAPNs)

50077762	50081669	50196216	50231633	50275030
50292572	50293237	50296230	50296912	50298160
50299826	50301167	50302075	50302550	50303358
50306887	50307598	50309467	50316112	50320029
50324123	50331833	50349821	50351819	50351952
50353711	50353713	50353714	50353715	50353716
50366298	50367136	50367271	50368801	50373265
50374353	50374378	50377953	50378557	50379679
50380641	50383957	50384600	50384603	50397764
50400169	50408899	50432942	50434036	50460748
50460853	50460854	50460855	50460856	50461112
50464251	50467475	50468258	50470350	50476376
50478716	50480633	50480775	50486012	50488118
50488205	50488671	50495407	50498288	50503487
50504171	50505471	50508441	50508535	50509348
50509349	50510900	50511714	50512133	50512145
50512161	50512927	50513243	50514400	50514761
50514763	50517362	50518473	50520004	50520094
50523909	50523941	50526287	50527319	50527591
50528240	50533294	50537049	50537580	50537773
50538422	50539974	50540302	50544198	50549573
50549905	50551038	50553479	50557216	50559233
50560307	50560735	50571017	50571263	50571958
50572543	50572731	50572850	50573073	50573100
50573621	50578156	50581344	50586403	50586414
50587179	50587467	50587887	50588833	50593382
50595139	50595251	50596059	50597674	50598796
50599347	50599373	50599651	50599652	50599653
50599999	50600205	50601032	50601631	50601792
50606427	50607241	50607392	50609302	50609303
50610708	50612562	50612919	50616754	50617408
50618079	50619307	50622606	50624949	50627792
50627859	50628009	50628120	50629355	50631838
50633288	50636316	50636744	50637196	50639078
50639901	50641223	50642105	50647102	50654477
50654536	50654945	50655123	50655160	50655828
50656104	50656125	50656129	50656135	50656194
50656198	50656237	50656264	50656280	50656639
50656670	50656671	50656672	50656673	50656674
50656750	50656794	50656866	50656886	50656887
50656888	50656948	50656958	50656961	50656962
50656963	50657059	50657101	50657104	50657107
50657635	50657636	50657637	50657639	50657687

Work Orders

64074914	64059500	64026501	64062003	64021124	64005084
64078205	64003428	64059878	64032211	64005072	64046936
64028745	64003431	64003442	64021153	64046935	50607838
64024857	64029080	64026524	64005070	64021292	

Procedures

Number	Title	Revision
AD13.ID1	Conduct of Plant and Equipment Tests	14
AD13.ID4	Post Maintenance Testing	22
AD7.ID2	Daily Notification Review Team (DRT) and Standard Plant Priority Assignment Scheme	21
AD8.DC58	Outage Scope Control	9
AD8.ID1	Outage Planning and Management	23
MA1.DC54	Conduct of Maintenance	8
MA1.ID17	Maintenance Rule Monitoring Program	27
OM11.DC7	Conduct of Security	11
OM15.ID5	DCPP Performance Improvement Program	7
OM15.ID7	Conservative Decision-Making	1
OM16	Nuclear Safety Culture	2
OM16.ID1	Nuclear Safety Culture and Safety Conscious Work Environment (SCWE)	1-5
OM16.ID2	Nuclear Safety Culture Health Monitoring	5
OM4.ID3	Operating Experience Program	25
OM4.NQ8	Conduct of Quality	3
OM7.DC3	Engineering Decision Making	1
OM7.ID1	Problem Identification and Resolution	40A,46
OM7.ID12	Operability Determination	28-29
OM7.ID13	Technical Evaluations	4
OM7.ID3	Root Cause Evaluations	38
OM7.ID4	Apparent Cause Evaluation	31
OP AP-8A	Control Room Inaccessibility – Establishing Hot Standby	30
OP B-7:IX	Refueling Canal to Spent Fuel Pool Door	8
OP B-8H	Spent Fuel Pool Work Instructions	44
OP J-2:VIII	Guidelines for Reliable Transmission Service for DCPP	24

Procedures

Number	Title	Revision
OP J-6B	Diesel Generators	10
OP J-6C:I	Diesel Fuel Oil Transfer System – Make Available and Place in Service	15A
OP1.DC3	Operator Routine Plant Equipment Inspections	11
OP1.DC10	Conduct of Operations	42-43
OP1.DC16	Control of Plant Equipment not Required by the Technical Specifications	12
OP1.DC17	Control of Equip (sic) Required by Technical Specifications or Designated Programs	27
OP1.DC24	Control of Annunciator System Problems	8
OP1.DC31	Dissemination of Operations Information	4
OP1.DC37	Control Operator Turnover Checklist	49-49A
OP1.DC40	Operations Equipment Deficiency Tracking	6
OP1.ID7	Operational Decision Making	9
Ops Policy B-36	Entry into DFO Storage Tank for Emergency Cross-tie Operation	0
PEP 18-04	CP M-10 Ventilation Equipment Test	2
STP M-13F	4KV Bus F Non-SI Auto-Transfer Test	53
STP M-15	Integrated Test of Engineered Safeguards and Diesel Generators	60
STP M-16BA	Slave Relay Test Train A K604 (Safety Injection)	16
STP M-21-ENF.1	Diesel Engine Generator Inspection (Every Refueling Outage(	13
STP M-21-RTS.1	Return Diesel Engine to Service following Outage Maintenance	13
STP M-9A1	Diesel Engine Generator 1-1 Routine Surveillance Test	1
STP M-9A1	Diesel Engine Generator 1-2 Routine Surveillance Test	1
STP M-9A1	Diesel Engine Generator 2-1 Routine Surveillance Test	2
STP M-9A1	Diesel Engine Generator 2-3 Routine Surveillance Test	2
TQ2.DC9	Leadership Development Training Program	3
TS3.ID2	Licensing Basis Impact Evaluations	39
TS5.DC5	Conduct of Engineering	0
XI1.ID4	NRC Interface and Inspection Support	1,4

Procedures

Number	Title	Revision
XI3.ID12	Current Licensing Basis Determination	9

Audits

13400031	110490004	120170020	123450011	132200031
13510002	111800033	121920011	130910023	132510002
093560010	113480014	122150005	130910024	140500025

Other Documents

Number	Title	Revision
015-DC	Diesel Generator Loading for Vital Bus Loads Units 1 and 2	20
015-DC	Diesel Generator Loading for Vital Bus Loads Units 1 and 2	20
DCM T-13	Appendix R Fire Protection	7
M-0944	10 CFR 50 Appendix R Alternate Shutdown Methodology – Time and Manpower Study/Safe Shutdown System Considerations	
DCM T-42	Station Blackout	9
Slides	Diablo Canyon Power Plant, Disciplinary Review Guidelines	March 7, 2013
Slides	2013 Session 2 Continuing Leadership Training- DCLD-1303, Nuclear Safety Culture and SCWE	
	Security Services Path to Excellence Plan	July 1, 2014
	NEI 09-07 Nuclear Safety Culture Monitoring Implementation Independent Assessment (SAPN 50509314)	August 27, 2012
	Behavioral Science Tech Independent Safety Culture Review and Plan	April 2014
	Security Nuclear Safety Culture Check-Up Assessment	08/11/14-08/15/14
	Nuclear Safety Oversight Committee	04/7/14-04/10/14
	DCPP Knowledge Preservation Program Lesson 3 KTPM-2012, “Peer Mentoring”	0
	Diablo Canyon Knowledge Sharing Program Description, “Passport to Knowledge,”	4/16/13

Information Request
Biennial Problem Identification and Resolution Inspection
Diablo Canyon Power Plant
June 19, 2014

Inspection Report: **50-275 & 50-323/2014007**
On-site Inspection Dates: **August 25-28 & September 8-11, 2014**

This inspection will cover the period from March 23, 2012, through September 11, 2014. 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 Microsoft Excel or a similar 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.

Please provide the following information no later than August 7, 2014:

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)

h. Summary list of all Apparent Cause Evaluations completed during the period

i. Summary list of all Root Cause Evaluations planned or in progress but not complete at the end of the period, with planned completion or due date

2. Full Documents with Attachments

a. Root Cause Evaluations completed during the period

b. Quality Assurance audits performed during the period

c. All audits/surveillances, performed during the period, of the Corrective Action Program, of individual corrective actions, and of cause evaluations

d. Functional area self-assessments and non-NRC third-party assessments (i.e., 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

e. Any assessments of the safety-conscious work environment at Diablo Canyon

f. Corrective action documents generated during the period associated with the following:

i. NRC findings and/or violations issued to Diablo Canyon

ii. Licensee Event Reports issued by Diablo Canyon

g. Corrective action documents generated for the following, if they were determined to be applicable to Diablo Canyon (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

h. 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 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

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,

i. Planned work/maintenance schedule for the station

ii. Schedule of management or corrective action review meetings (e.g. operations focus meetings, condition report screening meetings, CARBs, MRMs, challenge meetings for cause evaluations, etc.)

iii. Agendas for these meetings

Note: The items listed in 5.d may be provided on a weekly or daily basis after the team arrives on site.

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; three additional copies should be provided to the team lead, to arrive no later than August 7, 2014:

Eric A. Ruesch
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.

Supplemental Information Request
Biennial Problem Identification and Resolution Inspection
Diablo Canyon Power Plant
August 20, 2014

Inspection Report: **50-275 & 50-323/2014007**
On-site Inspection Dates: **August 25-28 & September 8-11, 2014**

This request supplements the original information request. Where possible, the information should be available to the inspection team upon arrival at the site on the first day of inspection. This inspection will cover the period from March 23, 2012, through September 11, 2014. The scope of the requested information is limited to this period.

Please provide the following:

1. As part of the inspection, the team will do a five-year in-depth review of issues and corrective actions related to the emergency diesel generators, including control circuitry and starting logic. The following documents are to support this review:
    - Copies of all root and apparent cause evaluations and work group evaluations, with associated SAPNs, performed on the emergency diesel generators within the last 5 years, including any root cause evaluations not already provided
    - Summary list of all EQPR DNs initiated on the emergency diesel generators in the last 5 years, cross referenced to any associated DAs (include all corrective maintenance work orders performed on the emergency diesel generators within the last 5 years, if those are not all DNs)
    - List of all surveillances run on the emergency diesel generators within the last five years, sortable by surveillance procedure, and including acceptance criteria
    - List of maintenance rule functional failure assessments—regardless of the result—performed on the emergency diesel generators within the last 5 years
    - System training manual(s) for the emergency diesel generators
    - Engineering forms/logs (including the engineer's notes), if any, from the last two engineering walk-downs of each emergency diesel generator; if these logs and notes are not in controlled documents, please provide governing procedures and arrange an interview with the engineer(s)

2. Procedures (please provide hard copy and electronic):
    - Conduct of Operations procedure (or equivalent) and any other procedures governing control room conduct, operator burdens and workarounds, etc.
    - Operating Experience (OE) program procedures and any other procedures or guidance documents that describe the site's use of OE information
    - Procedure documenting the station's process for evaluating human resources actions for potential SCWE implications

3. All SAPNs and other corrective action documents generated in response to comments and assessments documented in the 2012 PI&R inspection report (full documents with attachments). Include any SAPNs initiated to review the 2012 PI&R observation regarding documentation of issues in multiple notifications that were not cross-referenced.

4. Summary list of SAPNs and other corrective action documents generated during maintenance and/or post-maintenance test activities

5. List of structures, systems, and components and/or functions that were in maintenance rule (a)(1) status at any time during the inspection period; include dates and results of expert panel reviews and dates of status changes

In addition to the list above, please provide any updates to the information previously provided in response to the June 19, 2014, information request.