



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

January 27, 2023

Paula A. Gerfen, Senior Vice President,  
Generation and Chief Nuclear Officer  
Pacific Gas and Electric Company  
P.O. Box 56  
Mail Code 104/6  
Avila Beach, CA 93424

**SUBJECT: DIABLO CANYON POWER PLANT – BIENNIAL PROBLEM IDENTIFICATION  
AND RESOLUTION INSPECTION REPORT 05000275/2022010 AND  
05000323/2022010**

Dear Paula A. Gerfen:

On December 14, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed a problem identification and resolution inspection at your Diablo Canyon Power Plant. On January 19, 2023, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspection team reviewed the station's problem identification and resolution program and the station's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems, and to confirm that the station was complying with NRC regulations and licensee standards for problem identification and resolution programs. The team identified a finding associated with problem identification and a non-cited violation associated with implementation of the process for prioritizing and evaluating problems.

The team also evaluated the station's processes for use of industry and NRC operating experience information and the effectiveness of the station's audits and self-assessments. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

Finally, the team reviewed the station's programs to establish and maintain a safety conscious work environment and interviewed station personnel to evaluate the effectiveness of these programs. Based on the team's observations and the results of these interviews the team found your employees appeared willing to raise nuclear safety concerns through at least one of the several means available.

One finding of very low safety significance (Green) is documented in this report. One Severity Level IV violation without an associated finding is documented in this report. We are treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violation or the significance or severity of the violation documented in this inspection report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement; and the NRC Resident Inspector at Diablo Canyon Power Plant.

If you disagree with a cross-cutting aspect assignment or a finding not associated with a regulatory requirement in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; and the NRC Resident Inspector at Diablo Canyon Power Plant.

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

Sincerely,



Signed by Agrawal, Ami  
on 01/27/23

Ami N. Agrawal, Team Leader  
Inspection Programs and Assessment Team  
Division of Operating Reactor Safety

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

Enclosure:  
As stated

cc w/ encl: Distribution via LISTSERV

DIABLO CANYON POWER PLANT – BIENNIAL PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000275/2022010 AND 05000323/2022010 DATED JANUARY 27, 2023

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DOCUMENT NAME: DIABLO CANYON POWER PLANT – BIENNIAL PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000275/2022010 AND 05000323/2022010

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

Docket Numbers: 05000275 and 05000323

License Numbers: DPR-80 and DPR-82

Report Numbers: 05000275/2022010 and 05000323/2022010

Enterprise Identifier: I-2022-010-0006

Licensee: Pacific Gas and Electric Company

Facility: Diablo Canyon Power Plant

Location: Avila Beach, CA

Inspection Dates: November 14, 2022, to December 14, 2022

Inspectors: D. Dodson, Senior Reactor Inspector  
A. Athar, Resident Inspector  
A. Sanchez, Senior Project Engineer  
C. Wynar, Resident Inspector

Approved By: Ami N. Agrawal, Team Leader  
Inspection Programs and Assessment Team  
Division of Operating Reactor Safety

Enclosure

## SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee’s performance by conducting a biennial problem identification and resolution inspection at Diablo Canyon Power Plant, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC’s program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information.

### List of Findings and Violations

Failure to Promptly Enter Operability and Safety Related Issues in the Corrective Action Program			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green FIN 05000323/2022010-01 Open/Closed	[H.14] - Conservative Bias	71152B
<p>The inspectors identified a Green finding for the licensee’s failure to generate timely notifications for conditions adverse to quality in accordance with OM7.ID1, “Problem Identification and Resolution.” Specifically, fuel line banjo bolt torquing deficiencies associated with emergency diesel generator (EDG) 2-1 and EDG 2-2 and other conditions associated with safety related structures, systems, and components, were not entered into the corrective action program promptly in accordance with licensee procedure OM7.ID1, which requires notifications be generated in the span of one shift. As a result, operability evaluations were delayed.</p>			

Inadequate 10 CFR Part 21 Procedures			
Cornerstone	Severity	Cross-Cutting Aspect	Report Section
Not Applicable	Severity Level IV NCV 05000275, 05000323/2022010-02 Open/Closed	Not Applicable	71152B
<p>The inspectors identified a Severity Level (SL) IV, non-cited violation of Title 10 of the <i>Code of Federal Regulations</i> (10 CFR) 21.21(a), which requires licensees to adopt appropriate procedures for evaluating deviations and failures to comply. Specifically, the licensee’s procedure for evaluating deviations and failures to comply was inappropriate because it concludes that the requirements of 10 CFR 21 are met if no report is required by 10 CFR 50.72, 10 CFR 50.73, or 10 CFR 73.71.</p>			

### Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
URI	05000275, 05000323/2022010-03	Failure to Adequately Evaluate a Potential Part 21 Issue	71152B	Open

## INSPECTION SCOPES

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

## OTHER ACTIVITIES – BASELINE

### 71152B - Problem Identification and Resolution

#### Biennial Team Inspection (IP Section 03.04) (1 Sample)

- (1) The inspectors performed a biennial assessment of the effectiveness of the licensee's problem identification and resolution program, use of operating experience, audits and self-assessments, and safety conscious work environment.
  - Problem Identification and Resolution Effectiveness: The inspectors assessed the effectiveness of the licensee's problem identification and resolution program in identifying, prioritizing, evaluating, and correcting problems. The team also evaluated the station's compliance with NRC regulations and licensee standards for corrective action programs. The inspectors sampled over 250 condition reports and their associated cause evaluations, as applicable. The inspectors also conducted five-year reviews of the auxiliary saltwater system, the emergency diesel generators, and the 480 V switchgear heating, ventilation, and cooling system. These reviews included failures, maintenance issues; surveillances; corrective and preventive maintenance; reliability; and maintenance rule performance. Additionally, inspectors reviewed findings and violations issued during the biennial assessment period.
  - Operating Experience: The inspectors assessed the effectiveness of the licensee's processes for use of operating experience.
  - Self-Assessments and Audits: The inspectors assessed the effectiveness of the licensee's identification and correction of problems identified through review of audits and self-assessments.
  - Safety Conscious Work Environment: The inspectors assessed the effectiveness of the station's programs to establish and maintain a safety conscious work environment.

## INSPECTION RESULTS

Assessment	71152B
<b>Corrective Action Program Effectiveness</b>	
<p>Based on the samples reviewed, the team determined that the licensee's corrective action program generally complied with regulatory requirements and self-imposed standards. The licensee's performance in each of the areas of Problem Identification, Problem Prioritization and Evaluation, and Corrective Actions adequately supported nuclear safety. The team noted some challenges associated with the licensee's problem identification and prioritization and evaluation of issues.</p>	
<u>Problem Identification</u>	
<p>The team found that the licensee was generally identifying and documenting problems at an appropriately low threshold that supported nuclear safety. During the approximately 2-year assessment period, the licensee initiated approximately 32,000 notifications, including approximately 1,300 notifications associated with conditions adverse to quality. However, the team noted some current performance challenges related to identifying issues when given an opportunity and with documenting some issues in the corrective action program. FIN 05000323/2022010-01, documented in this report, captures both minor and more -than -minor examples of the licensee's failures to timely initiate notifications. In each of these cases, the inspectors found that personnel evaluated the conditions on the spot, outside of the corrective action program, and determined the conditions were minor without ensuring all of the conditions were appropriately assessed by operators for operability and functionality, as applicable.</p>	
<u>Problem Prioritization and Evaluation</u>	
<p>In general, the team found that the licensee was adequately prioritizing and evaluating problems; however, the team noted some current performance challenges related to inappropriately excluding some issues from the corrective action program, inadequate 10 CFR Part 21 procedure guidance, and missing opportunities to elevate some issue evaluations that may have been better served by more rigorous evaluations. The inspectors noted the following:</p>	
<ul style="list-style-type: none"><li>• The inspectors determined that the licensee is inappropriately excluding some issues from the corrective action program because station personnel are inadequately evaluating them. The inspectors determined that the licensee's failures to adequately evaluate issues was caused, at least in part, by procedure language.<ul style="list-style-type: none"><li>○ The minor violation documented in this report discusses seven issues associated with safety related components that the licensee inappropriately determined were not conditions adverse to quality.</li><li>○ The inspectors noted that the definition of a condition adverse to quality in station procedures does not match the language describing a condition adverse to quality in 10 CFR 50, Appendix B, Criterion XVI. Specifically, the definition of a condition adverse to quality, as defined in station procedure OM7.ID1, "Problem Identification and Resolution," Revision 58, is, "A failure, malfunction, deficiency, deviation, defect, or nonconformance that renders the</li></ul></li></ul>	

properties or physical attributes of a safety-related/degraded-quality structure, system, component (SSC), or process unacceptable or indeterminate.”

The inspectors compared the licensee's procedure definition with the 10 CFR 50, Appendix B, Criterion XVI language, which states, “Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.”

The inspectors determined that the station's definition of a condition adverse to quality only includes conditions that are determined to be unacceptable or indeterminate. This leaves the station vulnerable to excluding some items from the corrective action program because they only represent degradations. Additionally, the inspectors noted that the station's procedures allow for some resolved conditions to be excluded because they are corrected immediately and no longer unacceptable. The station documented notification 51178255 to capture this observation and assessment.

- The team observed that procedure guidance could mislead personnel to identify conditions adverse to quality as conditions not adverse to quality. Specifically, AD4.ID3, “SISIP Housekeeping Activities,” Revision 18, provides examples of seismically induced system interaction (SISI) threats and SISI housekeeping issues. Additionally, procedure OM4.ID14, “Notification Review Team,” Revision 35A, notes that SISI threats are identified as conditions adverse to quality and SISI housekeeping issues are identified as conditions not adverse to quality. When both procedures are considered together, the examples provided in procedure AD4.ID3 and the guidance of OM4.ID14 allow items to be classified as SISI housekeeping issues (conditions not adverse to quality) when they are corrected within the shift and based on evaluation of whether equipment was adversely impacted. This could lead to some conditions adverse to quality not being categorized as conditions adverse to quality. The station documented notifications 51174424 and 51174266 to capture this observation and assessment.
- The inspectors determined that the licensee may not always be performing adequate 10 CFR Part 21 evaluations, at least in part, due to inadequate procedure guidance.
  - The inspectors identified NCV 05000275, 05000323/2022010-02, "Inadequate 10 CFR Part 21 Procedures," for the licensee's failure to adopt appropriate procedures for evaluating deviations and failures to comply. Specifically, the licensee's procedure for evaluating deviations and failures to comply was inappropriate because it does not recognize that items of noncompliance may be reportable under 10 CFR Part 21 but not reportable under 10 CFR 50.72, 50.73, and 73.71. An inadequate procedure can have more than minor safety significance because reportable defects can be inappropriately and programmatically screened out from Part 21 evaluation and reporting, resulting in substantial safety hazards not being communicated to other affected entities.
  - The inspectors documented URI 05000275, 05000323/2022010-03 because it is not clear to the inspectors that the requirements of 10 CFR 21.21(a) have



been met associated with EDG cap screw issues. Specifically, it is not clear that the licensee has adequately evaluated the cap screw issues to determine whether the defect or failure to comply could create a substantial safety hazard were it to remain uncorrected.

- The inspectors determined that the licensee has missed opportunities to elevate some issue evaluations to perform more rigorous evaluations based on specific facts and when recommended by procedure. Specifically, two observations documented in this report detail a delay in elevating a significant condition adverse to quality from a condition adverse to quality and missed opportunities to elevate cause evaluations that could have identified additional procedure or procedure adherence issues.

Effectiveness of Corrective Actions

The team concluded that the station is adequately developing effective corrective actions and timely implementing them for the problems evaluated in the corrective action program. Diablo Canyon generally implemented these corrective actions in a timely manner, commensurate with their safety significance.

Assessment	71152B
<u>Audits and Self-Assessments</u>	
<p>The team reviewed a sample of Diablo Canyon Power Plant’s self-assessments and audits to assess whether performance trends were regularly identified and effectively addressed. The team also reviewed audit reports to assess the effectiveness of assessments in specific areas. Overall, the team concluded that the licensee had an adequate departmental self-assessment and audit process.</p>	

Assessment	71152B
<u>Use of Operating Experience</u>	
<p>The team reviewed a variety of sources of operating experience including Part 21 notifications and other vendor correspondence, NRC generic communications, and publications from various industry groups including INPO and EPRI. The team determined that Diablo Canyon Power Plant is adequately screening and addressing issues identified through operational experience that apply to the station, and this information is being evaluated in a timely manner once it is received.</p>	

Assessment	71152B
<u>Safety Conscious Work Environment</u>	
<p>The team conducted safety conscious work environment focus group interviews with approximately 60 individuals from seven departments, including: non-licensed operators, mechanical maintenance, instrumentation and control maintenance, engineering, security, chemistry, and radiation protection. The team also observed interactions between employees during routine notification review and management oversight meetings, interviewed the employee concerns coordinators, reviewed the results of the latest safety culture surveys and any case files that may relate to safety conscious work environment, and evaluated anonymous condition reports. Based upon all these interviews, observations, and document reviews, the team found that the station has a safety conscious work environment—</p>	

interviewed individuals indicated that they would raise safety concerns without fear of retaliation. However, the inspectors noted some facts and indicators that indicate there is a need for continued station focus and attention in some areas to ensure the station's safety conscious work environment does not degrade. Specifically, both security and engineering personnel feel that some types of concerns are not being addressed and expressed concern in management's decision making associated with correcting some types of issues, including some safety related conditions. Additionally, some security officers and engineers perceive that they cannot take some issues to certain parts of their management chain. Security officers sometimes indicated that they feel underappreciated, ignored, or that their quality -of-life issues and resource concerns frequently go unresolved or unaddressed.

Similarly, every work group the inspectors interviewed noted that resources are a challenge at the station and are causing things to be rushed, employees to feel excessive stress, and some individuals to believe that resource issues will not be fixed. Finally, the inspectors noted that the number of anonymous notifications is worth monitoring. Specifically, since 2014, the average number of anonymous notifications has been about 156 per year, which equates to about one anonymous notification every 2 days and about 1 percent of all notifications. This could be indicative of some individuals lacking trust in others within the organization.

Failure to Promptly Enter Operability and Safety Related Issues in the Corrective Action Program			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green FIN 05000323/2022010-01 Open/Closed	[H.14] - Conservative Bias	71152B
<p>The inspectors identified a Green finding for the licensee's failure to generate timely notifications for conditions adverse to quality in accordance with OM7.ID1, "Problem Identification and Resolution." Specifically, fuel line banjo bolt torquing deficiencies associated with emergency diesel generator (EDG) 2-1 and EDG 2-2 and other conditions associated with safety related structures, systems, and components, were not entered into the corrective action program promptly in accordance with licensee procedure OM7.ID1, which requires notifications be generated in the span of one shift. As a result, operability evaluations were delayed.</p>			
<p><u>Description:</u> In June of 2021 the licensee documented a cause evaluation associated with notification 51124262 for a fuel leak on EDG 2-3, cylinder 1R (notification 51124036). The licensee determined that one of the causes of this leak was loss of preload on the special banjo bolt on the fuel header. This loss of preload caused the bolt to back out and generate a leak path for fuel oil, which required the diesel to be secured. As part of the licensee's extent of condition, the licensee conducted torque checks on the same bolts on the other EDGs. The operator conducting the checks found a bolt on EDG 2-1, cylinder 3R at 65 ft-lbs, and similarly, EDG 2-2, cylinders 1R, 7L, and 2R were found at 98, 97, and 80 ft-lbs, respectively. The torque specification for these banjo bolts is 100 ft-lbs. Upon finding a significant loss of margin on these banjo bolts, the licensee failed to generate a notification promptly.</p>			
<p>The NRC inspectors questioned the licensee regarding these conditions, and the licensee performed analysis outside of the corrective action program. After the inspectors directly questioned why these conditions were not entered into the corrective action program, the licensee eventually generated notifications 9 and 14 days later for the EDG 2-1 and EDG 2-2 conditions, respectively. This is contrary to licensee procedure OM7.ID1, "Problem</p>			

Identification and Resolution,” Revision 57, Steps 5.2.1 and 5.2.2, which state, “Employees shall initiate a notification for an identified or perceived problem...within a shift.” The lack of a timely notification delayed the operations staff from evaluating the nonconforming conditions associated with the EDGs in accordance with procedure OM7.ID12, “Operability Determination,” Step 5.2.6, which states, “The [Shift Manager] or [Shift Foreman] and appropriate personnel shall assess the impact on operability...this assessment shall be completed without delay and in a controlled manner.”

The licensee’s later substantial analysis determined that substantial bolt torque margin was lost—the licensee found that 49 ft-lbs was the minimum required torque for operability.

The inspectors identified additional minor examples of notifications associated with safety related structures not being generated in a timely manner and delaying operability and functionality evaluations. Specifically, the inspectors identified that some personnel were not including some concrete spalling conditions associated with containment and the auxiliary building within the corrective action program. Additionally, the licensee failed to promptly initiate a notification after the inspectors identified a minor amount of trash and other materials in containment following the licensee’s containment closeout inspection—these materials should have been identified by the licensee’s own walkdown. As in the case of the EDG banjo bolt issues, personnel evaluated the conditions on the spot and outside of the corrective action program and determined the conditions were minor.

Corrective Actions: The licensee generated notification 51135254 to document the delay in creating notifications for banjo bolts found less than 100 ft-lbs; notifications 51173465 and 51178296 to document the spalling conditions and notification timeliness; and notifications 51176792 and 51176793 associated with the containment walkdown items.

Corrective Action References: Notifications 51135254, 51173465, 51176792, 51176793, 51178296

Performance Assessment:

Performance Deficiency: Failure to timely initiate notifications and complete appropriate evaluation of the identified conditions in accordance with procedure OM7.ID1, “Problem Identification and Resolution,” Revision 57 and 58 is a performance deficiency.

Screening: The inspectors determined the performance deficiency was more -than -minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, in two examples associated with EDGs 2-1 and 2-2, fuel line banjo bolt issues were not entered into the corrective action program until 9 and 14 days after the conditions were first identified, which substantially delayed operability assessment; substantial analysis was required to demonstrate the EDGs maintained operability and operability margin was significantly reduced.

Significance: The inspectors assessed the significance of the finding using Exhibit 2 of Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At -Power,” issued January 1, 2021, and determined this finding is not a deficiency affecting the design or qualification of a mitigating SSC; the finding does not represent a loss of the probabilistic risk assessment function of a single train technical specification system or a multi-train technical specification system; the finding does not

represent a loss of the probabilistic risk assessment function of two separate technical specification systems for greater than 24 hours or a probabilistic risk assessment system and/or function for greater than 24 hours; and the finding does not represent a loss of the probabilistic risk assessment function of one or more nontechnical specification trains of equipment designated as risk-significant in accordance with the licensee's maintenance rule program for greater than 3 days. Therefore, the inspectors determined the finding was of very low safety significance (Green).

Cross-Cutting Aspect: H.14 - Conservative Bias: Individuals use decision making practices that emphasize prudent choices over those that are simply allowable. A proposed action is determined to be safe in order to proceed, rather than unsafe in order to stop. Specifically, individuals rationalized assumptions for the sake of completing a task when they evaluated the banjo bolt torquing concerns outside of the corrective action program and operability process.

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

Inadequate 10 CFR Part 21 Procedures			
Cornerstone	Severity	Cross-Cutting Aspect	Report Section
Not Applicable	Severity Level IV NCV 05000275, 05000323/2022010-02 Open/Closed	Not Applicable	71152B
<p>The inspectors identified a Severity Level (SL) IV, non-cited violation of Title 10 of the <i>Code of Federal Regulations</i> (10 CFR) 21.21(a), which requires licensees to adopt appropriate procedures for evaluating deviations and failures to comply. Specifically, the licensee's procedure for evaluating deviations and failures to comply was inappropriate because it concludes that the requirements of 10 CFR 21 are met if no report is required by 10 CFR 50.72, 10 CFR 50.73, or 10 CFR 73.71.</p> <p><u>Description:</u> The inspectors reviewed licensee procedure OM7.ID11, "10 CFR 21 Reportability Review Process," Revisions 3, 4, and 4A, and noted that Section 5.1.1 states, "If the evaluation concludes that there is no report required by 10 CFR 50.72, 10 CFR 50.73, or 10 CFR 73.71, the requirements of 10 CFR 21 are met." The licensee's procedures did not acknowledge that items may be reportable under Part 21 but not meet the reporting requirements of 10 CFR 50.72, 10 CFR 50.73, 10 CFR 73.71.</p> <p>The Inspectors noted Office of the Inspector General (OIG) Report, OIG-11-A-08, "Audit of NRC's Implementation of 10 CFR Part 21, Reporting of Defects and Noncompliance," dated March 23, 2011, pointed out conflict between the July 31, 1991, Statements of Consideration as well as Revision 2 of NUREG 1022, "Event Report Guidelines 10 CFR 50.72 and 50.73." The OIG report noted that 10 CFR Part 21 implements the provisions of Section 206 and requires that licensees inform NRC if they obtain information that indicates that basic components fail to comply with regulatory requirements relating to substantial safety hazards or contain defects that could create a substantial safety hazard. The OIG report goes on to state, "There are differences between Part 21 and Part 50 Sections 72/73 reporting requirements. One difference is that Part 21 concerns itself with component defect reporting, whereas Part 50 Sections 72/73 describe event reporting. Consequently, the thresholds for reporting a component defect under Part 21 are different than those for Part 50 Sections 72/73." Additionally, the report points out, "Another difference between the Part 21 defect</p>			

reporting and Part 50 Sections 72/73 event reporting requirements is that Part 21 defect reporting requires an evaluation and report if the defect could cause a loss of safety function, whereas Part 50 Sections 72/73 events require reporting of only actual losses of safety function. In addition, Part 21 defect reporting requirements include individual component failures if the failures are caused by a defect. Part 50 Sections 72/73 would not require reporting of an individual component failure unless the failure caused a loss of safety function."

The inspectors noted Revision 3 of NUREG 1022, published January 2013, removed guidance that was in Revision 2 that could have led licensees to incorrectly conclude that if a report was not merited by Part 50 Sections 72/73, that a report would also not be required under Part 21. The inspectors also noted that Regulatory Guide 1.234 Revision 0, "Evaluating Deviations and Reporting Defects and Noncompliance Under 10 CFR Part 21," was issued in April of 2018. This is the first Regulatory Guide describing Part 21, and it endorses NEI 14-09, "Guidelines for Implementation of 10 CFR Part 21 Reporting of Defects and Noncompliance," Revision 1. The guidance in NEI 14-09, Revision 1, Section 5, "Interfaces with Other Regulations," states, "Note that the criteria for reporting under 10 CFR Part 21 is not identical to the criteria for other regulations. The criteria for each regulation should be considered. There may be instances where the reporting criteria for another regulation have been met but a 10 CFR Part 21 notification is still required."

Finally, the inspectors noted that licensee procedure OM7.ID11, Revision 4A, specifically lists Regulatory Guide 1.234 and the OIG report in the references portion of the procedure. Considering all of the above, the inspectors determined that procedure OM7.ID11 was inappropriate as written.

Corrective Actions: The licensee documented notification 51174949 in the corrective action program for evaluation.

Corrective Action References: Notification 51174949

Performance Assessment: The inspectors determined this violation was associated with a minor Reactor Oversight Process (ROP) performance deficiency.

Enforcement: The ROP's significance determination process does not specifically consider the regulatory process impact in its assessment of licensee performance. Therefore, it is necessary to address this violation, which impedes the NRC's ability to regulate, using traditional enforcement to adequately deter noncompliance.

Severity: This is a Severity Level IV issue in accordance with the NRC Enforcement Policy. Section 6.9.d.13 includes the example, "Failures to implement adequate 10 CFR Part 21 or 10 CFR 50.55(e) processes or procedures that has more -than -minor safety or security significance." Specifically, this inadequate procedure issue has more -than -minor safety significance because some reportable Part 21 issues could be inappropriately and programmatically screened out from Part 21 evaluation and reporting, resulting in substantial safety hazards not being communicated to other affected entities.

Violation: Title 10 CFR Part 21.21(a) requires, in part, each individual, corporation, partnership, dedicating entity, or other entity subject to the regulations in this part shall adopt appropriate procedures to evaluate deviations and failures to comply to identify defects and failures to comply associated with substantial safety hazards as soon as practicable in order to identify a reportable defect or failure to comply that could create a substantial safety hazard, were it to remain uncorrected.

Contrary to the above, from June, 29, 2010, to present, the licensee, an entity subject to the regulations in this part, did not adopt appropriate procedures to evaluate deviations and failures to comply to identify defects and failures to comply associated with substantial safety hazards as soon as practicable in order to identify a reportable defect or failure to comply that could create a substantial safety hazard, were it to remain uncorrected. Specifically, the licensee adopted procedure OM7.ID11, "10 CFR 21 Reportability Review Process," Revisions 3, 4, and 4A, to evaluate deviations and failures to comply to identify defects and failures to comply associated with substantial safety hazards, and the procedure was inappropriate because it concludes that the requirements of 10 CFR 21 are met if no report is required by 10 CFR 50.72, 10 CFR 50.73, or 10 CFR 73.71.

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

Unresolved Item (Open)	Failure to Adequately Evaluate a Potential Part 21 Issue URI 05000275, 05000323/2022010-03	71152B
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Description: The inspectors noted that Licensee Event Report (LER) 2014-002-01, "Unit 2 Plant Shutdown Required by Technical Specifications," reported on May 7, 2015, described a failed inlet-to-fuel header cap screw on EDG 2-2 engine cylinder 1L and a degraded cap screw on EDG 2-3 engine cylinder 8L. As a result, both EDGs were inoperable, and a technical specification required shutdown was subsequently completed. The cause of the failed and degraded cap screws was determined to be high cycle fatigue due to inadequate preloading of the cap screws. Additionally, the licensee's associated root cause analysis associated with notification 50652094 determined the bolted connection components (cap screw, gasket, and lock washer) provided by the EDG vendor (ALCO/Fairbanks Morse) reduced the fatigue design margin by not controlling the preload on the bolted connection. The root cause evaluation notes, "Caps crews supplied by [the vendor] have lower mechanical properties than those installed prior to 2011...resulting in a reduced maximum torque value of 18 ft-lbs." Additionally, the evaluation notes, "Changes by the vendor to a thicker, less crushable gasket decreased the preload on the bolted joint, reducing design margin. No specific engineering evaluation (i.e., effect on torque and assembly sequence) of the gasket changes were identified by either the vendor or [Diablo Canyon Power Plant]." Finally, the licensee also determined that the EDG vendor maintenance instructions did not provide adequate details regarding maintaining the bolted connection to address high cycle fatigue concerns.

Although LER 2014-002-01 states that the as-found condition of the cap screws would not have prevented the diesels from performing their specified safety function, it is not clear to the inspectors that the requirements of 10 CFR 21.21(a) have been met. Specifically, 10 CFR 21.21(a) requires evaluation of deviations and failures to comply to identify defects and failures to comply associated with substantial safety hazards as soon as practicable, and in all cases within 60 days of discovery, in order to identify a reportable defect or failure to comply that could create a substantial safety hazard, were it to remain uncorrected. In this case, the licensee has not adequately evaluated the cap screw issues to determine whether the defect or failure to comply could create a substantial safety hazard were it to remain uncorrected.

Therefore, the inspectors determined that a URI was necessary to appropriately characterize the violation(s) and determine whether the issue(s) is more than minor.

Planned Closure Actions: The inspectors are anticipating the licensee will perform additional evaluation of the cap screw issues to determine whether the defect or failure to comply could create a substantial safety hazard were it to remain uncorrected, and the NRC needs to review the licensee's 10 CFR Part 21 evaluation for the cap screw issues to determine whether the defect or failure to comply represents a substantial safety hazard if left uncorrected and whether the issue was reportable under 10 CFR Part 21.

Licensee Actions: Following identification of the cap screw issues, the degraded cap screws were replaced with Grade 8 special cap screws tightened to vendor-approved torque values, and the licensee installed cap screw positive locking mechanisms and new gaskets to achieve metal-to-metal bolting connections. Additionally, the licensee obtained updated vendor maintenance instructions and documentation for the Grade 8 cap screws. The licensee entered the 10 CFR Part 21 evaluation and reporting concern into the corrective action program.

Corrective Action References: Notification 51174312

Minor Violation	71152B
<p>Minor Violation: The inspectors identified that some conditions were inappropriately dispositioned as conditions not adverse to quality. Specifically, 10 CFR 50, Appendix B, Criterion XVI, requires, in part, that "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected." Contrary to the above, some conditions adverse to quality were not promptly identified and corrected. The inspectors noted seven examples of conditions documented in notifications that were not identified as conditions adverse to quality. The seven issues included: loose banjo bolts on safety related EDG 2-1 (notification 51133376); failure to complete a post-event fitness for duty test (notification 50925349); two safety related containment and auxiliary building concrete spalling conditions (notifications 50039246 and 50033628, respectively); two unattended and mobile carts adjacent to the control boards and safety related equipment in the control room (notifications 51141078 and 51133832, respectively); and a cart secured to safety related EDG 2-2 jacket water piping (notification 51165812). The station documented notification 51174850 to capture the overall issue.</p> <p>Screening: The inspectors determined the performance deficiency was minor. The inspectors determined the examples of the performance deficiency did not adversely affect a cornerstone objective, would not lead to a more significant safety concern if left uncorrected, and could not reasonably be viewed as a precursor to a significant event.</p> <p>Enforcement: This failure to comply with 10 CFR Part 50, Appendix B, Criterion XVI constitutes a minor violation that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.</p>	

Observation: Delay in Determining a Significant Condition Adverse to Quality Existed	71152B
<p>At the start of the fall 2022 Unit 2 outage on October 23, 2022, during routine outage inspections, the licensee identified through wall pressure boundary leakage on the reactor coolant system cold leg loop 1 vacuum refill connecting pipe (line 1140). The issue was reported as LER 2022-001-00, "Unit 2 Reactor System Pressure Boundary Degradation."</p>	

Initially, the licensee determined that a through wall unisolable reactor coolant system leak did not warrant a root cause evaluation and did not need to be precluded from repetition. Rather, the licensee initially determined that the line 1140 pressure boundary leakage only required an apparent cause evaluation, which by process, neither identifies root causes nor corrective actions to preclude repetition.

The inspectors noted that this initial determination appeared to be contrary to Step 3.28 of OM7.ID3, "Root Cause Evaluation," Revision 53, which defines a significant condition adverse to quality as, "A condition adverse to quality (CAQ) that, if uncorrected could seriously affect the health and safety of the public or require a major effort to restore capability to perform specific functions." Additionally, the inspectors noted that had the condition been identified while in MODE 1, a technical specification shutdown would have been required since no amount of pressure boundary leakage is acceptable.

However, on December 7, 2022, the station reconsidered whether a root cause evaluation was appropriate based on additional information gained during start-up monitoring and concluded that the condition warranted a root cause evaluation to determine the root causes and appropriate corrective actions to preclude repetition.

Although the station appropriately determined that a root cause evaluation and corrective actions to preclude repetition were necessary for a significant condition adverse to quality, the inspectors observed that the sufficient information existed earlier for the licensee to come to the correct conclusion that a root cause evaluation was warranted and that the condition needed to be precluded from repetition.

Observation: Performance of Less Rigorous Cause Evaluations

71152B

The inspectors observed that the licensee is performing less rigorous cause evaluations even when a more robust cause evaluation is recommended by procedure and could identify additional insights.

The licensee justified performance of a lower level causal evaluation associated with notification 51157253 in response to NCV 2022002-02, "Inadequate Procedure Renders Residual Heat Removal Pumps Vulnerable to Seismically Induced System Interactions," when additional insights could have been gained from a more robust evaluation. Specifically, the licensee determined that a work group evaluation was appropriate to evaluate the concern even though OM4.ID14, "Notification Review Team (NRT)," Revision 35A, recommends that a more robust cause evaluation is necessary when causes are not fully understood.

As a result, the licensee did not look at the SISI program more holistically and recognize that procedures OP1.DC10, "Conduct of Operations," Revision 65 and A-48, "Operations Watchstander and Supervisor Expectations," Revision 2, had requirements associated with SISI hazards. Instead, the licensee focused solely on the violation. This was a missed opportunity to perform a more rigorous evaluation that could have identified additional learnings or issues associated with not following other related licensee procedures.

## EXIT MEETINGS AND DEBRIEFS

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



- On December 14, 2022, the inspectors presented the biennial problem identification and resolution inspection results to Paula A. Gerfen, Senior Vice President, Generation and Chief Nuclear Officer, and other members of the licensee staff.
- On January 19, 2023, the inspectors presented the biennial problem identification and resolution inspection results to Paula A. Gerfen, Senior Vice President, Generation and Chief Nuclear Officer; Justin Rogers, Nuclear Training and Accreditation Director; and other members of the licensee staff.

**DOCUMENTS REVIEWED**

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152B	Calculations	M-912	HVAC Interactions for Room Heat Up Due to Loss of HVAC	9
71152B	Corrective Action Documents	Notification	50033628; 50035253; 50039246; 50394106; 50517404; 50531504; 50533633; 50553121; 50570623; 50571052; 50607241; 50620434; 50680750; 50684617; 50798440; 50821789; 50827317; 50882377; 50925349; 50929916; 50930618; 50944736; 50951476; 51012113; 51015960; 51017815; 51021455; 51023877; 51036892; 51041906; 51052723; 51064107; 51064372; 51067174; 51069553; 51069986; 51070121; 51070339; 51070582; 51071977; 51073283; 51074953; 51075070; 51077274; 51077470; 51077890; 51078401; 51079148; 51079152; 51079153; 51079217; 51079218; 51079941; 51080519; 51080566; 51080779; 51080874; 51081322; 51081501; 51081519; 51082293; 51082592; 51082639; 51082801; 51082918; 51083213; 51084207; 51084784; 51084785; 51084829; 51084875; 51085333; 51085405; 51086222; 51086961; 51087149; 51087728; 51088130; 51088141; 51088341; 51090103; 51090496; 51090681; 51091312; 51093137; 51093204; 51093962; 51094645; 51094876; 51095570; 51096876; 51097868; 51097902; 51100220; 51101181; 51101678; 51102123; 51102124; 51102126; 51102133; 51103119; 51103866; 51103896; 51104560; 51104645; 51105237; 51106484; 51107469; 51107485; 51107567; 51108157; 51108548; 51109003; 51109004; 51109005; 51109010; 51109215; 51109818; 51109927; 51110031; 51110044; 51111786; 51111789; 51113434; 51113754; 51114463; 51115230; 51115840; 51116951; 51118427; 51119759; 51119821; 51122063; 51122515; 51123152; 51123561; 51124036; 51124262; 51124494; 51124756; 51124809; 51124860; 51124938; 51125009; 51125240; 51125305; 51126129; 51126493; 51127045; 51127931; 51128221; 51128283; 51128613; 51128824; 51129829; 51130149; 51130644; 51131236; 51131508; 51131514; 51131551; 51131820; 51131840; 51131967; 51132730; 51132731; 51132854; 51132895; 51132970; 51133375; 51133376; 51133391; 51133450; 51133472; 51133679; 51133832; 51133841; 51134347; 51134473; 51134627; 51134663; 51134704; 51134964; 51135038; 51135050; 51135092;	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			51135252; 51136026; 51136349; 51136623; 51137051; 51137084; 51137600; 51137972; 51138642; 51138664; 51139208; 51139386; 51139412; 51139425; 51140452; 51140494; 51140696; 51141078; 51141433; 51141476; 51141493; 51141496; 51141789; 51142115; 51142120; 51142224; 51143292; 51144526; 51145260; 51145800; 51147124; 51147688; 51147922; 51147935; 51147936; 51148137; 51148529; 51148664; 51148865; 51149034; 51149167; 51149260; 51150555; 51150559; 51150669; 51150932; 51151560; 51151815; 51152020; 51152257; 51152325; 51153685; 51154606; 51155127; 51155158; 51156217; 51157308; 51157513; 51157775; 51157842; 51158587; 51158610; 51159849; 51160136; 51160286; 51160294; 51162799; 51162947; 51162982; 51163159; 51163264; 51163466; 51163761; 51163762; 51163955; 51164154; 51164279; 51164376; 51164433; 51165986; 51167081; 51167669; 51167870; 51167877; 51168277; 51168664; 51169865; 51170322; 51170456; 51170658; 51171840; 51171864; 51171892; 51171985; 51171987; 51172032; 51172072; 51172073; 51172075; 51172076; 51172149; 51172185; 51172732; 51172748; 51172760; 51173730; 51173767; 51173835; 51174176; 51174214; 51174216; 51174240; 51174266; 51174268; 51174371; 51176792; 51176793; 51178296	
71152B	Engineering Evaluations	0322-0052-RPT-001	Evaluation of the DCPD DEG Fuel Header Special Cap Screw Loss of Preload	0
71152B	Miscellaneous		Nuclear Safety Culture Review Report 2nd Period 2022	10/10/2022
71152B	Miscellaneous		Nuclear Safety Culture Review Report 1st Period 2022	03/21/2022
71152B	Miscellaneous		Nuclear Safety Culture Review Report 3rd Period 2021	12/16/2021
71152B	Miscellaneous		Nuclear Safety Culture Review Report 2nd Period 2021	06/24/2021
71152B	Miscellaneous		Nuclear Safety Culture Review Report 1st Period 2021	02/12/2021
71152B	Miscellaneous		1R20 ASW Discharge Pipe Corrosion Report	06/12/2017
71152B	Miscellaneous	20-05; 21-02; 22-01; 22-03	Employee Concerns Program Reports	
71152B	Miscellaneous	20-26; 20-28; 20-30; 20-32; 20-	Employee Concerns Program Records	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		36; 21-03; 21-11; 21-12; 21-13; 21-16; 21-17; 21-19; 21-30; 21-31; 22-01; 22-02; 22-08; 22-10; 22-14; 22-15; 22-17		
71152B	Miscellaneous	2020-AS-13	Evaluation of Corrective Action Program	12/01/2020
71152B	Miscellaneous	2021-AS-01	Safety Issue Resolution	01/21/2021
71152B	Miscellaneous	2021-IA-10	2021 Problem Prevention and Corrective Action Program Audit	09/27/2021
71152B	Miscellaneous	2022-IA-01	2022 Emergency Preparedness Audit	02/17/2022
71152B	Miscellaneous	2022-IA-02	Radiation Protection Programs Audit	01/31/2022
71152B	Miscellaneous	413.61-17.86	Remote Visual Inspection of the Diablo Canyon Power Plant, Unit 1 Auxiliary Salt Water Piping Train 1-1 and 1-2 During the 1R20 Refueling Outage	05/01/2017
71152B	Miscellaneous	ASMP SAF 51071977	2021 Nuclear Safety Culture Assessment	12/2021
71152B	Miscellaneous	DCM No. S-23G	Intake Structure Ventilation System	10
71152B	Miscellaneous	DCM No. S-68	Lighting, Heat Trace & Cathodic Protection	16
71152B	Miscellaneous	DCM S-17B	Auxiliary Saltwater System	25
71152B	Miscellaneous	PC-17A-02	Maintenance Rule Performance Criteria: Saltwater System	
71152B	Miscellaneous	PC-21A-01	Maintenance Rule Performance Criteria- Emergency Diesel Generator	
71152B	Miscellaneous	PowerPoint	Continued Decommissioning Planning and Extended operations	
71152B	Procedures	A-48	Operations Watchstander and Supervisor Expectations	2
71152B	Procedures	AD4.ID3	SISIP Housekeeping Activities	18
71152B	Procedures	AD7.ID2	Daily Notification Review Team (DRT) & Standard Plant Priority Assignment Scheme	40

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152B	Procedures	AD8.ID5	Outage Scope Determination and Control Process	3
71152B	Procedures	AR PK10-16	FDWTR HTRS LEVEL HI	13
71152B	Procedures	B-35	Notification Review	14
71152B	Procedures	CF4.ID7	Temporary Alteration	30
71152B	Procedures	MP E-53.7	Maintenance of ITT, General Controls Hydramotor Actuator	14
71152B	Procedures	MP M-21.11	Diesel Engine Fuel Pump Maintenance rev 19	07/21/2022
71152B	Procedures	OM14.ID1	Fatigue Management Rule Program	31A
71152B	Procedures	OM14.ID3	Fitness for Duty Program	32A
71152B	Procedures	OM14.ID3	Fitness for Duty Program	31
71152B	Procedures	OM4.ID14	Notification Review Team (NRT)	35A
71152B	Procedures	OM7.ID1	Problem Identification and Resolution	58
71152B	Procedures	OM7.ID11	10 CFR 21 Reportability Review Process	2
71152B	Procedures	OM7.ID11	10 CFR 21 Reportability Review Process	3
71152B	Procedures	OM7.ID11	10 CFR 21 Reportability Review Process	4
71152B	Procedures	OM7.ID11	10 CFR 21 Reportability Review Process	4A
71152B	Procedures	OM7.ID12	Operability Determination	43
71152B	Procedures	OM7.ID13	Technical Evaluations	9
71152B	Procedures	OM7.ID3	Root Cause Evaluation	52
71152B	Procedures	OM7.ID3	Root Cause Evaluation	53
71152B	Procedures	OP E-5:IV	Auxiliary Saltwater System-Swapping Pumps or HXs During Single CCW HX Operation	14, 15
71152B	Procedures	OP1.DC10	Conduct of Operations	64
71152B	Procedures	OP1.DC10	Conduct of Operations	65
71152B	Procedures	OP1.DC3	Operator Routine Plant Equipment Inspections	17
71152B	Procedures	OP1.DC40	Operations Equipment Deficiency and Adverse Condition Monitoring	13
71152B	Procedures	SP 101	Control of Security Program Plans, Manuals, Procedures, and Policies	20
71152B	Procedures	SP 101	Control of Security Program Plans, Manuals, Procedures, and Policies	24
71152B	Procedures	XI1.ID2	Regulatory Reporting Requirements and Reporting Process	44
71152B	Self-Assessments	2020-AS-12	Human Performance Evaluations and Actions	11/23/2020

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71152B	Self-Assessments	51125733	NSOC Concern: Equipment Vulnerabilities	07/19/2021
71152B	Self-Assessments	51139860	2022 PI&R Self-Assessment	12/29/2021
71152B	Work Orders	60065150		
71152B	Work Orders	60126877		
71152B	Work Orders	6013928		
71152B	Work Orders	64136575	M 2234 CCW HX 2-1 Performance test	
71152B	Work Orders	64136615	M 234 CCW HX 2-2 Performance Test	
71152B	Work Orders	64157580	CCWHE1-1: Clean/Inspect SW Side	
71152B	Work Orders	64160081	CCWHE1-2: Clean/Inspect SW Side	
71152B	Work Orders	64194111	STP M-70.SWG U1 Containment ECCS Doors	
71152B	Work Orders	64254392	ASP2-2: Repack Pump	