



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

May 4, 2012

EA 12-075

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 Code 104/6  
Avila Beach, CA 93424

Subject: DIABLO CANYON POWER PLANT - NRC INTEGRATED INSPECTION  
REPORT 05000275/2012002 AND 05000323/2012002 and NOTICE OF  
VIOLATION

Dear Mr. Halpin:

On March 23, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Diablo Canyon Power Plant Units 1 and 2. The enclosed inspection report documents the inspection findings, which were discussed on March 27, 2012, with Mr. James Becker, Site Vice President, and other members of your staff.

The inspections examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

In a conversation on April 26, 2012, Neil O'Keefe of my staff informed you that the NRC was considering escalated enforcement for an apparent violation involving the failure to provide complete and accurate information to the NRC regarding control room habitability test results conducted in 2005. Mr. O'Keefe also informed you that we had sufficient information regarding the apparent violation and your corrective actions to make an enforcement decision without the need for a pre-decisional enforcement conference or a written response from you. You indicated that Pacific Gas and Electric did not believe that a pre-decisional enforcement conference or written response was needed.

Based on the information developed during the inspection, the NRC has determined that a violation of NRC requirements occurred. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report.

The violation occurred on April 22, 2005, when Pacific Gas and Electric reported to the NRC that control room habitability testing required by Generic Letter 2003-01, "Control Room

Habitability,” had confirmed that the main control room envelope did not have any unfiltered in-leakage when performed in the most limiting configuration for operator dose (Pacific Gas and Electric Letter DCL-05-042, April 22, 2005, “Control Room Envelope In-Leakage Test Results Relative to Generic Letter 2003-01, Control Room Habitability,” ADAMS ML051260225). During this inspection, inspectors identified that three of the four tests performed in January 2005 had measured unfiltered control room in-leakage that were greater than both the values assumed in the design basis and the values reported to the NRC in response to Generic Letter 2003-01, and that the testing had not been performed in the most limiting configuration for operator dose. On December 2, 2011, Pacific Gas and Electric issued a letter (ML113390057) to report that incorrect information had been reported in their 2005 response to Generic Letter 2003-01. The letter also provided the correct 2005 test results. The letter stated that a leakage path was identified and corrected after the first three tests, and the fourth test (negative in-leakage) was representative of the control room envelope. The licensee determined that human error (a mindset that a pressurized control room should have zero in-leakage) affected the interpretation of test results and led to the non-conservative determination of zero in-leakage in 2005. During the period of the violation, both units spent time in operating and shutdown modes. The licensee made an 8-hour notification on September 12, 2011, when the error was identified and the control room was declared inoperable, and submitted a licensee event report and supplement on November 14, 2011 and January 30, 2012, respectively.

The safety significance of this failure to provide complete and accurate information was very low because the licensee was able to verify that emergency core cooling system leakage outside containment was maintained sufficiently low so that control room operator dose would not have exceeded 5 rem. This violation impacted the NRC’s ability to perform its regulatory function because the NRC relies on its licensees to provide complete and accurate information. The staff has concluded that the NRC would have taken a different regulatory position or undertaken substantial further inquiry had the correct test results been reported. Therefore, this violation has been categorized in accordance with the NRC Enforcement Policy at Severity Level III.

In accordance with the NRC’s Enforcement Policy, a base civil penalty of \$70,000 is considered for a Severity Level III violation. Because your facility has not been the subject of escalated enforcement actions within the last 2 years, the NRC considered whether credit was warranted for Corrective Action in accordance with the civil penalty assessment process in Section 2.3.4 of the Enforcement Policy. Credit was given for the Corrective Action factor because you promptly reported the erroneous report when you became aware of the problem and provided the correct test results. You also implemented prompt compensatory measures and performed new tests.

Based on the civil penalty assessment process discussed above, the NRC will not propose a civil penalty in this case. Additionally, it is recognized that this violation occurred more than 5 years ago, so it was beyond the normal statute of limitations.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC review of your response to the Notice will also determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

Additionally, one NRC identified finding of very low safety significance (Green) was identified during this inspection. This finding was determined to involve a violation of NRC requirements. The NRC is treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the non-cited violation, 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, D.C. 20555-0001, with copies to the Regional Administrator, Region IV; Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the Diablo Canyon Power Plant.

If you disagree with a cross-cutting aspect assigned 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 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such information, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). The NRC also includes significant enforcement actions on its Web site at (<http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions/>).

Sincerely,

***/RA KKennedy for/***

Elmo E. Collins  
Regional Administrator

Docket Nos.: 050000275, 050000323

License Nos.: DPR-80, DPR-82

Enclosures: (1) Notice of Violation  
(2) Inspection Report 05000275/2012002 and 05000323/2012002  
w/Attachment: Supplemental Information

cc w/Enclosure: Electronic Distribution

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 Deputy Regional Administrator (Art.Howell@nrc.gov)  
 DRP Director (Kriss.Kennedy@nrc.gov)  
 DRP Deputy Director (Troy.Pruett@nrc.gov)  
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SUNSI Rev Compl.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	ADAMS	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Reviewer Initials	NFO
Publicly Avail	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sensitive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sens. Type Initials	NFO
RIV:RI:DRP/B	SRI:DRP/B	DRP/B	C:/DRS/PSB2	C:/DRS/EB1	
LHMicewski	MSPeck	LWilloughby	GEWerner	TRFarnholtz	
<b>/RA via E/</b>	<b>/RA via E/</b>	<b>/RA/</b>	<b>/LRicketson for/</b>	<b>/RA/</b>	
5/2/12	5/2/12	5/2/12	5/2/12	5/2/12	
C:/DRS/EB2	C:/DRS/PSB1	C:/DRS/OB	C:/DRS/TSB	C:/DRP/B	
GMiller	MHay	MHaire	RAlexander	NFOKeefe	
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## NOTICE OF VIOLATION

Pacific Gas and Electric Company  
Diablo Canyon Power Plant  
EA-12-075

Docket Nos. 050-275, 050-323  
License Nos. DPR-80, DPR-82

During an NRC inspection conducted between January 1, 2012 and March 23, 2012 a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Title 10 CFR 50.9(a), "Completeness and Accuracy of Information," requires, in part, that information provided to the Commission by a licensee shall be complete and accurate in all material respects.

Contrary to the above, on April 22, 2005, the licensee provided information to the Commission that was not complete and accurate in all material respects. Specifically, on April 22, 2005, the licensee stated to the NRC in their response to Generic Letter 2003-01 that: (1) test results confirmed that no unfiltered control room in-leakage existed; and (2) tracer gas in-leakage testing was performed in the alignment that results in the greatest consequence to the control room operator. However, the test results from licensee Procedure PMT 23.39 "PMT to Document Control Room Ventilation Test to Satisfy Generic Letter 2003-01," conducted prior to the licensee response to Generic Letter 2003-01, clearly indicated that the test identified unfiltered in-leakage greater than the value assumed in design basis radiological analyses, and the in-leakage test was not performed in the system alignment that resulted in the greatest consequence to the control room operator. This was material because the staff would not have closed the Generic Letter 2003-01 had the correct test results been reported.

This is a Severity Level III violation (Section 6.9).

Pursuant to the provisions of 10 CFR 2.201, Pacific Gas and Electric Company is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region IV, and a copy to the NRC Resident Inspector at the Diablo Canyon Power Plant, within 30 days of the date of the letter transmitting this Notice of Violation. This reply should be clearly marked as a "Reply to a Notice of Violation; EA-12-075" and should include: (1) the corrective steps that have been taken and the results achieved, (2) the corrective steps that will be taken, and (3) the results of your assessment of the cause of the violation. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide information, required by 10 CFR 2.390(b), that supports a request to withhold confidential commercial or financial information. If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated this 4th day of May 2012

**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION IV**

Docket: 05000275, 05000323

License: DPR-80, DPR-82

Report: 05000275/2012002  
05000323/2012002

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: January 1 through March 23, 2012

Inspectors: M. Peck, Senior Resident Inspector  
L. Micewski, Resident Inspector  
L. Willoughby, Senior Project Engineer  
N. Makris, Project Engineer

Approved By: N. O'Keefe, Chief, Project Branch B  
Division of Reactor Projects

## SUMMARY OF FINDINGS

IR 05000275/2012002, 05000323/2012002; 1/1/2012 – 3/23/2012; Diablo Canyon Power Plant, Integrated Resident and Regional Report; Surveillance Testing; Other Activities

The report covered a 3-month period of inspection by resident inspectors. One Green non-cited violation and one Severity Level III violation were identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process." The cross-cutting aspect is determined using Inspection Manual Chapter 0310, "Components Within the Cross Cutting Areas." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

### **A. NRC-Identified Findings and Self-Revealing Findings**

Cornerstone: Mitigating Systems

- Green. The inspectors identified a non-cited violation of 10 CFR, Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," after operations personnel declared diesel generator 2-3 operable after failing to meet all surveillance test acceptance criterion. On December 22, 2011, diesel generator 2-3 did not meet frequency acceptance criteria during technical specification surveillance testing. Plant operators declared the diesel operable after applying an engineering evaluation. The inspectors identified that the evaluation was not appropriate to the conditions of the failed test. The licensee's corrective actions included corrective maintenance, re-performance of the surveillance test, and entering the condition into the corrective action program as Notifications 50449027 and 50449504.

The failure of operations personnel to recognize that diesel generator surveillance results indicated that the system was not fully operable was a performance deficiency. This finding was more than minor because the licensee's engineering evaluation created a reasonable doubt that the system was operable, similar to Example 3.k in Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues." The inspectors concluded that the finding was of very low safety significance (Green) because the finding was not a design or qualification deficiency, did not result in the loss of operability or functionality of a single train for greater than the technical specification outage time, did not represent an actual loss of safety function, and was not potentially risk significant due to a seismic, flooding, or severe weather event. The most significant contributor to this performance deficiency was that operators did not review and understand the diesel generator surveillance results sufficiently to recognize that the condition did not match the previously-evaluated condition that was used to conclude the diesel generator remained operable. Therefore, this finding had a cross-cutting aspect in the area of problem identification and resolution, associated with the corrective action program component [P.1(c)] (Section 1R22).



Cornerstone: Barrier Integrity

- SL-III. The inspectors identified a Green finding and Severity Level III violation of 10 CFR 50.9, "Completeness and Accuracy of Information," after Pacific Gas and Electric failed to submitted complete and accurate information in response to Generic Letter 2003-01, "Control Room Habitability." Generic Letter 2003-01 requested that the licensee submit information demonstrating that the control room habitability system was in compliance with the current licensing and design bases. The licensee was specifically requested to verify that the most limiting unfiltered in-leakage into the control room envelope was no more than the value assumed in the design basis radiological analyses for control room habitability. On April 22, 2005, the licensee reported to the NRC that testing performed in the most limiting configuration for operator dose demonstrated that there was no unfiltered in-leakage into the control room envelope. This was material because the NRC used this information to close out Generic Letter 2003-01. In September 2011, the inspectors identified that the control room test results were greater than the value assumed in the design basis radiological analysis and that the licensee's testing was not performed in the most limiting configuration for operator dose. Using the actual control room in-leakage rates, the inspectors concluded that the resultant operator dose could have exceeded the limit established by current licensing and design bases during an accident.

The inspectors concluded that the failure of Pacific Gas and Electric to provide complete and accurate information in response to Generic Letter 2003-01 was a performance deficiency. The finding was more than minor because the information was material to the NRC's decision making processes. The inspectors screened the issue through the Reactor Oversight Process because the finding included a performance deficiency that was reasonably within the licensee's ability to control. The inspectors concluded that the finding was of very low safety significance (Green) because only the radiological barrier function of the control room was affected. The inspectors also screened the issue through the traditional enforcement process because the violation impacted the regulatory process. The inspectors concluded that the violation was a Severity Level III because had the licensee provided complete and accurate information in their letter dated April 22, 2005, the NRC would have likely reconsidered a regulatory position or undertaken a substantial further inquiry. The inspectors did not identify a cross-cutting aspect because the performance deficiency was not reflective of present performance (Section 40A5).

**B. Licensee-Identified Violations**

None

## REPORT DETAILS

### Summary of Plant Status

Pacific Gas and Electric Company (PG&E) was operating both units at full power at the beginning of the inspection period. On February 13, 2012, plant operators reduced Unit 2 to 50 percent power following ocean debris fouling of the condenser cooling system. On February 17, 2012, the licensee cleared the debris and returned the unit to full power. Both units operated at full power for the remainder of the inspection period.

### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

#### 1R04 Equipment Alignments (71111.04)

##### .1 Partial Walkdown

##### a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk-significant systems:

- Unit 1, Emergency diesel generator train 1-2, January 4, 2012
- Unit 2, Residual heat removal pump train 2-2, January 10, 2012
- Unit 2, Centrifugal charging pump train 2-2, January 17, 2012
- Unit 1, Component cooling water train 1-1, February 29, 2012

The inspectors selected these systems based on their risk significance relative to the reactor safety cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could affect the function of the system, and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, Final Safety Analysis Report Update (FSARU), technical specification requirements, administrative technical specifications, outstanding work orders, condition reports, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also inspected accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the corrective action program with the appropriate significance characterization.

These activities constitute completion of four partial system walkdown samples as defined in Inspection Procedure 71111.04-05.

##### b. Findings

No findings were identified.

.2 Complete Walkdown

a. Inspection Scope

On March 22, 2012, the inspectors performed a complete system alignment inspection of the Unit 1 auxiliary feedwater system to verify the functional capability of the system. The inspectors selected this system because it was considered both safety significant and risk significant in the licensee's probabilistic risk assessment. The inspectors inspected the system mechanical and electrical equipment line ups, electrical power availability, system pressure and temperature indications, as appropriate, component labeling, component lubrication, component and equipment cooling, hangers and supports, operability of support systems, and to ensure that ancillary equipment or debris did not interfere with equipment operation. The inspectors reviewed a sample of past and outstanding work orders to determine whether any deficiencies significantly affected the system function. In addition, the inspectors reviewed the corrective action program database to ensure that system equipment alignment problems were being identified and appropriately resolved. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of one complete system walkdown sample as defined in Inspection Procedure 71111.04-05.

b. Findings

No findings were identified.

**1R05 Fire Protection (71111.05)**

Quarterly Fire Inspection Tours

a. Inspection Scope

The inspectors conducted fire protection walkdowns that were focused on availability, accessibility, and the condition of firefighting equipment in the following risk-significant plant areas:

- January 12, 2012, Unit 1, Fire Area FB-1, spent fuel handing floor
- January 31, 2012, Unit 2, Fire Zone 19-E, component cooling water heat exchanger room
- February 1, 2012, Unit 1, Fire Zones 11-A-1, 11-B-1 and 11-C-1, emergency diesel generator rooms 1-1, 1-2, and 1-3
- February 1, 2012, Unit 1, Fire Zones 11-A-2, 11-B-2, and 11-C-2, emergency diesel generator radiator rooms
- February 7, 2012, Units 1 and 2, Fire Zones 8-B-4, and 8-B-3, control room ventilation equipment rooms

The inspectors reviewed areas to assess if licensee personnel had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant; effectively maintained fire detection and suppression capability; maintained passive fire protection features in good material condition; and had implemented adequate compensatory measures for out of service, degraded or inoperable fire protection equipment, systems, or features, in accordance with the licensee's fire plan. The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events with later additional insights, their potential to affect equipment that could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to a security event. Using the documents listed in the attachment, the inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also verified that minor issues identified during the inspection were entered into the licensee's corrective action program. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of five quarterly fire-protection inspection samples as defined in Inspection Procedure 71111.05-05.

b. Findings

No findings were identified.

**1R06 Flood Protection Measures (71111.06)**

a. Inspection Scope

The inspectors reviewed the FSARU, the flooding analysis, and plant procedures to assess susceptibilities involving internal flooding; reviewed the corrective action program to determine if licensee personnel identified and corrected flooding problems; inspected underground bunkers/manholes to verify the adequacy of sump pumps, level alarm circuits, cable splices subject to submergence, and drainage for bunkers/manholes; and verified that operator actions for coping with flooding can reasonably achieve the desired outcomes. The inspectors also inspected the areas listed below to verify the adequacy of equipment seals located below the flood line, floor and wall penetration seals, watertight door seals, common drain lines and sumps, sump pumps, level alarms, and control circuits, and temporary or removable flood barriers. Specific documents reviewed during this inspection are listed in the attachment.

- February 1, 2012, Unit 1, residual heat removal pumps rooms

These activities constitute completion of one flood protection measures inspection sample as defined in Inspection Procedure 71111.06-05.

b. Findings

No findings were identified.

## 1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11)

### .1 Quarterly Review of Licensed Operator Requalification Program

#### a. Inspection Scope

On January 17, 2012, the inspectors observed a crew of licensed operators in the plant's simulator to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems and training was being conducted in accordance with licensee procedures. The inspectors assessed the following areas:

- Licensed operator performance
- The ability of the licensee to administer the evaluations and the quality of the training provided
- The modeling and performance of the control room simulator
- The quality of post-scenario critiques
- Follow-up actions taken by the licensee for identified discrepancies

These activities constitute completion of one quarterly licensed operator requalification program sample as defined in Inspection Procedure 71111.11.

#### b. Findings

No findings were identified.

### .2 Quarterly Observation of Licensed Operator Performance

#### a. Inspection Scope

On March 8, 2012, the inspectors observed the performance of on-shift licensed operators in the plant's main control room. At the time of the observations, the plant was in a period of heightened activity due to diesel generator testing, reactivity manipulations, and operability issues associated with defective Rosemont transmitters.

In addition, the inspectors assessed the operators' adherence to plant procedures, including Procedure OP1.DC10, "Conduct of Operations," and other operations department policies.

These activities constitute completion of one quarterly licensed-operator performance sample as defined in Inspection Procedure 71111.11.

#### b. Findings

No findings were identified.

## 1R12 Maintenance Effectiveness (71111.12)

### a. Inspection Scope

The inspectors evaluated degraded performance issues involving the following risk significant systems:

- Containment isolation valves, Notification 64054266
- 230kV preferred offsite power maintenance, Notification 50286581

The inspectors reviewed events such as where ineffective equipment maintenance has resulted in valid or invalid automatic actuations of engineered safeguards systems and independently verified the licensee's actions to address system performance or condition problems in terms of the following:

- Implementing appropriate work practices
- Identifying and addressing common cause failures
- Scoping of systems in accordance with 10 CFR 50.65(b)
- Characterizing system reliability issues for performance monitoring
- Charging unavailability for performance monitoring
- Trending key parameters for condition monitoring
- Ensuring proper classification in accordance with 10 CFR 50.65(a)(1) or -(a)(2)
- Verifying appropriate performance criteria for structures, systems, and components classified as having an adequate demonstration of performance through preventive maintenance, as described in 10 CFR 50.65(a)(2), or as requiring the establishment of appropriate and adequate goals and corrective actions for systems classified as not having adequate performance, as described in 10 CFR 50.65(a)(1)

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system. In addition, the inspectors verified maintenance effectiveness issues were entered into the corrective action program with the appropriate significance characterization. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of two quarterly maintenance effectiveness sample as defined in Inspection Procedure 71111.12-05.

### b. Findings

No findings were identified.

## **1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)**

### a. Inspection Scope

The inspectors reviewed licensee personnel's evaluation and management of plant risk for the maintenance and emergent work activities affecting risk-significant and safety-related equipment listed below to verify that the appropriate risk assessments were performed prior to removing equipment for work:

- Unit 2, planned maintenance and testing of the vital batteries, January 23, 2012
- Units 1 and 2, removal of Morro Bay 230 kV Bus E from service for maintenance, January 26 and 27, 2012
- Unit 2, planned maintenance of emergency diesel generator 2-3 and condensate booster pump 2-1, February 22, 2012
- Unit 1, unplanned maintenance work window extension for emergency diesel generator 1-3, February 27, 2012
- Unit 2, residual heat removal train 2-2 maintenance work window, February 28, 2012

The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that licensee personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When licensee personnel performed emergent work, the inspectors verified that the licensee personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed the technical specification requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of five maintenance risk assessments and emergent work control inspection samples as defined in Inspection Procedure 71111.13-05.

### b. Findings

No findings were identified.

## **1R15 Operability Evaluations (71111.15)**

### a. Inspection Scope

The inspectors reviewed the following issues:

- Unit 1, systems and process notification (SAPN) 50450980, January 8, 2012, high vibration on containment fan cooler 1-4
- Unit 2, SAPN 50454298, January 26, 2012, failure of the control rod position switch
- Units 1 and 2, SAPN 50455814, February 6, 2012, degraded control room habitability system
- Units 1 and 2, SAPN 50461051, weld cracks in emergency diesel generator turbocharger supports, February 27, 2012

The inspectors selected these potential operability issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure that technical specification operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the technical specifications and FSARU to the licensee personnel's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations. Additionally, the inspectors also reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of four operability evaluations inspection samples as defined in Inspection Procedure 71111.15-05.

b. Findings

No findings were identified.

**1R19 Post-maintenance Testing (71111.19)**

a. Inspection Scope

The inspectors reviewed the following post-maintenance activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

- Unit 2, work order 64071682-0100, preventive maintenance of residual heat removal pump 2-1, January 11, 2012
- Unit 2, work orders 64050461 and 64024569, preventive and corrective maintenance of vital battery charger 2-3-2, January 25, 2012
- Unit 2, work order 64031217-5000, preventive and corrective maintenance of emergency diesel generator 2-2, January 30, 2012



- Unit 2, work order 640438384, kV vital bus H undervoltage relay preventive maintenance and calibration, January 30, 2012

The inspectors selected these activities based upon the structure, system, or component's ability to affect risk. The inspectors evaluated these activities for the following (as applicable):

- The effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed
- Acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate

The inspectors evaluated the activities against the technical specifications, the FSARU, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with post-maintenance tests to determine whether the licensee was identifying problems and entering them in the corrective action program and that the problems were being corrected commensurate with their importance to safety. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of four post-maintenance testing inspection samples as defined in Inspection Procedure 71111.19-05.

b. Findings

No findings were identified.

**1R22 Surveillance Testing (71111.22)**

a. Inspection Scope

The inspectors reviewed the FSARU, procedure requirements, and technical specifications to ensure that the surveillance activities listed below demonstrated that the systems, structures, and/or components tested were capable of performing their intended safety functions. The inspectors either witnessed or reviewed test data to verify that the significant surveillance test attributes were adequate to address the following:

- Preconditioning
- Evaluation of testing impact on the plant
- Acceptance criteria
- Test equipment
- Procedures

- Jumper/lifted lead controls
- Test data
- Testing frequency and method demonstrated technical specification operability
- Test equipment removal
- Restoration of plant systems
- Fulfillment of ASME Code requirements
- Updating of performance indicator data
- Engineering evaluations, root causes, and bases for returning tested systems, structures, and components not meeting the test acceptance criteria were correct
- Reference setting data
- Annunciators and alarms setpoints

The inspectors also verified that licensee personnel identified and implemented any needed corrective actions associated with the surveillance testing.

- Unit 2, routine surveillance test of centrifugal charging pump 2-1, January 17, 2012
- Unit 2, inservice test of turbine driven auxiliary feedwater pump 2-1, January 26, 2012
- Units 1 and 2, reactor coolant leakage surveillance test, January 26, 2012
- Unit 2, in-service testing surveillance of containment isolation valve FCV-698, January 27, 2012
- Unit 1, routine surveillance test of 4kv vital bus "F" undervoltage relay calibration, February 22, 2012

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of five surveillance testing inspection samples as defined in Inspection Procedure 71111.22-05.

b. Findings

Inadequate Operability Evaluation

Introduction. The inspectors identified a green noncited violation of 10 CFR, Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when operations

personnel declared diesel generator 2-3 operable after failing to meet all surveillance test acceptance criterion.

Description. On December 22, 2011, plant operators completed diesel generator 2-3 technical specification surveillance testing using Procedure STP M-9A, "Diesel Engine Generator Routine Surveillance Test," Revision 90. Plant operators concluded that the test acceptance criterion were met and declared the diesel generator operable. Procedure ST M-9A, Step 12.3.9, required the operator to verify that the generator frequency stabilized between 59.5 and 60.5 cycles per second within 13 seconds following a start signal. During the test the frequency stabilized above this range at 60.6 cycles per second. Procedure STP M-9A, Step 6.1, "Acceptance Criteria," required that the test frequency be within the acceptance range before the diesel generator could be considered operable. Also, Administrative Procedure AD13.ID1, "Conduct of Plant and Equipment Tests, Revision 12, Section 5.7, "Test Review," required the licensee to first revise the surveillance test acceptance criteria prior to accepting test results outside of the existing acceptance range.

The inspectors concluded that the most significant contributor to the finding was a less than adequate operability evaluation. Plant operators concluded the diesel generator was operable based on an engineering evaluation described in Action Request 056731. This evaluation stated that the diesel generator could be considered operable if the frequency failed to stabilize within 13 seconds provided that the generator voltage had stabilized within 13 seconds. On December 23, 2011, the inspectors identified that this engineering evaluation was not applicable to the failed surveillance test because the evaluation did not address frequency stabilization outside of the acceptance range. Following discussions with the inspectors, the licensee declared diesel generator 2-3 inoperable and performed maintenance on the motor operated potentiometer controlling generator frequency. Plant operators subsequently re-performed the surveillance test and all acceptance criteria were met. The licensee entered the condition into the corrective action program as Notifications 50449027 and 50449504.

Analysis. The failure of operations personnel to recognize that diesel generator surveillance results indicated that the system was not fully operable was a performance deficiency. The performance deficiency was similar to the more than minor example 3.k in Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues," because the inadequate evaluation resulted in a reasonable doubt of diesel generator operability. The inspectors concluded that the finding affected the mitigating systems cornerstone because the performance deficiency was related to diesel generator availability. The inspectors used Inspection Manual Chapter 609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," to analyze the significance of the finding. The inspectors concluded that the finding was of very low safety significance (Green) because the finding was not a design or qualification deficiency, did not result in the loss of operability or functionality of a single train for greater than the Technical Specification outage time, did not represent an actual loss of safety function for greater than 24 hours, and was not potentially risk significant due to a seismic, flooding, or severe weather initiating event. The most significant contributor to this performance deficiency was that operators did not review and understand the diesel generator surveillance results sufficiently to recognize that the condition did not match the previously-evaluated condition that was used to conclude the diesel generator remained operable. Therefore, this finding had a cross-cutting aspect in the area of problem identification and resolution, associated with the corrective action program component [P.1(c)].

Enforcement. Title 10 CFR, Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires in part that activities affecting quality be accomplished in accordance with procedures. Procedure STP M-9A, "Diesel Engine Generator Routine Surveillance Test," Revision 90, stated that the diesel generator shall be considered operable when frequency stabilizes within the acceptance range within 13 seconds following a start signal. Contrary to the above, on December 22, 2011, plant personnel concluded that diesel generator 2-3 was operable after the frequency failed to stabilize within the required acceptance range within 13 seconds following a start signal without an adequate technical basis. Because this finding was of very low safety significance and was entered into the corrective action program as Notifications 50449027 and 50449504, this violation is being treated as a noncited violation, consistent with Section 2.3.2 of the NRC Enforcement Policy: NCV 05000323/2012002-01, Inadequate Operability Determination.

#### 4. OTHER ACTIVITIES

**Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Security**

##### 40A1 Performance Indicator Verification (71151)

###### .1 Data Submission Issue

###### a. Inspection Scope

The inspectors performed a review of the performance indicator data submitted by the licensee for the fourth quarter 2011 performance indicators for any obvious inconsistencies prior to its public release in accordance with Inspection Manual Chapter 0608, "Performance Indicator Program."

This review was performed as part of the inspectors' normal plant status activities and, as such, did not constitute a separate inspection sample.

###### b. Findings

No findings were identified.

###### .2 Unplanned Scrams per 7000 Critical Hours (IE01)

###### a. Inspection Scope

The inspectors sampled licensee submittals for the unplanned scrams per 7000 critical hours performance indicator for Units 1 and 2 for the period from the first quarter 2011 through the fourth quarter 2011. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, and NRC integrated inspection reports for the period of January 2011 through December 2011 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any

problems had been identified with the performance indicator data collected or transmitted for this indicator and none were identified.

These activities constitute completion of two unplanned scrams per 7000 critical hours samples as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

.3 Unplanned Power Changes per 7000 Critical Hours (IE03)

a. Inspection Scope

The inspectors sampled licensee submittals for the unplanned power changes per 7000 critical hours performance indicator for Units 1 and 2 for the period from the first quarter 2011 through the fourth quarter 2011. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, and NRC integrated inspection reports for the period of January 2011 through December 2011 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the performance indicator data collected or transmitted for this indicator and none were identified.

These activities constitute completion of two unplanned transients per 7000 critical hours samples as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

.4 Unplanned Scrams with Complications (IE04)

a. Inspection Scope

The inspectors sampled licensee submittals for the unplanned scrams with complications performance indicator for Units 1 and Unit 2 for the period from the first quarter 2011 through the fourth quarter 2011. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, and NRC integrated inspection reports for the period of January 2011 through December 2011 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the performance indicator data collected or transmitted for this indicator and none were identified.

These activities constitute completion of two unplanned scrams with complications samples as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

**4OA2 Identification and Resolution of Problems (71152)**

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As part of the various baseline inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that they were being entered into the licensee's corrective action program at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. The inspectors reviewed attributes that included: the complete and accurate identification of the problem; the timely correction, commensurate with the safety significance; the evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent of condition reviews, and previous occurrences reviews; and the classification, prioritization, focus, and timeliness of corrective actions. Minor issues entered into the licensee's corrective action program because of the inspectors' observations are included in the attached list of documents reviewed.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure, they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

b. Findings

No findings were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program. The inspectors accomplished this through review of the station's daily corrective action documents.

The inspectors performed these daily reviews as part of their daily plant status monitoring activities and, as such, did not constitute any separate inspection samples.

b. Findings

No findings were identified.

.3 Selected Issue Follow-up Inspection

a. Inspection Scope

During a review of items entered in the licensee's corrective action program, the inspectors recognized a corrective action item documenting:

- SAPN 50459801, Operating experience at Byron Nuclear Plant, impact of open circuit on offsite power system, February 16, 2012
- SAPN 50455065, Availability of the emergency diesel generators during surveillance testing

These activities constitute completion of two in-depth problem identification and resolution samples as defined in Inspection Procedure 71152-05.

b. Findings

No findings were identified.

**40A5 Other Activities**

.1 (Closed) Unresolved Item 05000275; 05000323/2011004-02: Inconsistent Control Room In-Leakage Test Results Reported to the NRC

The inspectors reviewed information submitted by the licensee in response to Generic Letter 2003-01, "Control Room Habitability," and completed a review of circumstances, extent of condition, and causes related to incorrect information reported to the NRC following control room envelope trace gas testing. The results of this review are documented in Section 40A5.2. This URI is closed.

.2 Failure to Submit Complete and Accurate Information in Response to Generic Letter 2003-01, "Control Room Habitability"

Introduction. The inspectors identified a Green finding and Severity Level III violation of 10 CFR 50.9, "Completeness and Accuracy of Information," after Pacific Gas and Electric failed to provide complete and accurate information in response Generic Letter 2003-01, "Control Room Habitability."

Description. The NRC issued Generic Letter 2003-01, "Control Room Habitability," to ensure that the applicable regulatory requirements and the design bases were met for control room habitability systems. The generic letter specifically requested Pacific Gas and Electric to verify that the most limiting unfiltered in-leakage into the control room envelope was no more than the value assumed in the design basis radiological analyses for control room habitability. FSARU Section 15.5.17.10, "Post-Accident Control Room Exposures," stated that the control room design bases limited post-accident operator radiation exposure to 5 rem equivalent for the duration of the most severe accident, consistent with General Design Criteria 19, "Control Room," of 10 CFR, Part 50, Appendix A. The habitability system limited operator radiation exposure by filtering and pressurizing the air in control room envelope. The licensee used Calculation STA-195, "Design Bases Dose Consequences and Recirculation Loop Margin Leakage Rates,"

Revision 0, to demonstrate that this design basis requirement was met. Calculation STA-195 showed that 10 cubic feet minute (cfm) unfiltered in-leakage into the envelope would result in control room operators receiving 5 rem equivalent dose.

In response to Generic Letter 2003-01, Pacific Gas and Electric reported to the NRC that testing performed in January 2005 confirmed that the control room envelope did not have any unfiltered in-leakage (Pacific Gas and Electric Letter DCL-05-042, April 22, 2005, "Control Room Envelope In-Leakage Test Results Relative to Generic Letter 2003-01, Control Room Habitability," ADAMS ML051260225). The licensee stated that the testing was performed in the most limiting configuration for operator dose consistent with Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Section 2.2, "Alignment, Operation, and Performance." In 2006, the NRC concluded that the licensee's responses and described actions needed for Generic Letter 2003-01 were complete because the licensee had reported that in-leakage was not greater than assumed in the design basis radiological analyses (Diablo Canyon Power Plant , Units 1 and 2 – RE: Response to Generic Letter 2003-01, "Control Room Habitability" TAC Nos. MB9797 and MB9798, ADAMS ML0623605840).

In September 2011, the inspectors identified that the control room in-leakage test results had been greater than both the values reported to the NRC in response to the generic letter and the values assumed in the design basis radiological analyses. Procedure PMT 23.39, "PMT to Document Control Room Ventilation Test to Satisfy Generic Letter 2003-01," tested the control room habitability system in four configurations and had measured unfiltered in-leakage rates described in Table 1.

**Table 1 – PMT 23.29 Control Room Unfiltered In-Leakage**

<u>Date</u>	<u>Configuration</u>	<u>Unfiltered In-Leakage (CFM)</u>
January 22, 2005	Supply Fan S-99 in operation	59
January 22, 2005	Supply Fan S-98 in operation	44
January 22, 2005	Supply Fan S-97 in operation	19
January 22, 2005	Supply Fan S-96 in operation	-10

The inspectors also identified that the licensee had not performed the trace gas in-leakage test in the most limiting configuration for operator dose consistent with Regulatory Guide 1.197. The licensee had performed the 2005 tests with components of both control room habitability trains in operation. Technical Specification Basis 3.7.10, "Control Room Ventilation System (CRVS)," stated that each individual ventilation train was required to limit operator dose to 5 rem equivalent. In November 2011, the licensee re-performed the in-leakage tests in the most limiting configuration for operator dose and measured about 800 CFM unfiltered in-leakage into the control room envelope. Plant operators subsequently declared the habitability system inoperable and implemented compensatory actions.

The inspectors concluded that the violation resulted in potential safety consequences. By failing to recognize and report the unfiltered in-leakage, the licensee did not take corrective actions necessary to ensure that the control room habitability system would



meet the radiological analysis for in-leakage into the control room envelope. The analysis assumed 10 cfm in-leakage and concluded that the control room operators would receive the 5 rem equivalent regulatory limit established by 10 CFR Part 50, Appendix A, General Design Criteria 19, "Control Room." Based on the results of the 2005 control room in-leakage test, control room operators would have had the potential to exceed the 5 rem equivalent regulatory limit during an accident with a release. The inspectors concluded that no actual consequences occurred as a result of the violation because there were no adverse radiological conditions that challenged this function.

Analysis. The inspectors concluded that the failure of Pacific Gas and Electric to provide complete and accurate information in response to Generic Letter 2003-01 was a performance deficiency. The inspectors screened the issue through the Reactor Oversight Process because the finding included a performance deficiency that was reasonably within the licensee's ability to control. The inspectors also screened the issue through the traditional enforcement process because the violation impacted the regulatory process. The purpose of the generic letter was to collect information to determine if additional regulatory action was required. Title 10 CFR 50.9(a) required that the requested information, when provided, must be complete and accurate in all material respects. The finding was more than minor because the information was material to the NRC's decision making processes. Specifically, the information requested by Generic Letter 2003-01 was to enable NRC staff to determine whether the applicable regulatory requirements identified in the generic letter (10 CFR Part 50, Appendix A, General Design Criteria 1, 3, 4, and 19; and 10 CFR Part 50, Appendix B, Criterion XI), were being met in regard to the operational readiness of the control room habitability system.

The inspectors concluded that the finding was associated with the Barrier Integrity Cornerstone because the control room habitability system was affected. Using Inspection Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the inspectors concluded that the finding was of very low safety significance (Green) because only the radiological barrier function of the control room was affected. The inspectors used the NRC Enforcement Policy to evaluate the traditional enforcement violation. The inspectors concluded that the violation was a Severity Level III because had the licensee provided complete and accurate information in their letter dated April 22, 2005, the NRC would not have closed Generic Letter 2003-01. The staff considered whether a civil penalty was warranted. The licensee has not been the subject of escalated enforcement actions within the last 2 years; Credit was given for the Corrective Action factor because the licensee promptly reported the erroneous report when they became aware of the problem and provided the correct test results; Prompt compensatory measures were taken and new tests were performed. Based on the civil penalty assessment process, the NRC will not propose a civil penalty in this case. Additionally, it is recognized that this violation occurred more than 5 years ago, so it was beyond the normal statute of limitations.

The inspectors did not identify a cross-cutting aspect because the performance deficiency was not reflective of present performance.

Enforcement. Title 10 CFR 50.9(a), "Completeness and Accuracy of Information," requires, in part, information provided to the Commission by a licensee shall be complete and accurate in all material respects. Contrary to the above, on April 22, 2005, the licensee provided information to the Commission that was not complete and accurate in all material respects. Specifically, on April 22, 2005, the licensee stated to

the NRC in their response to Generic Letter 2003-01 that: (1) test results confirmed that no unfiltered in-leakage existed; and (2) tracer gas in-leakage testing was performed in the alignment that results in the greatest consequence to the control room operator. However, the test results from licensee Procedure PMT 23.39, "PMT to Document Control Room Ventilation Test to Satisfy Generic Letter 2003-01," conducted prior to the licensee response to Generic Letter 2003-01, clearly indicated that the test identified unfiltered in-leakage greater than the value assumed in design basis radiological analyses, and the in-leakage test was not performed in the system alignment that resulted in the greater consequence to the control room operator. This was material because the staff would not have closed the generic letter, had the correct test results been reported: NOV 05000275; 05000323/2012002-02, Incomplete and Inaccurate Information Provided to the NRC in Response to Generic Letter 2003-01, "Control Room Habitability."

#### **40A6 Meetings**

##### Exit Meeting Summary

On March 27, 2012, the inspectors presented the inspection results to Mr. James Becker, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

#### Licensee Personnel

J. Becker, Site Vice President  
J. Welsch, Station Director  
J. Nimick, Director, Operations Services  
S. David, Director, Site Services  
T. Baldwin, Manager, Regulatory Services  
P. Gerfen, Manager, Operations

### LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

#### Opened and Closed

05000323-2012002-01      NCV    Inadequate Operability Determination (Section 1R22)

#### Opened

05000323-2012002-01      NOV    Incomplete and Inaccurate Information Provided to the NRC  
in Response to Generic Letter 2003-01, "Control Room  
Habitability." (Section 40A5)

#### Closed

05000275;  
05000323/2011004-02      URI    Inconsistent Control Room In-Leakage Test Results  
Reported to the NRC (Section 40A5)

### LIST OF DOCUMENTS REVIEWED

#### **Section 1R04: Equipment Alignments**

##### PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
DCM S-21	Diesel Engine System	21A
DCM S-10	Residual Heat Removal System	16B
DCM S-9	Safety Injection System	27

##### DRAWINGS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
106703	Sheet 3, AFW System	76
106703	Sheet 4, Aux Feedwater and Chemical Injection	75

**Section 1R05: Fire Protection**

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
OM8.ID1	Fire Loss Prevention	22
OM8.ID2	Fire System Impairment	16
OM8.ID4	Control of Flammable and Combustible Materials	19
STP M-70A	Inspection of Fire Barrier and HELB Penetration Seals	6
STP M-70D	Inspection of Fire Barriers, Rated Enclosures, Credited Cable Tray Fire Stops, and Equipment Hatches	13
ECG 18.7	Fire Rated Assemblies	7

DRAWINGS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
515573	Fire Barriers for Unit 2, Turbine Building, 85' Elevation, Sht. 1	19

**Section 1R06: Flood Protection Measures**

DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
	PG&E PRA Calculation File No. F4 "PRA Internal Floods Analysis"	1

**Section 1R11: Licensed Operator Requalification Program**

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
Exam115E1-1	Reactor Trip	17
OP1.DC10	Conduct of Operations	30

**Section 1R12: Maintenance Effectiveness**

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
MA1.ID17	Maintenance Rule Monitoring Program	23

NOTIFICATIONS

50369577	50439888	50408740
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DOCUMENTS

Maintenance Rule Expert Panel Meeting 185, March 22, 2012

**Section 1R13: Maintenance Risk Assessments and Emergent Work Control**

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
MA1.ID17	Maintenance Rule Monitoring Program	24
AD7.DC6	On-Line Risk Management	19A

DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
Switching Log 12-0112	Removal of Morro Bay Bus 1 Section e and CB 582	Dec. 28, 2011
Switching Log 12-0113	Removal of Morro Bay Bus 1 Section e and CB 582 T-Tap	Dec. 28, 2011

Unit 1, Risk Assessment 09-15, DEG 2-3 (M-75F) and Condensate Booster Pump 2-1 MOW

**Section 1R15: Operability Evaluations**

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
OM7.ID12	Operability Determination	22
AD13.1D	Control of Plant and Equipment Tests	12
AD.13	Test Control,	3
AD13.DC1	Control of the Surveillance Test Program,	37

NOTIFICATIONS

50460853                      50461614                      50464320

DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
	Operational Decision Making Report, Unit 2 Rod Control	Jan. 28, 2012
PG&E Letter DCL 88-090	Deletion of Reactor Trip on turbine Trip Below 50 Percent Power	Apr. 18, 1988
OP1.DC10	Conduct of Operations	Rev. 30
	Diesel Generator 13 Turbo-Charger Vibration Report, Data Collect 12/04/03	

Input Data sent to MPR Associates for analysis  
 Operability write up, SAPN 50460853 Task 6, Cracked  
 Welds on Support Bracket for EDG Turbocharger

CALCULATIONS

D21.1-3	Diesel Generator System	Rev. 0
D21.1-2	Diesel Generator System	Rev. 0
SAP 9000041323-001-00	Legacy Calc. No.: SQE-024.14	Rev. 1

**Section 1R19: Post-maintenance Testing**

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
STP P-RHR-21	Routine Surveillance Test of RHR Pump 2-1	23
STP M-12B	Battery Charger Performance Test	15
MP E-64.1B	Molded Case Circuit Breaker Exercise and Maintenance	12
MP E-67.3C	Maintenance of Solid State Controls 400A vital Station Battery Chargers	8
MP E-57.15	Maintenance and Calibrations of Ammeters Voltmeters, Frequency Meters & tachometers	13
MP E-50.30B	Agastat Type ETR Timing Relay Maintenance	17
MP E-50.62	Basler BE1-GPS100 Relay Maintenance	5
MP E-50.33A	Type SSV-T One Unit Voltage Relay Maintenance	11
MP E-50.61	Basler type BE1-27 Medium Inverse Undervoltage Relay Maintenance	5
STP M-75H	4 kV Vital Bus H Undervoltage relay Calibration	1

NOTIFICATIONS

50455065

**Section 1R22: Surveillance Testing**

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
STP P-CCP-21	Routine Surveillance Test of Centrifugal Charging Pump 2-1	22
STP I-1B	Routine Daily Checks required by Licenses U1	121
STP V-3T4	Exercising of Containment Atmosphere Sample Post LOCA Valves	12
STP I-1B	Routine Daily Checks required by Licenses U2	102

STP P-AFW-21	Routine Surveillance test of Turbine-Driven Auxiliary Feedwater Pump 2-1	25
STP M-75F	4kv Vital Bus F Undervoltage Relay Calibration	1A
MP E-50.61	Basler Type BE1-27 Medium Inverse Undervoltage Relay Maintenance	5
STP M-9A	Diesel engine Generator Routine Surveillance Test	90
AD13.1D	Control of Plant and Equipment Tests	12
AD.13	Test Control,	3
AD13.DC1	Control of the Surveillance Test Program,	37

**Section 4OA2: Identification and Resolution of Problems**

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
OM7.ID13	Technical Evaluation	1

DOCUMENTS

Pre-NIEP Self-Assessment of Diablo Canyon Quality Program Implementation, February 4, 2012

**Section 4OA5: Other Activities**

DOCUMENTS

Drawing 437621 Startup Bus Control Power Schematic

Drawing 437666 Startup Bus Control Power Schematic

Drawing 437664 Startup Bus Control Power Schematic

Drawing 437625 Startup Bus Control Power Schematic

Drawing 437665, 4 KV Diesel Generators and Associated Circuit Breakers Schematic

Drawing 458863 4160 Volt Bus Section "F" Automatic Transfer Logic Diagram

## LIST OF ACRONYMS

ADAMS	Agencywide Document Access and Management System
ADR	alternative dispute resolution
CFM	cubic feet per minute
CRVS	control room ventilation system
FSARU	Final Safety Analysis Report Update
NCV	non-cited violation
NRC	Nuclear Regulatory Commission
PEC	Pre-decisional Enforcement Conference
SAPN	systems applications process notification