UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

September 11, 2002

Gregory M. Rueger, Senior Vice
President, Generation and Chief Nuclear Officer
Pacific Gas and Electric Company
Diablo Canyon Power Plant
P.O. Box 3
Avila Beach, CA 93424

SUBJECT: ERRATA FOR DIABLO CANYON POWER PLANT, NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 50-275/02-02; 50-323/02-02

Dear Mr. Rueger:

Please replace NRC Inspection Report 50-275/02-02; 50-323/02-02, dated June 14, 2002, with the attached revised report. The changes are marked with revision bars. We had inadvertently used the wrong tracking number for a noncited violation in Section 40A2.b (2) and failed to include the noncited violation in the section titled “Items Opened and Closed.”

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

/RA/

William B. Jones, Chief
Project Branch E
Division of Reactor Projects

Enclosure:
As stated

Dockets: 50-275; 50-323
Licenses: DPR-80; DPR-82

cc w/enclosure:
David H. Oatley, Vice President
Diablo Canyon Operations and Plant Manager
Diablo Canyon Power Plant
P.O. Box 56
Avila Beach, California 93424

Lawrence F. Womack, Vice President, Power
Generation & Nuclear Services
Diablo Canyon Power Plant
P.O. Box 56
Avila Beach, California 93424

Dr. Richard Ferguson
Energy Chair
Sierra Club California
1100 llth Street, Suite 311
Sacramento, California 95814

Nancy Culver
San Luis Obispo Mothers for Peace
P.O. Box 164
Pismo Beach, California 93448

Chairman
San Luis Obispo County Board of
Supervisors
Room 370
County Government Center
San Luis Obispo, California 93408

Truman Burns\Mr. Robert Kinosian
California Public Utilities Commission
505 Van Ness, Rm. 4102
San Francisco, California 94102

Robert R. Wellington, Esq.
Legal Counsel
Diablo Canyon Independent Safety Committee
857 Cass Street, Suite D
Monterey, California 93940

Ed Bailey, Radiation Control Program Director
Radiologic Health Branch
State Department of Health Services
P.O. Box 942732 (MS 178)
Sacramento, California 94234-7320

Christopher J. Warner, Esq.
Pacific Gas and Electric Company
P.O. Box 7442
San Francisco, California 94120

City Editor
The Tribune
3825 South Higuera Street
P.O. Box 112
San Luis Obispo, California 93406-0112

James D. Boyd, Commissioner
California Energy Commission
1516 Ninth Street (MS 34)
Sacramento, California 95814

Electronic distribution by RIV:
Regional Administrator **(EWM)**
DRP Director **(KEB)**
DRS Director **(EEC)**
Senior Resident Inspector **(DLP)**
Branch Chief, DRP/E **(WBJ)**
Senior Project Engineer, DRP/E **(VGG)**
Staff Chief, DRP/TSS **(PHH)**
RITS Coordinator **(NBH)**
Scott Morris **(SAM1)**
DC Site Secretary **(AWC1)**

R:_DC\2002\DC2002-02-DRP-errata.wpd

RIV:PE:DRP/E	C:OB	C:DRP/E
JSDodson	ATGody	WBJones
/RA/	***TFStetka for***	***/RA/***
08/20/02	8/29/02	9/11/02

OFFICIAL RECORD COPY T=Telephone E=E-mail F=Fax

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

June 14, 2002

Gregory M. Rueger, Senior Vice
President, Generation and Chief Nuclear Officer
Pacific Gas and Electric Company
Diablo Canyon Power Plant
P.O. Box 3
Avila Beach, CA 93424

SUBJECT: NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION
REPORT 50-275/02-02; 50-323/02-02

Dear Mr. Rueger:

On April 19, 2002, the NRC completed an inspection at your Diablo Canyon Nuclear Power Plant, Units 1 and 2. The enclosed report documents the inspection findings which were discussed on April, 19, 2002, with Mr. David Oatley and other members of your staff and on May 31, 2002 with Mr. D. Christensen.

This inspection 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. Within these areas, the inspection included selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, the NRC has identified an issue that was evaluated under the risk significance determination process as having very low safety significance (Green). This issue is being treated as a noncited violation, consistent with Section VI.A of the Enforcement Policy. Another issue, which presents no immediate safety concern, has not completed the NRC significance determination process and will be addressed in future correspondence. The noncited violation is described in the subject inspection report. If you contest the violation or significance of the noncited 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, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Diablo Canyon Nuclear Power Plant, Units 1 and 2 facility.

In accordance with 10 CFR 2.790 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 Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Anthony T. Gody, Chief
Operations Branch
Division of Reactor Safety

Dockets: 50-275; 50-323
Licenses: DPR-80; DPR-82

Enclosure:
NRC Inspection Report
50-275/02-02; 50-323/02-02

cc w/enclosure:
David H. Oatley, Vice President
Diablo Canyon Operations and Plant Manager
Diablo Canyon Nuclear Power Plant
P.O. Box 56
Avila Beach, California 93424

Lawrence F. Womack, Vice President, Power
Generation & Nuclear Services
Diablo Canyon Power Plant
P.O. Box 56
Avila Beach, CA 93424

Dr. Richard Ferguson
Energy Chair
Sierra Club California
1100 llth Street, Suite 311
Sacramento, California 95814

Nancy Culver
San Luis Obispo Mothers for Peace
P.O. Box 164
Pismo Beach, California 93448

Chairman
San Luis Obispo County Board of
Supervisors
Room 370
County Government Center
San Luis Obispo, California 93408

Truman Burns\Mr. Robert Kinosian
California Public Utilities Commission
505 Van Ness, Rm. 4102
San Francisco, California 94102

Robert R. Wellington, Esq.
Legal Counsel
Diablo Canyon Independent Safety Committee
857 Cass Street, Suite D
Monterey, California 93940

Ed Bailey, Radiation Control Program Director
Radiologic Health Branch
State Department of Health Services
P.O. Box 942732 (MS 178)
Sacramento, California 94234-7320

Steve Hsu
Radiologic Health Branch
State Department of Health Services
P.O. Box 942732
Sacramento, California 94327-7320

Christopher J. Warner, Esq.
Pacific Gas and Electric Company
P.O. Box 7442
San Francisco, California 94120

City Editor
The Tribune
3825 South Higuera Street
P.O. Box 112
San Luis Obispo, California 93406-0112

Robert A. Laurie, Commissioner
California Energy Commission
1516 Ninth Street (MS 31)
Sacramento, CA 95814

Electronic distribution by RIV:
Regional Administrator **(EWM)**
DRP Director **(KEB)**
DRS Director **(ATH)**
Senior Resident Inspector **(DLP)**
Branch Chief, DRP/E **(WBJ)**
Senior Project Engineer, DRP/E **(GAP)**
Staff Chief, DRP/TSS **(PHH)**
RITS Coordinator **(NBH)**
Scott Morris **(SAM1)**
DC Site Secretary **(AWC1)**

SOE:OB	SOE:OB	SOE:OB	RI	C:OB	C:PBE	C:OB
GWJohnston/lmb	PCGage	TOMcKernon	TJackson	ATGody	WJones	ATGody
/**RA**/	/**RA**/	/**RA**/	/**RA**/ E	/**RA**/	/**RA**/	/**RA**/
05/31/02	5/31/02	5/31/02	5/31/02	5/31/02	5/31/02	06/14/02

OFFICIAL RECORD COPY T=Telephone E=E-mail F=Fax

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Dockets:	50-275; 50-323
Licenses:	DPR-80; DPR-82
Report No.:	50-275/02-02; 50-323/02-02
Licensee:	Pacific Gas and Electric Company
Facility:	Diablo Canyon Nuclear Power Plant, Units 1 and 2
Location:	7 ½ miles NW of Avila Beach Avila Beach, California
Dates:	April 19, 2002
Inspectors:	G. Johnston, Sr. Operations Engineer T. McKernon, Sr. Operations Engineer P. Gage, Sr. Operations Engineer T. Jackson, Resident Inspector
Approved By:	A. Gody, Chief, Operations Branch

SUMMARY OF FINDINGS

IR 05000275-02-02; 05000323-02-0, on 4/8/2002-4/19/2002, Pacific Gas and Electric Company. Diablo Canyon Nuclear Power Plant, Units 1, and 2; biennial inspection of identification and resolution of problems.

The inspection was conducted by three regional senior operations engineers, and a resident inspector. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 609, "Significance Determination Process." The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at http://www/nrc/gov/NRR/Oversight/index.html. Findings for which the Significance Determination Process does not apply are indicated by "No Color" or by the severity level of the applicable violation.

Identification and Resolution of Problems

- The licensee was effective at identifying problems and placing them into the corrective action program with one exception in the area of operability determinations. Occasionally an operability determination being reviewed by engineering was not timely. For example, the licensee failed to identify and evaluate how differential pressure affected steam generator instrumentation and its affect on operability prior to starting the plant following a trip with unusual steam generator level indications. The licensee appropriately determined the extent of evaluation of individual problems and prioritized the schedule for implementation of corrective actions to address the safety significant issues. In general, corrective actions, when specified, were effective and were implemented in a timely manner. The licensee performed effective audits and assessments. Based on the interviews conducted during this inspection, workers at the site felt free to input safety issues into the problem identification and resolution program.

Cornerstone: Mitigating Systems

- Green. The inspectors identified a violation of Technical Specification 5.4.1.a for the failure to initiate an operability assessment for a nonconforming condition associated with adequate fuel storage capacity to address increases of diesel generator loads in Calculation M-786. The licensee, contrary to the procedural requirements, placed the issue in a process to validate the initial perception that diesel fuel oil tank capacity would meet design requirements. The licensee documented on July 19, 2001, that Calculation M-786 had not been updated with regard to changes that would affect diesel fuel usage in the Technical Specifications, Design Criteria Memorandum, the Final Safety Analysis Report Update, and the Emergency Operating Procedures. The licensee determined that such changes could have an adverse impact on the design and licensing basis related to adequate diesel fuel oil storage.

  The issue was determined to be of very low risk significance during Phase 1 of the NRC Significance Determination Process, because the Calculation M-786 was found to be conservative with respect to diesel generator loads and, therefore, the diesels remained operable. The failure to adequately address operability of potentially nonconforming conditions, if left uncorrected, could become a more significant safety concern, therefore, the issue was determined to be more than minor. This violation is being

treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the corrective action program as Action Request A0553285. (Section 4OA2).

- TBD. The inspectors identified a finding with respect to the placement of ventilation louvers on 12 kV grounding transformer fuse boxes. On August 4, 2001, Units 1 and 2 experienced a loss of startup power as a result of multiple electrical faults in Startup Transformer 1-1 Grounding Transformer Fuse Box. Nonconformance Report N0002130, "Loss of Unit 1 and 2 Startup Power," determined the primary cause of the electrical faults to be condensation inside the fuse box. The contributory cause of the event was the ventilation louver, which allowed outside (salty) air to be drawn into the fuse box.

  The inspectors' Phase 2 evaluation of this issue using the Significance Determination Process indicated a condition that was potentially greater than green. The inspectors determined that the installation of the ventilation louver, and the subsequent electrical fault associated with Startup Transformer 1-1 Grounding Transformer Fuse Box represented an actual impact on safety since the preferred offsite power was momentarily lost from both units. Subsequently, auxiliary power continued to supply power to plant loads during the loss of startup power, and diesel generators were also available to supply power to safety-related equipment. This issue will remain as an unresolved issue (URI 50-275; 323/2002-02-01) pending completion of the significance determination process (Section 4OA2).

Report Details

2. REACTOR SAFETY

4OA2 Identification and Resolution of Problems

a. Effectiveness of Problem Identification

(1) Inspection Scope

The inspectors reviewed items selected across the seven cornerstones of safety to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. The inspectors reviewed reports of events, conditions, problems and deficiencies entered into the action request and other data bases and tracking systems including: action requests related to condition adverse to quality, maintenance action requests, engineering evaluations, and event trend records. The inspectors conducted detailed reviews of action requests, event trends (delineated in the attachment to this report) from a list of documents requested, which had been issued between April 1, 2001, through April 1, 2002. The inspectors also reviewed the licensee's audits and self-assessments of the corrective action activity at the programmatic and departmental levels. The inspectors evaluated the effectiveness of the audits and assessments by comparing the audit and assessment results against self-revealing issues, external audits, and NRC-identified issues discussed in inspections conducted over the interval from the previous problem identification and resolution inspection (50-275;323/2000-08).

The inspection reviewed issues developed over the last year in the corrective action program. One issue involved the event trend record program and was identified as a noncited violation (50-275; 323/2000-08-01) from NRC Inspection Report 50-275; 323/00-08. The inspectors examined the current procedure and several event trend records to determine the status of the program. Several facility supervisors were queried as to the implementation of the program and the results of the trending program. The facility also conducted a program assessment, which was reviewed to determine the status of the program.

The inspection also reviewed the effectiveness of the licensee's post event review and evaluation of the reactor trip of February 9, 2002, involving steam generator level instrumentation. The licensee's evaluation of this event involved the use of the process in Procedure OM7.ID5, "Issues Needing Validation to Determine Impact on Operability (INVIDIO)," Revision 2B and is discussed in paragraph 40A3 of this report.

The inspectors evaluated the items contained in the various licensee problem reporting processes to determine the licensee's threshold for identifying problems and entering them into the corrective action program. Also, the licensee's efforts in establishing the scope of problems were evaluated by reviewing pertinent control room logs, work requests, engineering modification packages, self-assessment results, action plans, and results from surveillance tests and preventive maintenance tasks.

(2) Issues and Findings

The inspectors determined that the licensee was effective at identifying problems and entering them into the corrective action system. Licensee audits and assessments were of good depth and identified issues similar to those that were self-revealing or raised during previous NRC inspections.

The inspectors review of the February 9, 2002, reactor trip event, and the licensee's subsequent evaluation of steam generator level instrumentation (as described and addressed in NRC Inspection Report 50-275; 323/02-007) noted that the evaluation did not adequately address the operability of the narrow range steam generator level instrumentation. The evaluation performed by the licensee regarding the wide range steam generator level instrumentation was found to be appropriately performed by the requirements of Procedure OM7.ID5, "Issues Needing Validation to Determine Impact on Operability (INVIDIO)," Revision 2B.

The inspectors determined from a review of the licensee's event trend record program that trending is generating useful insights into performance and was effective at identifying issues. The consensus of licensee supervisors and management interviewed by the inspectors indicated that the event trend record program was generating useful and valuable information. The inspectors identified no findings of significance in this area.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed action requests, maintenance action items, and engineering requests, and supporting documentation, including an appropriate analysis of the cause of the problem, to assess the licensee's evaluation of the problems identified. The inspectors focused on the licensee's performance regarding operability, reportability, the full extent of conditions, generic implications, common causes, and previous occurrences. A specific area the inspectors reviewed was the licensee's use of Procedure OM7.ID5, "Issues Needing Validation to Determine Impact on Operability (INVIDIO)," Revision 2B, and the correlation between operability determination. The inspectors evaluated all issues that were addressed by the INVIDIO procedure for the past year, which included a total of eight issues. The application of the INVIDIO procedure was compared to the guidance provided in Generic Letter 91-18, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions," Revision 1.

The inspectors reviewed the effectiveness of corrective actions from past events related to the 12 kV electrical distribution system. The events considered as part of the inspection effort included:

October 21, 1995: Auxiliary Transformer 1-1 fire and loss of off-site power to Unit 1 as a result of a 12 kV nonvital bus energized with a grounding buggy still installed

November 22, 1996: Auxiliary Transformer 1-1 Grounding Transformer Fuse Box electrical fault and subsequent Unit 1 reactor trip as a result of polyvinyl chloride (PVC) insulating boot degradation

May 15, 2000: Auxiliary Transformer 1-1 12 kV bus duct electrical fault and loss of offsite power as a result of physical and electrical shocks from the October 1995 event, corrosion of the bolted bus bars, loose bolting of the bus bars, and operation of the bus bars near maximum capacity

August 4, 2001: Startup Transformer 1-1 Grounding Transformer Fuse Box electrical fault and loss of startup power to Units 1 and 2 as a result of moisture accumulation in the fuse box

The inspectors evaluated each event for correlation with respect to causes and corrective action. Nonconformance reports and past inspection reports were reviewed by the inspectors and interviews where conducted with system engineers.

Specific items reviewed are listed in the attachment.

(2) Issues and Findings

Emergency Diesel Fuel Oil Consumption

The inspectors determined that, in general, the INVIDIO procedure was properly applied with one exception. The inspectors found that the INVIDIO procedure was inappropriately used for a nonconforming condition involving a diesel fuel oil storage calculation. In this instance, the inspectors identified a noncited violation because the licensee failed to perform an operability assessment with regards to the nonconforming diesel fuel oil storage calculation. The non-conformance pertained to Calculation M-786, "Emergency Diesel Generator Fuel Oil Storage," Revision 12, where electrical loads used to mitigate the consequences of design basis accidents were not updated or missing in the calculation. The inspectors determined this finding had very low risk significance on the basis that the emergency diesel fuel oil system remained operable.

Calculation M-786 describes the amount of diesel fuel oil that is required to be stored in the diesel fuel oil storage tanks in order to meet the design basis accidents. On July 19, 2001, the licensee made a determination in Action Request A0537708, "Calc. M-786 Not Revised With Inputs That May Impact Tech Spec," that changes in the Technical Specifications, Design Criteria Memorandum, the Final Safety Analysis Report Update, and the Emergency Operating Procedures were not reflected in Calculation M-786. The loss of design control for Calculation M-786 resulted in some missing electrical loads and some loads that were not updated. The licensee initially determined that the impact of the loss of design control may reduce the margin in the diesel fuel oil calculation by as much as 20 percent. The loss of design control for Calculation M-786 was documented as a licensee identified violation in NRC Inspection Report 50-275/323;2001-06.

One action identified in AR A0537708 was to evaluate any INVIDIO or operability issues resulting from a condition outside the currently approved calculation. Procedure OM7.ID5, “Issues Needing Validation to Determine Impact on Operability (INVIDIO),” Revision 2B, Section 2.4, required the licensee to address operability if it was determined that a degraded or nonconforming condition existed. Section 3.2 described a nonconforming condition as a condition that questions the ability of a structure, system, or component to meet design requirements, analysis constraints, or licensing commitments. An example of a nonconforming condition as described in Section 3.2 is "documentation required to verify conformance to NRC requirements is deficient or not available." The inspectors determined the loss of design control for Calculation M-786 to be a nonconforming condition. Contrary to Procedure OM7.ID5, the licensee determined that the issue in AR A0537708 was to be placed in INVIDIO instead of addressing operability of the diesel generators.

The inspectors evaluated the inappropriate use of INVIDIO using the Significance Determination Process. The inspectors determined that the failure to adequately address operability of potentially nonconforming conditions, if left uncorrected, could become a more significant safety concern in situations where equipment is not capable of performing its safety function. Subsequently, a complete analysis of Calculation M-786 determined that the calculation retained a margin of 3,747 gallons, including the previously unaccounted diesel generator loads. The margin represented the difference between the needed fuel to meet design basis events and the design capacity of 60,000 gallons. The actual available capacity was 100,000 gallons. The inspectors concluded, that based on Calculation M-786, the emergency diesel generators remained operable, therefore, this issue had very low safety significance (Green).

The inspectors identified the failure to adequately perform an operability assessment of the non-conforming diesel fuel oil storage calculation, as required by Procedure OM7.ID5, as a violation. Specifically, Technical Specification 5.4.1.a states, in part, that written procedures shall be implemented covering applicable procedures recommending in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A of Regulatory Guide 1.33, Section 1, identifies that the licensee shall have administrative procedures for equipment control. Procedure OM7.ID5, Section 2.4, required the licensee to address operability if it was determined that a degraded or nonconforming condition existed. In this case, a nonconforming condition existed, but operability was not addressed as described in the procedure. This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the corrective action program as Action Report A0553285 (275; 323/02002-02).

Electrical Distribution System

During the inspection, the inspectors recognized a correlation between the Startup Transformer 1-1 Grounding Transformer Fuse Box event and the Auxiliary Transformer 1-1 Grounding Transformer Fuse Box event. In Nonconformance Report N0002130, “Loss of Unit 1 and 2 Startup Power,” the licensee identified the root

cause of the Startup Transformer 1-1 Grounding Transformer Fuse Box event as moisture and airborne contaminates accumulating on the fuse insulators. The moisture and contaminates facilitated the electrical phase-to-ground arcing, which destroyed the fuse box. Nonconformance Report N0002130 listed the contributory cause to the event as the ventilation louver, which was installed as a corrective action after the November 22, 1996, Auxiliary Transformer 1-1 Grounding Transformer Fuse Box event. The root cause of the 1996 event was determined to be PVC insulating boot degradation. The PVC boot degradation released chlorine gas, which combined with moisture to form hydrochloric acid. The hydrochloric acid attacked the bus duct and fuse box structure, resulting in corrosion material being dripped on the fuse insulators. The corrosion material facilitated the electrical arcing which destroyed the fuse box. The ventilation louver was installed by the licensee to allow ionizing and chlorine gases to escape the fuse box and prevent future electrical faults within the fuse boxes. However, the licensee failed to recognize that the louver also allowed the accumulation of salt deposits on the insulators as the surrounding air with moisture laden with salt circulated within the terminal box. The licensee closed off the fuse boxes from outside air and placed desiccant inside the box to preclude the build-up of moisture, therefore, the condition passed not immediate concern. The PVC insulating boots were also replaced with insulating material not susceptible of off-gassing

The inspectors evaluated this issue using the Significance Determination Process. The inspectors determined that the installation of the ventilation louvers in all the grounding transformer fuse boxes, and the subsequent electrical fault associated with Startup Transformer 1-1 Grounding Transformer Fuse Box represented an actual impact on safety since the preferred offsite power was momentarily lost from both units. Subsequently, auxiliary power continued to supply power to plant loads during the loss of startup power, and diesel generators were also available to supply power to safety-related equipment. Startup power was restored to Unit 2 1 day later and startup power was cross-connected from Unit 2 to Unit 1 2 days after the event. Startup power was restored to normal configuration 18 days after the event. Final significance determination of this event has not been completed and, therefore, will be determined later (URI 50-275;323/2002-002-01).

Based on a review of the licensee's records, the inspectors concluded that the licensee effectively prioritized and evaluated issues appropriately with some exceptions as noted above.

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The inspectors reviewed condition reports and self-assessments to verify corrective actions, related to the issues, were identified and implemented in a timely manner commensurate with safety, including corrective actions to address common cause or generic concerns.

The team reviewed a number of action requests to ascertain the licensee's threshold for identifying problems, entering them into the corrective action program and resolving

them. Of note, the team, reviewed Nonconformance Report N0002131 (cause analysis for failed fuel) and Action Request A0542300 (failure to perform a prompt operability assessment for an atmospheric dump valve).

A listing of specific documents reviewed during the inspection is included in the attachment to this report.

(2) Issues and Findings

The licensee has had a history of fuel cladding failures on Unit 2 fuel during Operating Cycles 7, 9, 10, and 11. The licensee's attempt to identify the source of the fuel cladding failures concluded that the failures were a result of loose debris in the reactor coolant system. The team observed that the licensee's efforts to identify and correct the loose debris problems was not a systematic approach. The licensee's efforts did not identify how the debris was introduced into the system nor did efforts to remove debris from the reactor coolant system (foreign material exclusion control and other methods) appear effective in later operating cycles (e.g., Cycle 10.) The inspectors observed that although the licensee had determined the size of potential debris of concern, no concerted effort was undertaken to inspect areas where debris of concern would concentrate i.e. the lower head of the reactor vessel. The licensee planned to install "P-grids" in new fuel elements during the next refueling outage in an attempt to catch debris in inactive regions of the fuel. The licensee was tracking this issue in Nonconformance Report N0002131.

The inspectors reviewed action request Action Request 0542300 (failure to perform a prompt operability assessment for an atmospheric dump valve). While the licensee performed comprehensive actions in identifying improper work practices with the torquing of the bonnet stud nuts on atmospheric relief Valve PCV-21 and was timely in replacing the studs and nuts, the team observed that the licensee failed to perform a timely operability assessment in accordance with Procedure OM7.ID12. The issue was identified in NRC Inspection Report 50-275; 323/2001-007-01, as a noncited violation. The licensee entered the issue into the corrective action program and determined that the problem occurred due to human error, in that personnel failed to recognize a significant condition adverse to quality. The team determined this issue to be an isolated event and was resolved appropriately by the licensee.

Additionally, the team reviewed other NRC inspection findings, including 50-275; 323/2001-006, related to reactor trip risk assessment associated with specific surveillance testing (Action Request 0539532) and physical security action requests to ascertain the scope and effectiveness of the licensee's corrective actions. In each of the issues reviewed, the licensee's corrective actions adequately addressed the issues.

Based on a review of the licensee's records, the inspectors concluded that the licensee, with the exception of the electrical distribution issue discussed in paragraph (b.) above, effectively implemented corrective actions. The inspectors identified no significant findings related to the effectiveness of corrective actions.

d. Assessment of Safety Conscious Work Environment

(1) Inspection Scope

The team interviewed 14 individuals from the licensee's staff, which represented a cross-section of functional organizations and supervisory and nonsupervisory personnel. These interviews assessed whether conditions existed that would challenge the establishment of a safety conscious work environment.

(2) Issues and Findings

Based on interviews, the team identified no safety conscious work environment findings of significance. The team concluded, based on information from these interviews, that employees were willing to identify issues and accepted the responsibility to proactively identify and enter safety issues into the corrective action program.

4OA3 Event Followup

(Closed) Unresolved Item 50-275;323/02-007:

In NRC Inspection Report 50-275;323/02-07, the inspectors concluded that the licensee had indications from the February 9, 2002, event, which provided evidence that steam generator narrow range level indications functioned in an unexpected and inconsistent manner. The inspectors reviewed the licensee's decision to restart the plant and study the issue of wide range steam generator level indiction further using Procedure OM7.ID5, "Issues Needing Validation to Determine Impact on Operability (INVIDIO)," Revision 2B. The inspectors determined that while the issue of narrow range steam generator operability issue was not identified nor appropriately evaluated, the issue of wide range level indication performance met the requirements for placing it in the INVIDIO process to further evaluate all aspects of operability.

4OA6 Meetings, including Exit

Exit Meeting

The inspectors discussed these findings with Mr. D. Oatley, Vice President, Operations, and members of the licensee's staff in a meeting on April 19, 2002. The licensee's management acknowledged the findings presented. On May 31, 2002, a telephonic exit was conducted with Mr. D. Christensen, Regulatory Affairs, to discuss the extension of the resolution of the unresolved issue in paragraph 4OA2(b.)(2) above regarding the electrical distribution system.

ATTACHMENT

KEY POINTS OF CONTACT

Licensee

A. Afzali, Supervisor PRA Group
J. Becker, Station Director
K. Bych, Manager, Engineering Services
M. Mayer, Engineering Supervisor
D. Miklush, Director, Engineering Services
D. Oatley, Vice President
J. Shoulders, Manager, Engineering
D. Taggart, Manager, Nuclear Quality
J. Tomkins, Director, Nuclear Quality and Licensing
L. Womack, Vice President, Nuclear Services

NRC

D. Proulx, Senior Resident Inspector, Diablo Canyon

ITEMS OPENED AND CLOSED

Opened

50-275; 323/2002-002-01	URI	Operability Evaluation Of Auxiliary and Startup Transformer Fuse Boxes (Section 4OA2)

Closed

50-275; 323/2002-007-02	URI	Licensee Use Of INVIDO Process For Operability Evaluations (Section 4OA3)

Opened and Closed

50-275; 323/2002-002-02	NCV	Failure to initiate an operability assessment for a nonconforming condition associated with diesel generator fuel storage capacity (Section 4OA2)

DOCUMENTS REVIEWED

The following documents were selected and reviewed by the inspectors to accomplish the objectives and scope of the inspection and to support any findings:

Audits and Self-Assessments

2001 Radiation Protection Program Audit, EDMS 011770001
2001 Chemistry and Radiochemistry Program Audit, EDMS 012210004
2001 Annual, Biennial Fire Protection Prevention Audit, EDMS 011510087
10 CFR 50 Appendix B Criterion V and XVI, EDMS 010790003
Assessment of AR and ETR Thresholds, February 20, 2001 – March 6, 2001
2001 Audit of Inservice Testing Program, EDMS 011920004
10 CFR 50 Appendix B Criterion XVI, EDMS 012340036
2001 Emergency Preparedness Program Audit, EDMS 013200055
FSAR Maintenance Program Audit, EDMS 10660013
Preventive Maintenance Program Audit, EDMS 012620003
2002 Radioactive Effluent Controls Program Audit, EDMS 013130017
Performance of Containment Entries at Power, EDMS 013410056
Fitness For Duty Program Audit, EDMS 011090052
Operations Surveillance Testing Activities Audit
Year 2002 Corrective Action Program & Implementation Audit, EDMS 020800001
Resolution of Repetitive Check Valve Failures, EDMS 01234036

Action Requests

A0528007	A0527329	A0536913	A0332349	A0389485
A0543891	A0537708	A0543651	A0398781	A0493018
A0026389	A0510972	A0544559	A0398995	A0493960
A0280455	A0469597	A0550412	A0399462	A0494603
A0280643	A0469598	A0536729	A0400072	A0531661
A0297910	A0469249	A0537470	A0401410	A0533362
A0298151	A0545344	A0552297	A0430195	A0533435
A0332183	A0540479	A0528007	A0517778	A0536399
A0332327	A0546105	A0543891	A0527329	A0536913
A0332349	A0389485	A0026389	A0537708	A0543651
A0398781	A0493018	A0280455	A0469597	A0544559
A0398995	A0493960	A0280643	A0469598	A0550412
A0399462	A0494603	A0297910	A0469249	A0536729
A0400072	A0531661	A0298151	A0545344	A0537470
A0401410	A0533362	A0332183	A0540479	A0552297
A0430195	A0533435	A0332327	A0546105	A0549031
A0517778	A0536399			

Nonconformance Reports (NCR)

N0002128	N0002133	N0002137	N0002005
N0002129	N0002135	N0002138	N0002125
N0002130	N0002136	N0002130	N0002112
N0002131			

Licensee Event Reports

27520010100	Diesel Generator Automatic Start; Start-up Power	6/4/01
27520010200	Automatic Start of All Diesel Generators	10/4/01
27520010300	Isolation of Auxiliary Feedwater Storage Tank	11/1/3/01
27520010400	Steam Generator Level Mounting Screws Missing	12/10/01
27520010401	Steam Generator Level Mounting Screws Missing	1/18/02
27520020100	Failed Fasteners on Atmospheric Dump Valve	1/15/02
32330010100	Degraded Wires 4160V vital	5/22/01
32330010101	Degraded Wires 4160V vital	11/16/01
32330010200	Unplanned Diesel Generator Start	7/13/01
32330010300	Post-Accident Monitoring Technical Specification 3.3.3	7/27/01
32330010400	Pressurizer Safety Lift Spread; Surveillance	8/27/01

Quality Evaluations

Q0012249, “Piece of Radioactive Thimble Tube in Lower Cavity 2R10"

Procedures

OM7, Corrective Action Program, 3/12/02

OM7.ID1, Problem Identification and Resolution - Action Requests, 1/3/02

OM7.ID2, Quality Evaluations, 2/26/02

OM7.ID3, Nonconformance Report and Technical Review Group, 4/3/02

OM7.ID4, Cause Analysis, 8/31/99

OM7.ID5, Issues Needing Validation to Determine Impact on Operability, Revision 8

OM7.ID8, Operability Evaluation, Revision 8

OM7.ID12, Operability Determination, Revision 4C

AD7.ID2, Operations Section Policy A-6, CBARs / OPERATOR WORKAROUND LIST, Revision 1

STP V-5A2, ECCS Checkvalve leak testing post-refueling/post-maintenance Valves 8948A-D and 8818A-D”, Revision 10

OP B-3A, “Safety Injection System” Revision 4A

Miscellaneous

Calculation M-786, “Emergency Diesel Generator Fuel Oil Storage,” Revision 12

Event Response Plan 02-01, February 9, 2002

Calculation STA-133, Rev 0 “Maximum Allowable Leakage From the HHSI Into RCS” Revision 0

Operability Evaluation 02-01, “Operability With Nonconservative Assumptions In Calculations Used For Steam Generator Water Level Low-Low Set Points,” Revision 0

DOCUMENTS REQUESTED

1. A summary list of all currently open/active items for:

   action requests of significant conditions adverse to quality
   operator work-arounds
   engineering review requests
   temporary modifications
   procedure change requests
   training needs request/evaluation
   control room and safety system deficiencies
   human performance issues

2. A summary list of all items completed/resolved/closed since April 1, 2001 for:

   action requests of significant conditions adverse to quality
   operator work-arounds
   engineering review requests
   temporary modifications
   procedure change requests
   training needs request/evaluation
   control room and safety system deficiencies
   human performance issues

3. Summary list of all action requests generated during the specified period and sorted by:

   chronology
   initiating organization
   responsible organization

4. All quality assurance audits and surveillances of corrective action activities since April 1, 2001.

5. All corrective action activity resulting from functional area self-assessments and nonNRC-third party assessments since April 1, 2001.

6. Corrective action performance trending/tracking reports generated since April 1, 2001.

7. Current revision of the following procedures governing initiation and processing of action requests, and disposition of action requests identifying potential adverse conditions, and root cause analysis.

8. Any additional governing procedures/policies/guidelines for:

   Condition Reporting
   Corrective Action Program
   Root Cause Evaluation/Determination
   Operator Work-Arounds
   Work Requests
   Engineering Requests
   Temporary Modifications
   Procedure Change Requests
   Deficiency Reporting and Resolution
   Training Needs Request/Evaluation

9. For each of the items applicable to Diablo Canyon listed below please provide the following:

   6. Full text of the action request (please indicate any findings that did not result in a smart-form or corrective actions)
   7. Any “Roll-up” or “Aggregating” action requests related to the generic communication or condition report.
   8. Root Cause analysis report (if applicable)
   9. Risk significance assessments
   10. Probable Cause evaluation (if applicable)
   11. Approved corrective actions
   12. Basis for extending originally approved due dates
   13. Evidence of corrective action completion for those items deemed to be closed (work packages, design change documentation, temporary modifications, training lesson plans/material, training attendance records, procedure revisions, etc.)

10. Part 21 Reports generated or reviewed over the interval of April 1, 2001 to present.

11. NRC Information Notices reviewed over the interval of April 1, 2001 to present.

12. All NCVs and NOV’s issued since April 1, 2001.

13. Current System Health Reports or similar system information.

14. Listing of plant safety issues generated through the employee concerns program since April 1, 2001.

15. Listing of action items generated by the plant safety review committees since April 1, 2001.

16. Current predictive performance summary reports.