UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

August 15, 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, California 93424

SUBJECT: DIABLO CANYON POWER PLANT - NRC INTEGRATED INSPECTION REPORT 50-275/02-06; 50-323/02-06

Dear Mr. Rueger:

On July 11, 2002, the NRC completed an inspection at your Diablo Canyon Power Plant. The enclosed report documents the inspection findings, which were discussed on July 11, 2002, with Mr. D. Oatley, Vice President Operations and Plant Manager, and other members of your staff.

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 consisted of 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 one finding of very low safety significance (green).

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/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Charles S. Marschall, Chief
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Dockets: 50-275; 50-323
Licenses: DPR-80; DPR-82

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Dockets:	50-275; 50-323
Licenses:	DPR-80; DPR-82
Report No:	50-275/02-06; 50-323/02-06
Licensee:	Pacific Gas and Electric Company
Facility:	Diablo Canyon Power Plant, Unit 1 and 2
Location:	7 ½ miles NW of Avila Beach Avila Beach, California
Dates:	June 17 through July 11, 2002
Team Leader:	M. F. Runyan, Senior Reactor Inspector, Engineering Maintenance Branch
Inspectors:	P.A. Goldberg, Senior Reactor Inspector, Engineering Maintenance Branch
	W. M. McNeill, Senior Reactor Inspector, Engineering Maintenance Branch
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Accompanying Personnel:	G. Skinner, Beckman and Associates
	J. Diecker, Engineering Associate
Approved By:	Charles S. Marschall, Chief Engineering Maintenance Branch Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000275; -323/02-06; Pacific Gas and Electric. Co.; 06/24-07/11/2002; Diablo Canyon Power Plant, Units 1 and 2; safety system design and performance capability.

The inspections were conducted by six regional inspectors and one contractor. The inspectors identified two green findings, one of which was characterized as a noncited violation. The other finding did not involve a violation of NRC regulations. The significance of most findings is indicated by their color (Green, White, Yellow, Red) and determined by using Inspection Manual Chapter 0609, "Significance Determination Process (SDP)." Findings for which the significance determination process does not apply are indicated by "No Color" or by the severity level of the applicable violation. 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.

Cornerstone: Mitigating Systems

- Green. The plant electrical distribution consisted of a design where the three redundant 4160 V safety buses and a non-safety bus were supplied from a common transformer winding during both normal and emergency operation. The 4160 V buses were interconnected by conductors so that a voltage disturbance on any part of the system would affect the entire system. The system had a high resistance grounding design to limit the magnitude of ground faults and to enable continued operation of a faulted load. The grounding resistor admits sufficient fault current to prevent severe over-voltages that could occur. However, if the grounding resistor developed an open circuit, the entire system would be susceptible to over-voltage. The licensee was periodically checking the continuity, but not the actual resistance of the grounding resistors and, thus, assumptions in the design were not being verified. The licensee issued Action Request A0561002 to evaluate the preventive maintenance program of the high resistance grounding program.

  This issue did not involve a violation of NRC requirements, but was considered to be a finding because it revealed a vulnerability in the licensee's design and maintenance that could result in a safety problem. However, the finding was determined to be of very low safety significance because there was no evidence that the grounding resistor had ever been degraded and that the probability of a grounding resistor failure in combination with a sparking ground fault was very small (50-275; -323/0206-01) (Section 1R215.b).

Report Details

1 **REACTOR SAFETY**

Introduction

A team inspection was performed to verify that facility safety system design and performance capability were adequate and that the initial design and subsequent modifications have preserved the current design basis of the systems selected for review. The scope of the review also included any necessary nonsafety-related structures, systems, and components that provided functions to support safety functions. The inspection effort also reviewed the licensee's programs and methods for monitoring the capability of the selected systems to perform the current design basis functions. This inspection verified aspects of the initiating events, mitigating systems, and barrier cornerstones.

The probabilistic risk assessment model for the Diablo Canyon Power Plant is based on the capability of the as-built safety systems to perform their intended safety functions successfully. The area and scope of the inspection were determined by reviewing the licensee's probabilistic risk analysis models to identify the most risk significant systems, structures, and components according to their ranking and potential contribution to dominant accident sequences and/or initiators. Deterministic effort was also applied in the selection process by considering recent inspection history, recent problem area history, and all modifications developed and implemented.

The team reviewed in detail the 4.16 kV electrical distribution system and the component cooling water (CCW) system. The primary review prompted parallel review and examination of support systems, such as, electrical power, instrumentation, room cooling systems, and related structures and components.

The objective of this inspection was to assess the adequacy of calculations, analyses, engineering processes, and engineering and operating practices that were used to support the performance of the safety systems selected for review and the necessary support systems during normal, abnormal, and accident conditions. Acceptance criteria utilized by the NRC inspection team included NRC regulations, the technical specifications, applicable sections of the Final Safety Analysis Report, applicable industry codes and standards, as well as, industry initiatives implemented by the licensee's programs.

An inspection to assess the performance of the licensee's program to meet the regulatory requirements of 10 CFR 50.59, "Changes, Tests, and Experiments," was conducted during the first week of the inspection.

1R02 Evaluation of Changes, Tests, and Experiments (71111.02)

a. Inspection Scope

The inspectors reviewed a selected sample of eight safety evaluations to verify that the licensee had appropriately considered the conditions under which the licensee may make changes to the facility or procedures or conduct tests or experiments without prior NRC approval in accordance with 10 CFR 50.59.

The inspectors reviewed 14 safety evaluations pertaining to modifications and procedure and calculation revisions, in which the licensee determined that evaluations were not required, to ensure that the licensee's exclusion of a full evaluation was consistent with the requirements of 10 CFR 50.59.

The inspectors evaluated the effectiveness of the licensee's corrective action process to identify and correct problems associated with 10 CFR 50.59 requirements. In this effort, the inspectors reviewed five condition reports. Further, the inspectors reviewed the most recent 10 CFR 50.59 program audit. Additionally, the inspectors reviewed the 10 CFR 50.59 training curriculum and the qualification records of a sample of independent technical reviewers identified in the screening and evaluation forms.

b Findings

No findings of significance were identified.

1R21 Safety System Design and Performance Capability (71111.21)

.1 System Requirements

a. Inspection Scope

The team reviewed the following attributes of the CCW system and the 4.16 kV electrical distribution system: (1) process medium (water, steam, and air), (2) energy sources, (3) control systems, and (4) equipment protection. The team verified that procedural instructions to operators were consistent with operator actions required to meet, prevent, and/or mitigate design basis accidents. The review also considered requirements and commitments identified in the Final Safety Analysis Report, technical specifications, design basis documents, and plant drawings.

b. Findings

No findings of significance were identified.

.2 System Condition and Capability

a. Inspection Scope

The team reviewed the periodic testing procedures for the CCW and 4.16 kV electrical distribution systems to verify that the design requirements were adequately demonstrated. The team reviewed the environmental qualification of a sample of system components to verify the capability to operate under design environmental conditions and the assumed operating parameters including: voltage, speed, power, flow, temperature, and pressure.

The team also reviewed the systems' operations by conducting system walkdowns; reviewing normal, abnormal, and emergency operating procedures; and reviewing the Final Safety Analysis Report, technical specifications, design calculations, drawings, and procedures.

b. Findings

No findings of significance were identified.

.3 Identification and Resolution of Problems

a. Inspection Scope

The team reviewed a sample of problems identified by the licensee in the corrective action program to evaluate the effectiveness of corrective actions related to design issues. The sample included open and closed condition reports for the past 3 years that identified issues affecting the selected systems.

b. Findings

No findings of significance were identified.

.4 System Walkdowns

a. Inspection Scope

The team performed walkdowns of the accessible portions of the CCW and 4.16 kV electrical distribution systems, as well as, the required support systems. The walkdowns focused on the installation and configuration of power supplies, piping, components, and instruments. During the walkdowns, the team assessed:

- The placement of protective barriers and systems,
- The susceptibility to flooding, fire, or environmental conditions,
- The physical separation of trains and the provisions for seismic concerns,
- Accessibility and lighting for any required local operator action,

- The materiel condition and preservation of systems and equipment, and
- The conformance of the currently-installed system configurations to the design and licensing bases.

b. Findings

No findings of significance were identified.

.5 Design Review

a. Inspection Scope

The team reviewed the current as-built instrument and control, electrical, and mechanical design of the CCW and 4.16 kV electrical distribution systems. These reviews included a review of design assumptions, calculations, required system thermal-hydraulic performance, electrical power system performance, protective relaying, and instrument setpoints and uncertainties. The team also performed a single-failure review of individual components to determine the effects of such failures on the capability of the systems to perform their design safety functions.

The team reviewed calculations, drawings, specifications, vendor documents, Final Safety Analysis Report, technical specifications, emergency operating procedures, and temporary and permanent modifications.

b. Findings

Grounding Resistor Vulnerability

A (green) finding was identified concerning the consequences of a loss of a ground resistor that could make the entire 4160 V electrical system susceptible to damaging over-voltage. The 4160 V electrical distribution system featured a design where the three redundant 4160 V safety buses and a non-safety bus were supplied from a common transformer winding during both normal and emergency operation. As a consequence of this arrangement, the 4160 V buses were directly interconnected by conductors so that a voltage disturbance on any part of the system would affect the entire system. The team noted that the design employed a high resistance grounding scheme that limited the magnitude of ground faults and, thus, enabled continued operation of a faulted load as long as no other faults occurred on the system. The grounding resistor was designed to admit sufficient fault current to prevent a severe over-voltage that could occur as a result of an intermittent (or sparking) ground fault. Therefore, if a ground resistor or its associated connection circuitry developed an open circuit, the system would be susceptible to severe over-voltage. The team concluded that, because of the interconnection of the 4160 V buses, the over-voltage would affect

all redundant safety buses. The over-voltage that could occur from an intermittent ground fault could reach several times normal system voltage, and cause failure of redundant safety-related equipment. As a worst case (but unlikely) scenario, the over-voltage could cause faults on all three safety-related 4160 V switchgear and prevent re-energizing of the buses from the diesel generators.

The team noted that the grounding resistor was not electrically monitored so that an open circuit would not be detectable while the 4160 V system was energized. The resistors were subject to preventive maintenance during refueling outages including cleaning, inspection, and meggering. The team noted that the actual resistance of the resistors was not measured so the performance capability assumed in Calculation 99-DC, "Calculation of Capacitive Charging Current and its Impact on 4.16 kV High Resistance Grounding System," Revision 3, was not verified. However, the continuity of the resistor to ground was checked informally as part of the procedure for removing ground buggies after bus maintenance (Maintenance Procedure MP E-57.11B). In response to the team's concerns, the licensee issued Action Request A0561002 to evaluate the preventive maintenance program on the high resistance grounding system.

Although this finding did not involve a violation of NRC requirements, the team considered it to be significant because the loss of a grounding resistor could make the entire 4160 V system susceptible to damaging over-voltages. This was considered to be a very low probability/ high consequence event. However, because there were no known occurrences of degradation of the grounding resistor during the history of plant operations and that the probability of a grounding resistor failure in combination with a sparking ground fault was very small, the finding had a very low safety significance (green) (50-275;50-323/0206-01).

Effect of Harmonics on Second Level Under-Voltage Relay Accuracy

An unresolved item was identified as a consequence of the licensee having not evaluated the susceptibility of the second level under-voltage relay to the effects of harmonics on either the voltage parameter measured in the field or the voltage source used for calibration. Harmonics may be imposed on the 4160 V safety buses from the offsite power system or from the onsite 4160 V buses because of operation of equipment, including large motors.

The team determined that the second level under-voltage relays installed at the site were ABB (formerly Westinghouse) Model SSV-T relays, which use a rectifier-type sensing circuit. The team noted that the relay did not appear to contain special circuitry required to produce a "True RMS" reading in the presence of harmonics. The relay vendor confirmed that the relay accuracy was affected by variations in input voltage frequency but that the effect of harmonics had not been quantified. If the relay input voltage was not a pure sine wave, or if the relay was not a "True RMS" reading relay, harmonics could cause the relay to trip either high or low. If the relay tripped too low, safety-related loads might not be protected, or technical specification limits could be exceeded. If the relay reset too high, the offsite source could be subjected to spurious loss during design basis events.

The team concluded that the licensee was not evaluating the susceptibility of the second level under-voltage relay to the effects of harmonics on either the voltage parameter measured in the field or the voltage source used for calibration. In response to the team's concern, the licensee performed measurements for the presence of harmonics on operating 4160V buses and found minor harmonic content. This team considered this test to be incomplete because it did not include some motors that could be running during an emergency. Consequently, the team was not able to conclude from the test information provided that the second level under-voltage relay would perform as required.

The significance of this issue depended on the magnitude of harmonics in the system, but a definitive measure of this parameter was not available during the inspection. Consequently, the team could not determine if this item was in noncompliance with 10 CFR Part 50, Appendix B, Criterion III, "Design Control," which requires that design control measures provide for verifying the accuracy of design, or, if so, whether the issue constituted a finding of more than minor significance. A violation may exist if it is established that the second level under-voltage relay setpoint was inadequate because of failure to account for harmonic effects. The licensee agreed to perform additional testing to determine the susceptibility of the system to harmonics. The finding was identified as an unresolved item pending NRC review of the licensee's tests (50-275; -323/0206-02).

.6 Safety System Inspection and Testing

a. Inspection Scope

The team reviewed the program and procedures for testing and inspecting selected components in the CCW system and the 4.16 kV electrical distribution system. The review included the results of surveillance tests required by the technical specifications.

The team reviewed the program and procedures for testing and inspecting the CCW pumps and heat exchangers.

b. Findings

No findings of significance were identified.

.4 **OTHER ACTIVITIES (ZA)**

4OA6 Management Meetings

Exit Meeting Summary

The team leader presented the inspection results to Mr. D. Oatley, Vice President, Operations and Plant Manager, and other members of licensee management at the conclusion of the onsite inspection on July 11, 2002.

At the conclusion of this meeting, the team leader asked the licensee's management whether any materials examined during the inspection should be considered proprietary. Some proprietary information was identified, but it was returned to the licensee.

ATTACHMENT

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ITEMS OPENED AND CLOSED

Opened and Closed

50-275;50-323/0206-01	FIN	Grounding resistor vulnerability (Section 1R21.5.b)

ITEMS OPENED

Opened

50-275; 50-323/0206-02	URI	Effect of harmonics on second level under-voltage relay accuracy (Section 1R21.5.b)

Documents Reviewed:

Safety Evaluations:

LBIE Log 2002-002, RHR Line 1-S6-509-8 Venting/SI-1-8818D Post-Stroke Leak Testing, Ref. Doc. TP TO-0110/TP TB-0106, dated 2/1/2002

LBIE Log 2002-003, Delete references to Reg Guide 1.75 in DCP E-049605, dated 3/13/2002

LBIE Log 2002-005, ECG 7.8, Accident Monitoring Instrumentation, dated 4/25/2002

LBIE Log 2002-006, DCPP Unit 1 Cycle 12 Reactor Core Fuel Load and COLR, dated 4/25/2002

LBIE Log 2002-007, TP TD-0203, Low Pressure Turbine Cover Handling, dated 5/7/2002

LBIE Log No. 2001-045, Unit2 EDUPS2 Battery Reconfiguration/Appendix R Compensatory Measures, dated 12/28/2001LBIE Log No. 2001-042, Revision to Commitment NBR T31460, dated 12/19/2001

LBIE Log No. 2001-037, Post Accident Sampling System, dated 9/28/2001DCP E-050322, Interim Operation of Unit 2 Startup Transformer SU21as a fixed Ratio Transformer after ON-Line Replacement, Revision 1

DCP E-049322, Replace SUT11 with new transformer equipped with LTC, Revision 0

Action Requests:

A0549345	A0517945	A0012461	A0301654	A0518733	A0554081
A0547979	A0393627	A0012469	A0315425	A0520616	A0561002
A0545470	A0231186	A0078312	A0351319	A0520617	A0559897
A0542755	A0237713	A0078315	A0368139	A0520618	A0560002
A0349338	A0542646	A0109944	A0453315	A0520580	A0541186
A0369822	A0419062	A0232589	A0464107	A0520582	A0419448
A0454631	A0559965	A0243993	A0467846	A0536318	A0301535
A0517415	A0559975	A0245077	A0517740	A0554076	A0300421
A0517595	A0559976	A0301653	A0517741		

Procedures

STP M-77, Safety and Relief Valve Testing, Revision 25

MA1.ID19, Safety and Relief Valve Maintenance and Inspection Program, Revision 1A

STP M-51.5, Testing and Maintenance of Safety/Relief Valves, Revision 18

OP AP-11, Malfunction of Component Cooling Water System, Revision 19B

STP V-302, Exercising Valves DEG-214, 225, 236, 247, 258, and 269, Diesel Generator Starting Air Compressor Discharge Check, Revision 10

STP M-130, Leak Rate Testing of the CCW Surge Tank Pressurization System, Revision 4

AR PK01-07, CCW System Surge Tank Level/Make-up, Revision 11A

AR PK01-14, CCW Surge Tank Pressure, Revision 8A

AR PK01-06, CCW Vital Hdr A/B, Revision 18

EOP E-1.3, Transfer to Cold Leg Recirculation, Revision 19

OP F-2:VI, CCW System Alignment Verification for Plant Startup, Revision 26

OP K-10B1, Sealed Valve Checklist for Containment Manual Isolation Valves Inside Containment, Revision 14

OP K-10B2, Sealed Valve Checklist for Containment Manual Isolation Valves Outside Containment, Revision 26

OP K-10E1, Sealed Valve Checklist for Component Cooling Water Pump 1-1, Revision 8

OP K-10E2, Sealed Valve Checklist for Component Cooling Water Pump 1-2, Revision 8A

OP K-10E3, Sealed Valve Checklist for Component Cooling Water Pump 1-3, Revision 7

OP K-10E4, Sealed Valve Checklist for Component Cooling Water Vital Headers A and B, Revision 20

STP M-16, Safeguards Active Component Operation by Slave Relay Operation, Revision 9

STP M-26, ASW System Flow Monitoring, Revision 25

STP P-MUW-01, Routine Surveillance Test of Makeup Water Transfer Pump 0-1, Revision 4

STP V-11, Containment Isolation Phase B Valves FCV-355, FCV-356, FCV-357, FCV-363, FCV-749, and FCV-750, Revision 12

STP-13A, CCW Flow Balancing, Revision 13

MP E-63.6A, Maintenance of SF6 4 kV Circuit Breakers, Revision 10

Annunciator Response Procedure AR PK01-06, CCW VITAL HDR A/B, Revision 18

Annunciator Response Procedure AR PK01-07, CCW SYS SURG TK LVE/MK-UP, Revision 3A

Annunciator Response Procedure AR PK01-08, CCW HEADER C, Revision 15B

Annunciator Response Procedure AR PK01-09, CCW PUMPS, Revision 12

Annunciator Response Procedure AR PK01-11, CCW PP. 1-1 RECIRC, Revision 7

Annunciator Response Procedure AR PK01-12, CCW PP. 1-2 RECIRC, Revision 7

Annunciator Response Procedure AR PK01-14, CCW SURGE TANK PRESSURE, Revision 8A

OP AP SD-4, Loss of Component Cooling Water, Revision 13

OP AP-8A, Control Room Inaccessibility - Establishing Hot Standby, Revision 13

OP AP-11, Malfunction of Component Cooling Water System, Revision 19A

STP I-1A, Routine Shift Checks Required by License, Revision 86

STP M-93A, Refueling Interval Surveillance - Containment Fan Cooler System, Revision 12

CF3.ID4, Design Calculations, Revision 10

CF3.ID9, Design Change Package Development, Revision 16

CF6.NE1, Instrument Channel Uncertainty and Setpoint Methodologies, Revision 2A

MP E-50.30C, Time Delay Relay Maintenance, Revision 0A

MP E-50.33A, Westinghouse Type SSV-T One Unit Voltage Relay Maintenance, Revision 6

MP E-57.11B, Protective Grounding, Revision 21

OP J-2:VIII, Guidelines for Reliable Transmission Service for DCPP, Revision 3

STP I-1C, Routine Weekly Checks Required by Licenses, Revision 73

STP M-75, 4KV Vital Bus Undervoltage Relay Calibration, Revision 27

Surveillance Tests

R0202175, CCW Flow Balancing, dated May 24, 2001

R0214520, CCW Flow Balancing, dated May 25, 2002

R0221324, Routine Surveillance Test of Component Cooling Water Pump 1-1, dated April 22, 2002

R0228901, Routine Surveillance Test of Component Cooling Water Pump 1-3, dated April 13, 2002

R0228902, Routine Surveillance Test of Component Cooling Water Pump 2-3, dated April 12, 2002

R0229319, Routine Surveillance Test of Component Cooling Water Pump 2-1, dated April 27, 2002

R0230053, Routine Surveillance Test of Component Cooling Water Pump 2-2, dated May 18, 2002

R0231667, Routine Surveillance Test of Component Cooling Water Pump 1-2, dated June 11, 2002

Safety Evaluation Screenings:

LBIE S-2002-0372, Unit 1 MOD Cycling for Aux Switch Verification, dated 5/21/2002.

LBIE S-2002-0466, Reactor Coolant Drain Tank High Level Alarm Channel, dated 2/14/2002.

LBIE S-2002-0451, RVLIS RTD Qualified Life Determination, dated 5/10/2002.

LBIE S-2002-0429, Motor Protective Device Setting Calculation, dated 5/17/2002.

LBIE S-2002-0421, Motor Protective Device Setting, dated 5/15/2002.

LBIE S-2002-0366, EDG Design Class 1 Governor Model EGB10C/13C Refurbishment, dated 5/17/2002.

LBIE S-2002-0356, Reduced resin loading in CVCS Mixed Bed During Operations, dated 3/19/2002.

LBIE S-2002-0354, Flush Line 7010: Rapid Drain Down Fill Line From CST, dated 4/17/2002.

LBIE S-2002-0351, Steam Generator Nozzle Dam Assembly, dated 4/19/2002.

LBIE S-2002-0337, Motor Protective Device Setting, dated 5/1/2002.

LBIE S-2002-0313, Motor Protective Device Setting and Penetration Protection, dated 5/4/2002.

LBIE S-2002-0311, Unistrut CGI Fasteners, Fittings and Struts (Generic), dated 5/7/2002.

LBIE S-2002-0289, 120VAC Class 1E Panels, dated 3/21/02.

LBIE S-2002-0276, Scaling Calculation Update, dated 2/9/2002

Work Orders

C0169414	C0143532	R0064420	C0169520	R0200883
R0136671	C0143779	R0223043	R0213299	C0178220
R0223043	R0064420	A0561048	R0212995	C0178244

Modifications

DCP —049284, Pressurization of the Unit 1 CCW Surge Tank, Revision 0

Calculations

N-190, ASME III Overpressure Protection Devices, dated October 11, 1995

M-1005, Pressure Retention Capability of the CCW Surge Tank, Revision 2

D.2.7, Component Cooling Water System-PRA System Analysis, Revision 6

M-0911, Fire Evaluation of Postfire Safe Shutdown Equipment Operability During Loss of HVAC, Revision 2

M-0912, HVAC Interactions for Postfire Safe Shutdown/room heat-up Due to Loss of HVAC as a Result, Revision 2

M-1017, To Determine Flows in the CCW System, Revision 3

WCAP-13907, Analysis of Containment Response Following Loss-of-Coolant Accidents for Diablo Canyon Units 1 and 2, Revision 0

WCAP-13908, Analysis of Containment Response Following Main Steamline Break Accidents for Diablo Canyon Units 1 and 2, Revision 0

WCAP-14282, Evaluation of Peak CCW Temperature Scenarios for Diablo Canyon Units and 2, Revision 1

M-998, Component Cooling Water Surge Tank," dated April 5, 1996

WCAP-14282, Evaluation of Peak CCW Temperature Scenarios for Diablo Canyon Units 1 and 2, Revision 1

CAP-12526, Auxiliary Salt Water and Component Cooling Water Flow and Temperature Study for Diablo Canyon Units 1 and 2, Revision 1

WCAP-13907, Analysis of Containment Response Following Loss-of-Coolant Accidents for Diablo Canyon Units 1 and 2, dated December 1993

WCAP-13908, Analysis of Containment Response Following Main Steamline Break Accidents for Diablo Canyon Units 1 and 2, dated December 1993

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