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

August 28, 2000

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: Diablo Canyon - NRC INSPECTION REPORT NO. 50-275/00-11; 50-323/00-11

Dear Mr. Rueger:

On August 10, 2000, the NRC completed an inspection at your Diablo Canyon Nuclear Power Plant, Units 1 and 2, facilities. The results of this inspection were discussed on August 10, 2000, with Mr. Larry Womack and other members of your staff.

This inspection was an examination of activities conducted under your license as they relate to the design adequacy and performance capability of the auxiliary saltwater and 4160 Vac systems and their support systems. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel. Within the scope of the inspection, no findings were identified.

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/**

Jeffrey L. Shackelford, Chief
Engineering and Maintenance Branch
Division of Reactor Safety

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

Enclosure:
NRC Inspection Report No.
50-275/00-11; 50-323/00-11

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**ENCLOSURE**

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

| | |
|---|---|
| Docket Nos.: | 50-275; 50-323 |
| License Nos.: | DPR-80; DPR-82 |
| Report No.: | 50-275/00-11; 50-323/00-11 |
| Licensee: | Pacific Gas and Electric Company |
| Facility: | Diablo Canyon Nuclear Power Plant, Units 1 and 2 |
| Location: | 7 1/2 miles NW of Avila Beach<br>Avila Beach, California |
| Dates: | July 24 through August 11, 2000 |
| Team Leader: | C. J. Paulk, Senior Reactor Inspector<br>Engineering and Maintenance Branch |
| Inspectors: | C. A. Clark, Reactor Inspector<br>Engineering and Maintenance Branch |
| | P. A. Goldberg, Reactor Inspector<br>Engineering and Maintenance Branch |
| | W. M. McNeill, Reactor Inspector<br>Engineering and Maintenance Branch |
| | N. L. Salgado, Resident Inspector<br>Projects Branch D |
| Accompanying Personnel: | R. Quirk, Consultant |
| Approved By: | Jeffrey L. Shackelford, Chief<br>Engineering and Maintenance Branch<br>Division of Reactor Safety |

ATTACHMENTS:

Attachment 1: Supplemental Information

Attachment 2: NRC's Revised Reactor Oversight Process

## SUMMARY OF FINDINGS

IR 05000275-00-11; 05000323-00-11; on 07/24-08/11/00; Pacific Gas and Electric Company; Diablo Canyon Power Plant; Units 1 & 2; Inspection of Safety System Design and Performance Capability Report; No Findings Identified.

This report covers a 2-week onsite inspection by a team of five Region IV inspectors and one contractor. The report includes the results of a safety system design and performance capability team inspection of the auxiliary saltwater and 4160 Vac systems and their supporting systems. No issues were identified during the inspection.

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

- No findings were identified.

## Report Details

1 **REACTOR SAFETY**

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R21 Safety System Design and Performance Capability

.1 System Requirements

a. Inspection Scope

The team reviewed operator actions and procedures associated with the auxiliary saltwater and 4160 Vac systems to ensure that they could be relied upon to meet their functional requirements. This review consisted of system walkdowns; review of normal operating, annunciator response, off-normal, and emergency operating procedures; and review of the Final Safety Analysis Report Update, the technical specifications, the system design criteria, and plant drawings. The purpose of this review was to verify that the auxiliary saltwater system, the 4160 Vac system, and appropriate support systems would perform the functions that were assumed to be available in the safety analysis.

The team reviewed the process media required for the operation of the auxiliary saltwater system. These media included the water, electrical, and air supplies for the auxiliary saltwater system; and the supply of auxiliary saltwater to the component cooling water heat exchangers. The review included piping and instrumentation diagrams, operating procedures, calculations, the Final Safety Analysis Report Update, system descriptions, and design bases documents. This review was performed to verify that the process media will be available and unimpeded during accident or event conditions.

The team verified that the system needs for the emergency diesel generators were met. The supply of air and the required amount of clean and tested diesel fuel and lubricating oil required by the technical specifications were verified through a review of the design of the emergency diesel generators' air start system, fuel oil storage and transfer system, lubricating oil storage system, and the licensee's fuel oil testing program.

The team reviewed the licensee's program for chemical analysis and treatment of the auxiliary saltwater system, as well as, the cleaning and testing requirements for the component cooling water heat exchangers. The existence of corrosion control and testing programs identified in the licensee's response to Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment," was reviewed on a sampling basis. Applicable condition reports and maintenance action items were reviewed to verify that problems with system needs were being identified and addressed.

The team reviewed the availability of the ac and dc power supply systems; minimum voltage requirements; system grounding requirements; the design requirements of the auxiliary saltwater pumps' motors; equipment cables; circuit breakers and protective devices; and emergency diesel generators and fuel storage.

b. Issues and Findings

No findings were identified.

.2 System Condition and Capability

a. Inspection Scope

The team reviewed system operations for the auxiliary saltwater and 4160 Vac systems and their required support systems. This review consisted of system walkdowns; review of normal operating, annunciator response, off-normal, and emergency operating procedures; and review of the Final Safety Analysis Report Update, the technical specifications, the system design criteria, and plant drawings.

The team reviewed the environment and environmental qualification of equipment in the auxiliary saltwater pump rooms and the emergency diesel generator rooms to verify that the equipment was qualified to perform its intended function when required, subject to the assumed accident environment.

The team performed a walkdown of the auxiliary saltwater system: auxiliary saltwater pump rooms, and the 4160 Vac system to verify that the changes and modifications to the initial design had not affected or changed the system design bases or required functional performance. The team used design drawings, piping, isometric and diagram drawings to assist in the as-built verification walkdowns.

The team verified that required inputs to components, such as flow, pressure, and temperature parameters, were consistent with design basis analyses for the auxiliary saltwater and 4160 Vac systems and their support systems.

Through a review of historical and current maintenance records including performance tests, the team evaluated for signs of degradation of the auxiliary saltwater and 4160 Vac systems and support system components.

b. Issues and Findings

No findings were identified.

.3 Identification and Resolution of Problems

a. Inspection Scope

The team reviewed a sample of auxiliary saltwater and 4160 Vac systems and support systems design-related problems identified by the licensee's corrective action program.

The team also reviewed Procedure OM7.ID1, “Problem Identification and Resolution - Action Requests,” Revision 12.

The team reviewed the actions the licensee has taken in response to industry-identified problems with the auxiliary saltwater and 4160 Vac systems and support equipment. This review included the status of modifications to replace 4160 Vac General Electric Magnablast circuit breakers.

b. Issues and Findings

No findings were identified.

.4 System Walkdowns

a. Inspection Scope

The team performed walkdowns of the accessible portions of the auxiliary saltwater piping and 4160 Vac systems, as well as the required support systems. The walkdowns focused on the installation and configuration of piping, components, and instruments; the placement of protective barriers and systems; the susceptibility to flooding, fire, or other environmental concerns; the physical separation; the provisions for seismic concerns; accessibility for operator action; and the conformance of the currently installed configuration of the systems with the design and licensing bases.

b. Issues and Findings

No findings were identified.

.5 Design Review

a. Inspection Scope

The team reviewed the design criteria for the auxiliary saltwater and 4160 Vac systems and then selected specific design criteria that assured the performance of safety functions during accident conditions. These criteria were reviewed to determine whether the design bases of the systems were met by the currently installed and tested configurations. Document reviews included drawings, procedures, calculations, vendor specifications, condition reports, and maintenance action items identified in the attachment, as well as the facility technical specifications and the Final Safety Analysis Report Update. These reviews further addressed the validity of design assumptions and calculations.

The team also assumed specific failures of individual safety- and nonsafety-related components to determine the potential effects of such failures on the capability of the systems to perform their safety functions. Instrumentation was reviewed to verify the appropriateness of setpoints with regard to the parameters that were monitored or measured and the function that was affected by or related to the monitored parameter.

Additionally, the team performed analyses in several areas to verify that design values were correct and appropriate.

b. Issues and Findings

No findings were identified.

.6 Safety System Testing

a. Inspection Scope

The team reviewed the program, procedures, and records associated with testing, cleaning, and inspecting the component cooling water heat exchangers and the auxiliary saltwater traveling screens. The team also verified that procedures, policies, and appropriate program requirements were in place to perform all technical specification-required surveillance testing or monitoring for the auxiliary saltwater and 4160 Vac systems. This included a review of required inservice testing of pumps and the NRC-granted exemptions for cases where ASME Section XI code requirements for testing were not met. Additional review was performed to verify that installed or test instrument uncertainties and system conditions that degrade safety system performance (e.g., heat exchanger fouling factors) were appropriately accounted for within the testing and analysis methodologies.

b. Issues and Findings

No findings were identified.

## 4 OTHER ACTIVITIES (OA)

4OA6 Management Meetings

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. Larry Womack and other members of licensee management at the conclusion of the onsite inspection on August 10, 2000. The licensee's management acknowledged the findings presented.

The inspectors asked the licensee's management whether any materials examined during the inspection should be considered proprietary. While the licensee’s representatives noted that some proprietary information had been reviewed by the team, no proprietary information is contained in this report.

## ATTACHMENT 1

## SUPPLEMENTAL INFORMATION

## PARTIAL LIST OF PERSONS CONTACTED

Licensee

J. Anastasio, Engineer, Engineering Services
J. Becker, Manager, Operations Services
S. Chesnut, Director, Balance of Plant
D. Christensen, Engineer, Nuclear Safety and Licensing
K. Kaminski, Engineer, Engineering Services
D. Miklush, Manager, Engineering Services
J. Portney, Senior Engineer, Engineering Services
J. Tompkins, Manager, Nuclear Safety and Licensing
D. Vosburg, Director - Nuclear Steam System, Engineering Services
L. Womack, Vice President, Power Generation and Nuclear Services

NRC

D. Proulx, Senior Resident Inspector, Diablo Canyon Power Plant

## DOCUMENTS REVIEWED

**Procedures**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| 17.8 | Preoperational test of auxiliary saltwater system | September 7, 1982 |
| AR PD01-01 | Annunciator response procedure asw sys delta P/HDR pressure | 20A |
| AR PK01-01 | ASW SYS HX DeltaP/HDR Press | 20A |
| AR PK01-02 | Aux Salt Wtr PPS Room | 10A |
| AR PK01-03 | Aux Saltwater Pumps | 11 |
| AR PK01-06 | CCW Vital HDR A/B | 17 |
| AR PK13-01 | Bar Racks/Screens | 16 |
| AR PK16-16 | 4kV Bus H DIFF Lockout | 6A |
| AR PK16-17 | 4kV Bus H Bus or SU FDR UV | 9A |
| AR PK16-18 | 4kV Bus H DC Control UV/Trouble | 9 |
| AR PK16-19 | 4kV Bus H Auto Transfer | 6 |

**Procedures**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| AWP E-001 | Development of Performance Measurement Equipment Channel Uncertainty Calculations | 0A |
| CF3.DC5 | Development of I&C Scaling Calculations | 0A |
| CF5.ID11 | Lubricant Storage, Selection, Dispensing, and Use | 1 |
| EOP ECA-0.0 | Loss Of All Vital AC Power | 13 |
| EOP ECA-0.3 | Restore 4kV Buses | 9 |
| LT 17-8A | Traveling Screens and Bar Racks Level Channel Calibration | 4 |
| LT 17-8D | Aux Saltwater Pump Intake Bay 1-7 Level Channel LT-240C Calibration | 3 |
| LT 17-8D | Auxiliary Saltwater Pump Intake Bay 1-7 Level Channel LT-240C Calibration | 3 |
| LT 17-23A | Auxiliary SWP 2-1 Bay Level Channel Calibration | 1 |
| MP E-50.308 | Agastat Type ETR Timing Relay Maintenance | 8 |
| MP E-50.30B | AGASTAT Type ETR Timing Relay Maintenance | 8 |
| MP E-56.1 | Electrical Equipment Lubrication Chart | 3 |
| MP E-63.3B | Maintenance of Potential Transformer Drawers in General Electric Metal-Clad 4kV and 12 kV Switchgear | 5A |
| MP E-63.3C | Maintenance of 4 and 12 kV Switchgear | 8 |
| MP E-63.3D | 4 & 12 kV Switchgear Bus Connection Resistance Test | 1 |
| MP E-63.6A | Maintenance of SF6 4kV Circuit Breakers | 7 |
| NSP-1-17-15A | Nominal Setpoint Calculation for the CCW Heat Exchanger Low DP Alarm | 5 |
| NSP-1-17-16A | Auxiliary Saltwater Pump Low Discharge Pressure Switches | 1 |
| OM4.ID3 | Assessment of Industry Operating Experience | 4 |
| OM7.ID1 | Problem Identification and Resolution - Action Requests | 12 |
| OM7.ID2 | Quality Evaluations | 9 |

**Procedures**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| OM7.ID3 | Nonconformance Report (NCR) and Technical Review Group (TRG) | 8 |
| OM7.ID10 | Quality Trend Analysis Program | 6 |
| OP AP SD-1 | Loss of AC Power | 11 |
| OP AP SD-3 | Abnormal Operating Procedure Loss of Auxiliary Salt Water | 7A |
| OP AP-10 | Abnormal Operating Procedure Loss of Auxiliary Salt Water | 7 |
| OP AP-11 | Abnormal Operating Procedure Malfunction of Component Cooling Water System | 17 |
| OP AP-26 | Loss of Offsite Power | 3 |
| OP J-6A | 4160 Volt System | 6A |
| OP J-6A: I | 4160 Volt System - Make Available | 9 |
| OP J-6A: II | Transferring 4160 Volt Banks | 6 |
| OP J-6A: IV | 4160 Volt Breaker Code Order | 14 |
| PEP EN-1 | Emergency Engineering Guideline on Control Room EOP Consultation | 5/5/99 |
| Round Sheet 69-11829-6 | Intake Structure/Outside Services Weekly Round Sheet | 18 |
| STP I-1C | Routine Weekly Checks | 68 |
| STP M-13A | Manual and Auto Transfer of 4kV Vital Busses Off-Site Power Sources | 9A |
| STP M-13B3 | ENGD SFGDS Auto Timers Setting VERF Loads Started SSPS Relay K-609, Train A | 7 |
| STP M-13B4 | ENGD SFGDS Auto Timers Setting VERF Loads Started SSPS Relay K-609, Train B | 7 |
| STP M-13F | 4kV Bus F Non-SI Auto-Transfer Test | 24 |
| STP M-13F | 4kV Bus F Non-SI Auto-Transfer Test | 24 |
| STP M-13G | 4kV Bus G Non-SI Auto-Transfer Test | 18 |
| STP M-13H | 4kV Bus H Non-SI Auto-Transfer Test | 18 |

**Procedures**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| STP M-15 | Integrated Test of Engineered Safeguards and Diesel Generators | 34 |
| STP M-16 | Safeguards Active Component Operation By Slave Relay Operation | 9 |
| STP M-16E | Operation of Train A Slave Relays K609 (Safety Injection) K633 (Motor Driven AFW Pump Start) | 11 |
| STP M-16F | Operation of Train B Slave Relays K609 (Safety Injection) K633 (Motor Driven AFW Pump Start) | 12 |
| STP M-235 | Auxiliary Salt Water Piping Inspection | 2 |
| STP M-26 | Auxiliary Salt Water System Flow Monitoring | 23 |
| STP M-26A | FCV-601, Auxiliary Salt Water Unit 1 and 2 Cross-Tie Dividing Valve, Flow Test | 10 |
| STP M-75 | 4kV Vital Bus Undervoltage Relay Calibration | 23 |
| STP M-90A | Monthly Surveillance of Diablo Canyon Breakwaters | 2 |
| STP M-90B | Annual Surveillance of Diablo Canyon Breakwaters | 2 |
| STP M-109 | Test of Backup Air Accumulator System to Fcv-602, CCW Heat Exchanger No. 1 Saltwater Inlet Valve | 8 |
| STP M-110 | Test of Backup Air Accumulator System to FCV-603, Component Cooling Water Heat Exchanger No. 2 Saltwater Inlet Valve | 8 |
| STP P-ASW-11 | Routine Surveillance Test of Auxiliary Saltwater Pump 1-1 | 15 |
| STP P-ASW-12 | Routine Surveillance Test of Auxiliary Saltwater Pump 1-2 | 11 |
| STP P-ASW-21 | Routine Surveillance Test of Auxiliary Saltwater Pump 2-1 | 14 |
| STP P-ASW-22 | Routine Surveillance Test of Auxiliary Saltwater Pump 2-2 | 11 |
| STP P-ASW-A | Performance Test of Auxiliary Saltwater Pumps | 11, 12 |
| STP P-CCW-11 | Routine Surveillance Test of Component Cooling Water Pump | 10 |

**Procedures**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| STP P-CCW-12 | Routine Surveillance Test of Component Cooling Water Pump 1-2 | 7 |
| STP P-CCW-13 | Routine Surveillance Test of Component Cooling Water Pump 1-3 | 7 |
| STP V-2A1 | Auxiliary Saltwater Cross Connect Header Valves | 1 |
| STP V-2A2 | Auxiliary Saltwater Crosstie Valve FCV-601 | 3 |
| STP V-2A3 | Auxiliary Saltwater Demusseling Valves | 1 |
| STP V-2F | Component Cooling Water Valves | 7 |
| STP V-3F1 | Exercising Valve FCV-495, ASW Pump 2 Crosstie Valve | 15, 16 |
| STP V-3F2 | Exercising Valve FCV-496, ASW Pump 1 Crosstie Valve | 14, 15 |
| STP V-3F3 | Exercising Valve FCV-601, Units 1 and 2 ASW Crosstie | 15 |
| STP V-3F4 | Exercising Valve FCV-602 CCW HX No. 1 Saltwater Inlet | 14, 15 |
| STP V-3F5 | Exercising Valve FCV-603 CCW HX No. 2 Saltwater Inlet | 12, 13 |
| STP V-3H8 | Exercising FCV-430 & FCV-431, CCW Heat Exchanger Outlet Isol Valves | 16 |

**Calculations**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| 114-DC | Protection Relay Settings for Bus and Feeders | 8 |
| 170-DC | Overcurrent Relay Setting for Class 1E, 4 kV Motors | 15 |
| 174A-DC | Diesel Start and Load Shed First Level Undervoltage Relay Setpoint Calc | 1 |
| 174B | Second Level Undervoltage Relay Settings | 1 |
| 215-DC | Emergency Diesel Generator Loading Capability Study without KWS Relay | 2 |
| 311-DC | Cable Sizing - 4.16kV Class 1E Loads | 4 |
| 340-DC | Intake Structure Cable Ampacity | 0 |

**Calculations**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| 357A-DC | DCPP Units 1 & 2 Load Flow, Short Circuit, and Transient Stability | 3 |
| 357M-DC | FLUR and SLUR Drift Analysis | 1 |
| 357P-DC | SLUR Relay and Timer Setpoints | 0 |
| 360-DC | 125 VDC System Analysis Methodology & Scenario Development | 2 |
| D.1 | DCPP Support System Event Trees | 8 |
| D.2.1.3 | Electric Power Unit 1 Vital AC System | 6 |
| D.2.1.4 | Electric Power Vital AC/DC System Unit 2 | 6 |
| D.2.6 | Auxiliary Saltwater Systems Analysis | 6 and 7 |
| EQP 301.1 | Deflection of Impeller Shaft | May 18, 1988 |
| J-002 | Backup Air/nitrogen Accumulators and Bottles | 6 |
| M-9 | Backup Air Supply, to Size Receivers | 4 |
| M-188 | To Determine the Velocity of Slat Water Through the CCW Heat Exchanger under Design and Maximum Flow | 2 |
| M-370 | Determine the Thrusts from the Auxiliary Saltwater Lines on the CCW Heat Exchangers for Units 1 & 2 | May 23, 1983 |
| M-854 | Worst Case Brake Horsepower for AFW, ASW, and CCW Pumps | 3 |
| M-897 | CCW Flow Balance | 4 |
| M-917 | Determine the ASW Flows for Various Configurations Utilizing the Inter-unit Crosstie Piping | 3 |
| M-938 | CCW Date Input for 1993 Containment Analysis Program | 3 |
| M-953 | Determine If Adequate NPSH Is Available for 1 Pump Supplying 2 Heat Exchangers | January 17, 1994 |
| M-966 | Establish Maximum CCW Flow Rate to the RHR Heat Exchangers | August 4, 1994 |
| M-988 | To Evaluate the Effects of the New ASW Bypass Piping | 6 |

**Calculations**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| M-1017 | To Determine Flows in the CCW System | 3 |
| M-1020 | Evaluate the CCW System for Mode 4 Operation with Elevated UHS Temperatures | 1 |
| M-1027 | To Determine the Maximum Allowable ASW Temperature When 2 CCW Heat Exchangers Are Aligned | 1 |
| NSP-1-17-15 | Nominal Setpoint Calculation for the CCW Heat Exchanger D/P Alarm | 3 |
| NSP-1-17-16A | Nominal Setpoint Calculation for Auxiliary Saltwater Pump Low Discharge Pressure Switches | 1 |
| NSP-1-17-23A | Nominal Setpoint for Auxiliary Saltwater Pump Bay Low Level Alarm | 0 |
| PLG 637 | Diablo Canyon Probabilistic Risk Assement | July 1988 |
| SC-L-17-15A | Instrument Scaling Calculation CCW Heat Exchanger 1-1 Differential Pressure Channel PT-5 Calibration | 2 |
| SC L-17-16A | Instrument Scaling Calculation Auxiliary Salt Water Pumps Header Pressure Switches Calibration | 1 |
| SC L-17-23A | Instrument Scaling Calculation Auxiliary SWP 1-1 Bay Level Channel LS-163 | 0 |
| SC L-17-23B | Instrument Scaling Calculation Auxiliary SWP 2-2 Bay Level Channel | 0 |

**Drawings**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| 053093 | Outboard Bubbler for Bar Rack LT-240D, Sheet 50 | 52 |
| 053093 | Inboard Bubbler for Bar Rack LT-240D, Sheet 50A | 52 |
| 053093 | Outboard Bubbler for Traveling Screen LT-240B & C, Sheet 50C | 28 |
| 053093 | Inboard Bubbler for Traveling Screen LT-240A, B, & C, Sheet 50D | 28 |

**Drawings**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| 57554 | Cable tray and Conduit Layout Plan Below Elevation 140'-0" Area “A” | 30 |
| 102017 | Piping Schematic Saltwater Systems , Sheet 1 | 89 |
| 102017 | Piping Schematic Saltwater Systems, Sheet 3B | 87 |
| 102017 | Piping Schematic Saltwater Systems, Sheet 3 | 95 |
| 102017 | Piping Schematic Saltwater Systems, Sheet 5 | 86 |
| 102032 | ASW Air Operated Valve Schematic, Sheet 42 | 143 |
| 102032 | ASW Air Operated Valve FCV-602, 603 Schematic, Sheet 42E | 140 |
| 102033 | Traveling Screen and Bar Racks Instrument Schematics, Sheet 23C | 115 |
| 102033 | ASW Pump Level Instrument Schematic, Sheet 24A | 115 |
| 106717 | Operating Valve Identification Diagram (OVID), Sheet 1 | 110 |
| 106717 | Operating Valve Identification Diagram (OVID), Sheet 7 | 109 |
| 106717 | Operating Valve Identification Diagram (OVID), Sheet 8 | 108 |
| 108017 | Piping Schematic Saltwater Systems, Sheet 5 | 53 |
| 108017 | Unit 2 Saltwater Systems Piping Schematic, Sheet 1 | 71 |
| 108017 | Unit 2Screen Wash System Piping Schematic, Sheet 3 | 71 |
| 108017 | Unit 2 Aux Saltwater System Piping Schematic, Sheet 3B | 73 |
| 216191 | Screen Wash Pumps and Screen Drive Logic | 5 |
| 437533 | Electrical Single Line Diagram Single Line Meter & Relay Diagram 4160 Volt System | 33 |
| 437589 | Unit 1 SI Pump Schematic | 14 |
| 437594 | Unit 1 Aux Seawater Pump Schematic | 24 |
| 437641 | Screen Drive Schematic | 12 |
| 437642 | Screen Drive and Wash Schematic | 14 |
| 437646 | Salt Water System Motor Operated Valves FCV-432/433/604/605/495/496/601 Schematic | 7 |

**Drawings**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| 437681 | FCV-602, 603 Schematic | 18 |
| 441229 | 4160 V System Bus Section F Single Line | 14 |
| 441287 | Auxiliary Saltwater Pumps Schematic | 21 |
| 441289 | Screen Drive System Schematic | 7 |
| 490093 | Auxiliary Saltwater Pump Intake Level Bubbler L-163 Details, Sheet 25 | 63 |
| 502110 | Single Line Diagram 500/230/25/12/4.16 kV Systems | 10 |

**Action Requests**

| | | | | |
|---|---|---|---|---|
| A0122296 | A0467127 | A0475431 | A0491419 | A0504172 |
| A0416737 | A0467481 | A0475677 | A0491977 | A0504648 |
| A0419055 | A0468144 | A0477270 | A0492483 | A0504915 |
| A0440794 | A0468232 | A0478268 | A0495005 | A0505103 |
| A0441048 | A0468320 | A0478510 | A0495066 | A0507000 |
| A0448591 | A0469102 | A0478576 | A0495278 | A0507382 |
| A0452896 | A0469559 | A0482690 | A0495318 | A0508248 |
| A0463722 | A0470233 | A0482692 | A0496068 | A0508383 |
| A0463807 | A0470978 | A0482876 | A0496465 | A0511800 |
| A0464840 | A0471180 | A0482901 | A0496468 | A0511987 |
| A0465134 | A0471484 | A0483328 | A0497475 | A0512029 |
| A0465736 | A0471662 | A0484387 | A0500504 | A0512581 |
| A0465775 | A0472876 | A0484806 | A0503381 | Q0012080 |
| A0465838 | A0474755 | A0486375 | A0503389 | |
| A0466445 | A0474805 | A0488881 | | |

**Design Change Packages**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| A0404677 | Teflon coated seat ring installation in Unit 1 | November 10, 1999 |
| A0437708 | Teflon coated seat ring installation in Unit 2 | June 19, 1997 |
| A0475763 | Request for design to eliminate ASW vacuum breaker counterweights | January 29, 1999 |
| A0482876 | Unit 2 design change to remove counterweights | April 16, 1999 |

**Design Change Packages**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| A0482901 | Unit 1 Design Change to Remove Counterweights | April 16, 1999 |
| A0486935 | Revise Unit 1 ASW Vacuum Breaker STP Frequency | June 22, 1999 |
| DCO-EM-39834 | Increase Impeller Diameter in ASW Pumps | May 20, 1988 |
| E049033 | Replace ASW Pump Underground Cable | 0 |
| E049318 | Replace the Electromechanical First Level Undervoltage Relay (FLUR) with Digital Relays | 0 |
| E049451 | Raise the Second Level Undervoltage Relay (SLUR) Setpoint | 0 |
| M049251 | Saltwater- Chemical Biofouling Control Systems Upgrade | 1 |
| M049376 | Stop Valve in Code Relief Valve Path of CCW Heat Exchanger Should Be Controlled to Ensure Code Compliance | 0 |
| M049385 | Revise the DCM and FSAR to Reflect ASW Pump Impeller Replacement | 0 |
| M050376 | Stop Valves in Code Relief Valve Path of CCW Heat Exchanger Should Be Controlled to Ensure Code Compliance | 0 |

**Miscellaneous Documents**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| | CCW Heat Exchanger 2-1 Test | February 1998 |
| | Final Unit 2 Ccw Heat Exchanger Test Results | November 22, 1994 |
| | Final Unit 1 CCW Heat Exchanger 1-1 Test Results | April 22, 1996 |
| | Maintenance Rule Data Base | |
| | Monthly NPQ Quality Problem Reports for August 1999 to July 2000 | |

**Miscellaneous Documents**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| | Remote Internal Video Inspection of ASW Piping During 1R8 Refueling Outage | June 1997 |
| | Remote Internal Video Inspection of ASW Piping During 2R10 Refueling Outage | April 1998 |
| | Remote Internal Video Inspection of ASW Piping During 1R7 Refueling Outage | November 1995 |
| | Remote Internal Video Inspection of ASW Piping During 2R7 Refueling Outage | May 1996 |
| | Unit 1CCW Heat Exchanger Test | April 1995 |
| | Inservice Testing Program Second Ten-Year Interval, Units1&2 | 16 |
| | Supplemental Safety Evaluation of PG&E Response to Station Blackout Rule for Diablo Canyon | May 29, 1992 |
| 663030-17 | Bingham-Willamette Co. Auxiliary Saltwater Pumps (20 x 34B “VCM” Single Stage Wet Pit Pumps) Vendor Instruction Manual | 17 |
| DCM S-17B | Units 1 and 2 Design Criteria Memorandum - Auxiliary Salt Water | 16 |
| DCM S-23G | Intake Structure Ventilation System | 6 |
| DCM S-63 | 4160 V System | 11 |
| E-5 | Auxiliary Saltwater System | 7 |
| GEH-1802 | Metal Clad Switchgear Types M-26 and M-36 Instruction and Renewal Parts | U |
| J-139 | Uncertainty in Using the AMAG Ultrasonics Flowmeter for Calibration Checks on the ASW Magnetic Flowmeters | 0 |
| J6A | 4kV System | 8 |
| M-270 | Flood Level of the Auxiliary Saltwater Pump Vault Due To Pipe Crack and Floor Drain Plugging | 6 |
| M00172080 | Repair/Replace PS-185A/185B | |

**Miscellaneous Documents**

| NUMBER | DESCRIPTION | REVISION |
|---|---|---|
| PG&E 116.30 | Asw Pump Testing for Run-out | February 26, 1994 |
| PG&E 116.31 | Evaluation of ASW Pumps in a Condition That the Available NPSH Was less than Required | February 9, 1994 |
| PG&E 420DC | Tides Occurring at Diablo Canyon Power Plant | May 4, 1988 |
| PM 51872 | CCWHE1 Open Heat Exchanger WaterBoxes (Work Order R0192829 01 ) | 01 |
| PM 53586 | CCWHE1-1 Clean/Inspect Seawater Side (Work Order R0088473 01 ) | 01 |
| PM 53601 | ASP1-1 Forebay: Remove Debris (Diver) (Work Order R0192562 01) | 01 |
| Report 420DC-97.139 | In-place Calibration Verifications of the DCPP Unit 1 ASW Magnetic Flowmeters | August 1997 |
| Report 420DC-00.8 | DCPP ASW Magnetic Flowmeter Comparison Tests January - February 2000 | March 2000 |
| STP M-13B4 | Engineered Safeguards Auto Timers Verify Loads Started SSPS Relays K-609 Train B | March 4, 1999 |
| Westinghouse PGE-00-503 | RHR Heat Exchanger Flow Increase Evaluation | February 8, 2000 |
| Westinghouse PGE-94-579 | Excessive Shell Side Flow Rates for the Residual Heat Exchanger | March 30, 1994 |

**Operating Events Analyses**

| | | | |
|---|---|---|---|
| 99-006 | 99-069 | 99-120 | Y0-065 |
| 99-035 | 99-111 | 99-167 | |

## ATTACHMENT 2

## NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

| Reactor Safety | Radiation Safety | Safeguards |
|---|---|---|
| ● Initiating Events | ● Occupational | ● Physical Protection |
| ● Mitigating Systems | ● Public | |
| ● Barrier Integrity | | |
| ● Emergency Preparedness | | |

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection Findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN Findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE Findings indicate issues that are of low to moderate safety significance. YELLOW Findings are issues that are of substantial safety significance. RED Findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin, but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner, which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.