UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
612 EAST LAMAR BLVD, SUITE 400
ARLINGTON, TEXAS 76011-4125

August 5, 2008

John T. Conway
Senior Vice President &
Chief Nuclear Officer
Pacific Gas and Electric Company
P.O. Box 3
Mail Code 104/6/601
Avila Beach, CA 93424

SUBJECT: DIABLO CANYON POWER PLANT - NRC INTEGRATED INSPECTION REPORT 05000275/2008003 AND 05000323/2008003

Dear Mr. Conway:

On June 30, 2008, the U.S. Nuclear Regulatory Commission completed an inspection at your Diablo Canyon Power Plant, Units 1 and 2, facility. The enclosed integrated report documents the inspection findings that were discussed on July 1, 2008, with Mr. James Becker and members of your staff.

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

Based on the results of this inspection, three NRC-identified findings of very low safety significance (Green) were identified in this report. These findings involved violations of NRC requirements. However, because of their very low risk significance and because they are entered into your corrective action program, the NRC is treating these three findings as non-cited violations (NCVs) consistent with Section VI.A of the NRC Enforcement Policy. If you contest any NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011-4005; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Diablo Canyon Power Plant.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter 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/

Vince G. Gaddy, Chief
Project Branch B
Division of Reactor Projects

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

Enclosure:
NRC Inspection Report 05000275/2008003 and 05000323/2008003
w/attachment: Supplemental Information

cc w/enclosure:

Sierra Club San Lucia Chapter
ATTN: Andrew Christie
P.O. Box 15755
San Luis Obispo, CA 93406

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

Chairman
San Luis Obispo County
Board of Supervisors
1055 Monterey Street, Suite D430
San Luis Obispo, CA 93408

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

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

Director, Radiological Health Branch
State Department of Health Services
P.O. Box 997414 (MS 7610)
Sacramento, CA 95899-7414

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

James D. Boyd, Commissioner
California Energy Commission
1516 Ninth Street (MS 31)
Sacramento, CA 95814

James R. Becker, Site Vice President
and Station Director
Diablo Canyon Power Plant
P.O. Box 56
Avila Beach, CA 93424

Jennifer Tang
Field Representative
United States Senator Barbara Boxer
1700 Montgomery Street, Suite 240
San Francisco, CA 94111

Chief, Radiological Emergency
Preparedness Section
National Preparedness Directorate
Technological Hazards Division
Department of Homeland Security
1111 Broadway, Suite 1200
Oakland, CA 94607-4052

Electronic distribution by RIV:
Regional Administrator (Elmo.Collins@nrc.gov)
DRP Director (Dwight.Chamberlain@nrc.gov)
DRS Director (Roy.Caniano@nrc.gov)
DRS Deputy Director (Troy.Pruett@nrc.gov)
Senior Resident Inspector (Michael.Peck@nrc.gov)
Branch Chief, DRP/B (Vincent.Gaddy@nrc.gov)
Senior Project Engineer, DRP/B (Rick.Deese@nrc.gov)
Team Leader, DRP/TSS (Chuck.Paulk@nrc.gov)
RITS Coordinator (Marisa.Herrera@nrc.gov)

Only inspection reports to the following:
DRS STA (Dale.Powers@nrc.gov)
M. Cox, OEDO RIV Coordinator (Mark.Cox@nrc.gov)
ROPreports
DC Site Secretary (Agnes.Chan@nrc.gov)
Bill Maier, RSLO (Bill.Maier@nrc.gov)
R. Kahler, NSIR (Robert.Kahler@nrc.gov)

SUNSI Review Completed: __VGG__ ADAMS: ☐ Yes ☐ No Initials: __VGG_
☑ Publicly Available ☐ Non-Publicly Available ☐ Sensitive ☑ Non-Sensitive
R:_REACTORS_DC\2008\DC2008003RP-msp.doc ML 082180882

RIV:RI:DRP/B	SRI:DRP/B	C:DRP/B	C:DRS/OB
MABrown	MSPeck	VGGaddy	RELantz
/RA/ VGGaddy for	***/RA/ VGGaddy for***	***/RA/***	***/RA/ TOMcKernon for***
07/29/08	07/29/08	8/5/08	07/21/08
C:DRS/EB1	C:DRS/EB2	C:DRS/PSB1	C:DRS/PSB2
RLBywater	NFO'Keefe	MPShannon	GEWerner
/RA/	***/RA/***	***/RA/***	***/RA/ LTRicketson for***
07/18/08	07/18/08	07/21/08	07/22/08

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

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Dockets:	50-275, 50-323
Licenses:	DPR-80, DPR-82
Report:	05000275/2008003 05000323/2008003
Licensee:	Pacific Gas and Electric Company
Facility:	Diablo Canyon Power Plant, Units 1 and 2
Location:	7 ½ miles NW of Avila Beach Avila Beach, California
Dates:	April 1 through June 30, 2008
Inspectors:	M. Peck, Senior Resident Inspector M. Brown, Resident Inspector J. Melfi, Resident Inspector, Palo Verde P. Elkmann, Senior Emergency Preparedness Inspector M. Haire, Senior Operations Engineer J. Nadel, Reactor Inspector, Engineering Branch
Approved By:	V. G. Gaddy, Chief, Projects Branch B Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000275/2008003, 05000323/2008003; 3/1/08 - 6/30/08; Diablo Canyon Power Plant Units 1 and 2; Maintenance Effectiveness, Operability Evaluations, and Identification and Resolution of Problems

This report covered a 13-week period of inspection by resident inspectors and announced regional inspectors. Three NRC-identified, Green, noncited violations were identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the Significance Determination Process does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The inspectors identified a noncited violation of 10 CFR 50.65(b) after Pacific Gas and Electric Company failed to include a radiation monitoring system in the maintenance rule scope for monitoring of maintenance effectiveness. The licensee relied on the radiation monitoring system for use in plant emergency operating procedures. The inspectors concluded that radiation monitoring system maintenance had not been effective. Between June 2006 and April 2008, twenty failures of the system had occurred. The licensee has taken corrective action to remove the radiation monitoring system from the emergency operating procedures and entered the condition into the corrective action program as Action Request A0728599.

  This finding is greater than minor because it is associated with the Mitigating Systems Cornerstone attribute of equipment performance and affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors concluded that the finding is of very low safety significance because it did not represent a loss of system safety function, an actual loss of safety function of a single train for greater than the Technical Specification allowed outage time, or screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a crosscutting aspect in the area of problem identification and resolution, associated with the corrective action program component, because Pacific Gas and Electric Company failed to perform an adequate extent of condition review following a similar finding described in NRC Integrated Inspection Report 05000275 and 05000323/2007003 [P.1(c)] (Section 1R12).

- Green. The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," after the licensee failed to adhere to several requirements in Administrative Procedure OM7.ID12, "Operability Determination," Revision 11. Specifically, the licensee identified that it did not perform a prompt operability assessment for a condition adverse to quality until approximately 1 year after the immediate operability determination was performed. Also, the inspectors identified that when the prompt operability assessment was performed, it relied inappropriately on engineering judgment, for a complex issue, without an adequately documented basis for that judgment. The adverse condition was an identified nonconformance related to the design basis because both units were operating at a full power average temperature less than the design value. The licensee has entered this into their corrective action program as Action Request A0723331 which details their planned correction actions.

The inspectors determined that the finding was more than minor because it is similar to Inspection Manual Chapter 0612, Appendix E, Minor Example 3(j) in that operability was questioned and both the licensee and the vendor had to perform significant work and analysis in order to fully address the operability impact of a low average temperature on operating Unit 1. In accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 4, Phase 1 - Initial Screening and Characterization of Findings, the inspectors concluded the finding was of very low safety significance (Green) because it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a crosscutting aspect in the area of human performance associated with the decision making component because the licensee did not use conservative assumptions when it decided that engineering judgment alone was a sufficient basis for operability without a supporting plant specific analysis [H.1(b)] (Section 1R15).

- Green. The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XV, "Nonconforming Materials, Parts, or Components," after Pacific Gas and Electric failed to perform an adequate receipt inspection to identify defective emergency diesel generator fuel injector snubber valves. On March 13, 2008, Entergy Nuclear Operations issued Part 21, Report 2008-004-00, "Potential Defect in Fairbanks Morse Emergency Diesel Generator Snubber Valve Material and Heat Treatment," after observing repetitive diesel generator snubber valve failures. Pacific Gas and Electric evaluated the Part 21 report and concluded that the current receipt inspection was adequate to identify defective snubber valves. However, the inspectors identified that the receipt inspection Procedure RPE M-7297, "DEG - Fuel Injection Pump Snubber Valve," did not include verification that the snubber valve material had been properly heat treated as described in the 10 CFR Part 21 notification. The inspectors concluded that the potential existed for defective snubber valves to be installed on station emergency diesel generators. The licensee took corrective actions to inspect the installed snubber valves, revise the receipt inspection, and enter the condition into the corrective action program as Action Request A0729807. The subsequent inspection did not identify any defective snubber valves installed in the plant or in the warehouse stock.

  The finding is greater than minor because if left uncorrected, less than adequate receipt inspections would become a more significant safety concern. The inspectors concluded this finding is of very low safety significance because it did not represent a loss of system safety function, an actual loss of safety function of a single train for greater than the Technical Specification allowed outage time, or screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a crosscutting aspect in the area of problem identification and resolution, associated with the operating experience component because Pacific Gas and Electric Company failed to adequately evaluate a Part 21 notification [P.2(a)] (Section 4OA2).

B. Licensee-Identified Violations

A violation of very low safety significance that was identified by the licensee has been reviewed by inspectors. Corrective actions planned or taken by the licensee have been entered into the licensee's corrective action program. This violation and corrective action tracking number are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Pacific Gas and Electric Company (PG&E) operated Diablo Canyon Unit 1 at full power throughout the inspection period. At the beginning of the inspection period Diablo Canyon Unit 2 was shutdown for refueling. PG&E restarted Unit 2 on April 13, 2008 and operated at full power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Summer Seasonal Readiness Preparations

a. Inspection Scope

The inspectors performed a review of the licensee's preparations for summer weather for selected systems, including conditions that could lead to loss of offsite power and conditions that could result from high temperatures. The inspectors reviewed the licensee's procedures affecting these areas and the communications protocols between the transmission system operator and the plant to verify that the appropriate information was being exchanged when issues arose that could impact the offsite power system. Examples of aspects considered in the inspectors' review included:

The coordination between the transmission system operator and the plant during off-normal or emergency events;

- The explanations for the events
- The estimates of when the offsite power system would be returned to a normal state
- The notifications from the transmission system operator to the plant when the offsite power system was returned to normal

This inspection constitutes one evaluation of offsite and alternate power system readiness sample as defined in Inspection Procedure 71111.01.

b. Findings

No findings of significance were identified.

.2 Readiness for Impending Adverse Weather Condition – Extreme Heat/Drought Conditions

a. Inspection Scope

During the inspection, the inspectors focused on plant specific design features and the licensee's procedures used to mitigate or respond to adverse weather conditions. Additionally, the inspectors reviewed the Final Safety Analysis Report (FSAR) and performance requirements for systems selected for inspection, and verified that operator actions were appropriate as specified by plant specific procedures. The inspectors also reviewed corrective action program items to verify that the licensee was identifying adverse weather issues at an appropriate threshold and entering them into its corrective action program in accordance with station corrective action procedures. Specific documents reviewed during this inspection are listed in the attachment.

This inspection constitutes one evaluation of extreme heat/drought conditions sample as defined in Inspection Procedure 71111.01.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignments (71111.04)

Quarterly Partial System Walkdowns

a. Inspection Scope

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

- Safety Injection, Train B, Unit 1, April 15, 2008
- Diesel Generator 2-2, Unit 2, April 16, 2008
- Auxiliary Saltwater Train A, Unit 1, April 23, 2008
- Motor-driven Auxiliary Feedwater Pumps A and B, Unit 1, April 24, 2008

The inspectors selected these systems based on their risk significance relative to the Reactor Safety Cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could impact the function of the system; and therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, FSAR, Technical Specification requirements, Administrative Technical Specification, outstanding work orders, condition reports, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also walked down accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the corrective action program with the appropriate significance characterization. Documents reviewed are listed in the attachment.

These activities constituted four partial system walkdown samples as defined by Inspection Procedure 71111.04.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

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

- Fire Area 9B, Unit 2, Containment Steam Generator Area, April 6, 2008
- Fire Area 9A, Unit 2, Containment Annulus, April 6, 2008
- Fire Area 3-M, Unit 1, Safety Injection Room, April 15, 2008
- Fire Area 3-N, Unit 2, Safety Injection Room, April 15, 2008
- Fire Area 22-A-1, Diesel Generator 2-1, April 16, 2008
- Fire Area 22-B-1, Diesel Generator 2-2, April 16, 2008
- Fire Area 5-A-1, 480 Volt Vital Switchgear Bus 1F, April 17, 2008
- Fire Area 5-A-2, 480 Volt Vital Switchgear Bus 1G, April 17, 2008
- Fire Area 5-A-3, 480 Volt Vital Switchgear Bus 1H, April 17, 2008
- Fire Area 3-F, Unit 1, Containment Spray, April 18, 2008
- Fire Area 3-G, Unit 2, Containment Spray, April 18, 2008
- Fire Area 3-Q-2, Unit 1, Motor-driven Auxiliary Feed Pump Room, April 24, 2008

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

These activities constituted 12 quarterly fire protection inspection samples as defined by Inspection Procedure 71111.05.

b. Findings

No findings of significance were identified.

1R06 Flooding (71111.06)

Internal Flooding

a. Inspection Scope

The inspectors reviewed selected risk important plant design features and licensee procedures intended to protect the plant and its safety related equipment from internal flooding events. The inspectors reviewed flood analyses and design documents, including the FSAR, engineering calculations, and abnormal operating procedures for licensee commitments. The specific documents reviewed are listed in the attachment. In addition, the inspectors reviewed licensee drawings to identify areas and equipment that may be affected by internal flooding caused by the failure or misalignment of nearby sources of water, such as the fire suppression or the circulating water systems. The inspectors also reviewed the licensee's corrective action documents with respect to past flood-related items identified in the corrective action program to verify the adequacy of the corrective actions. The inspectors performed a walkdown of the following plant area to assess the adequacy of watertight doors and verify drains and sumps were clear of debris and were operable, and that the licensee complied with its commitments:

- Auxiliary Saltwater System, Unit 2, April 2 and 23, 2008

This inspection constitutes one internal flooding sample as defined in Inspection Procedure 71111.06.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Resident Inspector Quarterly Review (71111.11Q)

a. Inspection Scope

On May 27, 2008, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator requalification training to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems and training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

- Licensed operator performance
- Crew's clarity and formality of communications
- Ability to take timely actions in the conservative direction

- Prioritization, interpretation, and verification of annunciator alarms
- Correct use and implementation of abnormal and emergency procedures
- Control board manipulations
- Oversight and direction from supervisors
- Ability to identify and implement appropriate Technical Specification actions Emergency Plan actions and notifications.

The inspectors compared the crew's performance in these areas to pre-established operator action expectations and successful critical task completion requirements. Documents reviewed are listed in the attachment.

This inspection constitutes one quarterly licensed operator requalification program sample as defined in Inspection Procedure 71111.11.

b. Findings

No findings of significance were identified.

.2 Annual Inspection (71111.11B)

a. Inspection Scope

The inspectors reviewed the annual operating test results for 2008. Since this was the first half of the biennial requalification cycle, the licensee was not required to administer a written examination. These results were assessed to determine if they were consistent with NUREG 1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1, guidance and Inspection Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process," thresholds. This review included the test results for a total of 13 crews composed of 65 licensed operators, which included: shift-standing senior operators, staff senior operators, and shift-standing reactor operators. Of the 13 crews, one crew failed the simulator scenario portion of the annual operating test, three members of the failing crew also received individual failures for their performance on that crew, and all individuals passed all other portions of the operating test. The crew and individual failures were remediated before being returned to shift duties.

This inspection constitutes one annual licensed operator requalification program sample as defined in Inspection Procedure 71111.11.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

Routine Quarterly Evaluations (71111.12Q)

a. Inspection Scope

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

- Units 1 and 2, SPING-3A Radiation Monitoring Systems, April 24, 2008
- Units 1 and 2, Carbon Dioxide Fire Suppression System, June 3, 2008

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

- Implementing appropriate work practices
- Identifying and addressing common cause failures
- Scoping of systems in accordance with 10 CFR 50.65(b) of the maintenance rule
- Characterizing system reliability issues for performance
- Charging unavailability for performance
- Trending key parameters for condition monitoring
- Ensuring 10 CFR 50.65(a)(1) or (a)(2) classification or re-classification
- Verifying appropriate performance criteria for structures, systems, and components/functions classified as (a)(2) or appropriate and adequate goals and corrective actions for systems classified as (a)(1)

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

This inspection constitutes two quarterly maintenance effectiveness samples as defined in Inspection Procedure 71111.12.

b. Findings

Introduction. The inspectors identified a Green, noncited violation (NCV) of 10 CFR 50.65(b) after PG&E failed to include a radiation monitoring system used in plant emergency operating procedures into the maintenance rule scope for monitoring of maintenance effectiveness.

Description. The inspectors concluded that PG&E should have included the auxiliary building Eberline Instruments SPING-3A Radiation Monitoring System (SPING) in the program scope for monitoring the effectiveness of maintenance. The failure of PG&E to properly scope the SPING in the maintenance rule was a performance deficiency. Regulatory Guide 1.160, “Monitoring the Effectiveness of Maintenance at Nuclear Power Plants,” Revision 2, stated that the structure, system and component that is explicitly used in the emergency operating procedures are within the scope of the rule. The inspectors identified that Emergency Operating Procedure E-0, “Reactor Trip or Safety Injection,” Revision 32, Step 28, utilized the SPING for identification of a loss of coolant accident outside containment. In addition, Plant Accident Mitigation Diagnostic Aids and Guidelines, PEP EN-1, Revision 17 used the SPING for determining the offsite release path in the event of a radioactive release.

The inspectors concluded that the SPING had not been reliable. Between June 2006 and April 2008, twenty failures of the auxiliary building SPING monitors occurred. In addition, the licensee personnel had deenergized a Unit 1 containment penetration area SPING for 11 days in October 2007 after exceeding the calibration due date.

Analysis. The finding is more than minor because it is associated with the Mitigating Systems Cornerstone attribute of equipment performance and affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, “Significance Determination Process,” Attachment 4, Phase 1 - Initial Screening and Characterization of Findings, the inspectors concluded that the finding is of very low safety significance because the condition did not represent a loss of system safety function, an actual loss of safety function of a single train for greater than the Technical Specification allowed outage time, or screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a crosscutting aspect in the area of problem identification and resolution, associated with the corrective action program component, because PG&E failed to perform an adequate extent of condition review following a similar NRC-identified violation described in NRC Integrated Inspection Report 05000275 and 05000323/2007003 [P.1(c)].

Enforcement. 10 CFR 50.65(b) requires, in part, that the scope of the monitoring program specified in paragraph (a)(1) of this section shall include nonsafety related structures, systems, or components that are relied upon to mitigate accidents or transients or are used in plant emergency operating procedures. Contrary to the above, PG&E failed to properly scope the SPING, used in plant Procedure EOP E-0, “Reactor Trip or Safety Injection," into their maintenance monitoring program. Because the finding is of very low risk significance and has been entered into the corrective action program as Action Request (AR) A0728599, this violation is being treated as an NCV consistent with Section VI.A of the Enforcement Policy: (NCV) 05000275/2008003-01, Failure to Scope SPINGs into the Maintenance Rule Program.

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

a. Inspection Scope

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

- Technical Specification Sheet (TSS) T0062694, Unit 1, Pressurized Power Operated Relief Valve Test, April 11, 2008
- TSS T0058247, Unit 1, Containment Vent, April 9, 2008
- TSS T0062616, Unit 1, N42 Power Range Channel Inoperable, April 9, 2008

- TSS T0062784, Unit 1, Failure of Containment Fan Cooler 1-4, April 17, 2008

- TSS T0062761, Unit 1, Incore-Excore Calibration, April 22, 2008

- TSS T0062770, Unit 2, Condensate Pump 2-3 Motor Replacement, April 22, 2008

- Work Order R031366101, Perform Hot Wash U-1 500 kV Insulators, April 22, 2008

- TSS T0062908, Unit 2, Battery Charger 2-2 Clean/Inspect and Test, May 5, 2008

- TSS T0063152, Unit 1, Carbon Dioxide Fire System Test Failure, May 28, 2008

- TSS T0063069, Unit 1, Solid State Protection System, Train B, Test Switch Failure, June 5, 2008

These activities were selected based on their potential risk significance relative to the Reactor Safety Cornerstones. As applicable for each activity, the inspectors verified that risk assessments were performed as required by 10 CFR 50.65(a)(4) and were accurate and complete. When emergent work was performed, the inspectors verified that the plant risk was promptly reassessed and managed. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed Technical Specification requirements and walked down portions of the redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met. Documents reviewed are listed in the attachment.

These activities constituted ten samples as defined by Inspection Procedure 71111.13.

b. <u>Findings</u>

No findings of significance were identified.

1R15 <u>Operability Evaluations (71111.15)</u>

a. <u>Inspection Scope</u>

The inspectors reviewed the following issues:

- AR A0707449, Unit 1, Excessive Hydrogen Usage, April 1, 2008

- AR A0726895, Unit 2, Accumulator 2-2 Level Increase, April 9, 2008

- AR A0727364, Unit 2 Digital Metal Impact Monitoring System Multiple Alarms, April 15, 2008

- AR A0689773, Unit 1, Containment Fan Cooling Unit 1-4 High Breaker Phase Differential Temperature, April 16, 2008

- AR A0697468, Unit 1, Deferral of Residual Heat Removal Recirculation Sump Upper Grating Installation, April 17, 2008

- AR A0682822, Unit 2, Heater Drain Tank Pump Seal Leak, April 23, 2008

- AR A0733325, Grease Leaking from Unit 1 Turbine-driven Auxiliary Feedwater Steam Supply Valve FCV-1-38, June 24, 2008

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

Documents reviewed are listed in the attachment.

This inspection constitutes seven samples as defined in Inspection Procedure 71111.15.

b. Findings

Introduction. The inspectors identified a Green, NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," after the licensee failed to adhere to several requirements in Administrative Procedure OM7.ID12, "Operability Determination," Revision 11. This procedure outlines the appropriate requirements when facing issues that challenge operability. In the process of dealing with an operability issue that was identified on April 14, 2006, PG&E failed to meet several requirements of Procedure OM7.ID12.

Description. On April 14, 2006, the licensee discovered that both units were operating at a reactor coolant system average temperature (Tavg) less than that assumed in some design basis documents, including several primary side component stress and fatigue analyses and several safety analyses. The FSAR listed a design reactor vessel (and thus reactor coolant system) Tavg of 577.3°F for Unit 1 and 577.6°F for Unit 2. Since initial commercial operation, Units 1 and 2 have operated with an actual full power Tavg of 572.2°F and 571.9°F, respectively.

A detailed AR A0663923, was written to document the issue and determine its potential safety impacts. The AR focused on the stress and fatigue analyses, although it did mention that FSAR Chapter 6 and 15 safety analyses were also impacted. The AR also focused on Westinghouse Commercial Atomic Power (WCAP) 13457, "Tavg/Power Coastdown Program Technical Report," which evaluated operating at low Tavgs (down to 560°F) during the "coastdown" period where Tavg was slowly lowered to introduce positive reactivity into the core to extend the number of days of full power operation at the end of a cycle. The AR correctly stated that the WCAP evaluation was not bounding for constant operation with a low Tavg with respect to cyclic fatigue and stress usage factors due to the relatively short period of a coastdown compared to an entire cycle. However, Diablo Canyon Power Plant (DCPP) incorrectly concluded that WCAP 13457 bounded the use of a low Tavg with respect to the accident analyses and other impacted areas. It was determined later that several analyses, including many not evaluated in WCAP 13457, may also be adversely impacted by operation at a low Tavg.

Over 20 years ago, as a result of the work performed to update the design bases of other plants to support small power uprates, Westinghouse discovered that many plants were operating at Tavgs that were lower than some original design bases documents assumed. The decisions to operate at low Tavgs were driven by thermal performance and efficiency gains. Early Westinghouse communications on the issue focused on the stress and fatigue analyses because it was identified that, “for some of the component design transients, the stress intensity range could be greater for lower temperatures.” However, Westinghouse investigated the issue and identified available analytical techniques that could be used to demonstrate continued compliance with industry and regulatory requirements. As other plants identified the issue in the process of performing steam generator replacements or power uprates, they contracted Westinghouse to update their analyses in order to bring their design bases back into compliance.

When contacted on this issue, Westinghouse provided letters and other communications from the late 1990s which concluded that operation at a low Tavg was not a safety concern with respect to the stress and fatigue analyses because they had successfully updated the analyses of approximately 24 plants without adverse results.

The AR resulted in an immediate operability determination (IOD) which was performed in accordance with DCPP Procedure OM7.ID12, “Operability Determination.” The IOD concluded that the affected structures, systems, and components were operable based on the Westinghouse judgment discussed above and that there was no safety concern with the stress and fatigue analyses.

The planned closeout date for the AR was delayed several times over the next year. In April 2007, the issue was briefed before a Plant Health Committee/Plant Health Issues Panel at which time it was concluded that the issue/explanation in the AR was “not clear and non-complex," which resulted in a request for a prompt operability assessment (POA). The POA described, in more detail, the potentially affected areas of the design bases with respect to both the Chapter 6 and 15 safety analyses and the stress and fatigue analyses. It also outlined existing analyses that were believed to be already bounded and analyses that had already been re-performed, to support the upcoming steam generator replacement outage on Unit 2, over a range of temperatures that bounded the operation at a low Tavg.

There were several deficiencies identified during the review of the POA. The inspectors concluded that the one year period between the performance of the IOD and the initiation of the POA was inconsistent with procedural requirements.
Procedure OM7.ID12, “Operability Determination,” clearly required that a POA be performed within, at most, 72 hours if: “Judgment and experience establish the initial basis for operability but further investigation, evaluation, or analysis must be performed

to substantiate or demonstrate the basis." Procedure OM7.ID12 also required a POA be performed when, "the basis for the operability determination requires a detailed or complex explanation." Thus, the inspectors determined, due to the extensive impact of Tavg on the design bases, that these requirements were met at the time the IOD was performed in April 2006. The inspectors noted that the licensee identified the need for a POA and that it was initiated after a one year period as a result of the Plant Health Committee/Plant Health Issues Panel meeting.

While the POA focused mainly on areas of the current design bases for which operation at a low Tavg was either already bounding or had been previously evaluated, it did not fully identify or discuss areas for which there was no current analytical basis. In fact, due to confusion between current design bases gaps and future contracted Westinghouse analyses, it was not clear to the inspectors in 2008 which analyses were impacted by operation at a lower than design Tavg. In the impacted area of stress and fatigue analyses, the POA relied on Westinghouse judgment that a safety issue did not exist because such analyses had been re-performed for 24 other plants without adverse consequences. Use of such judgment may be acceptable to form the basis of an IOD, but the inspectors concluded that it was inappropriate to rely on vendor judgment for the POA without further plant specific analysis to substantiate that judgment. This concern was identified solely by the NRC inspectors.

Furthermore, the POA concluded by stating that, "PG&E accident analyses conservatively bound operation at the current Tavg value of 572°F." With the deficiencies discussed above notwithstanding, this conclusion is inconsistent with the closure actions discussed a few lines later, which read, "The action required to close this POA is to complete a re-analysis of operation at a lower Tavg. This POA will remain open following the restart after 1R14 and 2R14, to allow time for the Westinghouse re-analysis which is anticipated to take approximately 14 months." Refueling Outage 2R14 was the steam generator replacement outage, after which it was known Tavg would decrease further from 572°F to around 568°F. The POA did not explicitly consider operation with the new steam generators in areas where there were analytical gaps, although it did take credit for certain analyses that were re-performed at lower Tavgs as a result of the steam generator replacement. It should be noted that no updates were planned to the POA before Unit 2 restart with the new steam generators until the inspectors questioned its adequacy.

The inspectors determined that the failure to follow Procedure OM7.ID12, "Operability Determination," constituted a performance deficiency. The licensee agreed with the deficiencies pointed out by the inspectors and the POA was updated to clarify the full scope of impact of the lower Tavg. These deficiencies, as well as the licensee's inappropriate use of engineering judgment have been entered into the corrective action program as AR A072331.

Analysis. The inspectors determined that the finding is more than minor because it is similar to Inspection Manual Chapter 0612, Appendix E, Minor Example 3(j) in that operability was questioned and both the licensee and the vendor had to perform significant work and analysis in order to fully address the operability impact of a low Tavg on the operating Unit 1. This finding affected the Mitigating Systems Cornerstone. In accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 4, Phase 1 – Initial Screening and Characterization of Findings, the inspectors concluded that the finding was of very low safety significance (Green) because it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The licensee has entered this into their corrective action program as AR A0723331.

This finding has a crosscutting aspect in the area of human performance associated with the decision making component because the licensee did not use conservative assumptions when it decided that engineering judgment alone was a sufficient basis for operability without a supporting plant specific analysis [H.1(b)].

Enforcement. 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires that activities affecting quality shall be prescribed by documented procedures and shall be accomplished in accordance with those procedures.

Contrary to the above, on April 13, 2007, a POA was performed to address an unclear and complex nonconforming condition. The POA relied inappropriately on engineering judgment as a basis for operability when further evaluation was needed to substantiate that basis. The licensee is given credit for identifying, approximately one year after the IOD, that a POA was required. The NRC, however, identified that the POA was inadequate with respect to its reliance on engineering judgment. This violation is of very low safety significance and has been entered into the licensee's corrective action program as AR A0723331, thus it is being treated as an NCV consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000323/2008003-02, Failure to Follow Operability Procedure.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

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

- Calibrations of Unit 2 wide range steam generator level transmitters installed as part of Unit 2 steam generator replacement project, April 14, 2008
- Calibrations of Unit 2 narrow range steam generator level transmitters installed as part of Unit 2 steam generator replacement project, April 16, 2008
- Measurement of hot gaps of replacement steam generator upper lateral supports, lower lateral supports, reactor coolant pump supports, hot leg rupture restraints and crossover leg rupture restraints as part of the Unit 2 steam generator replacement project, April 18, 2008
- Postmaintenance Test 04.19, Unit 2, Steam generator replacement testing, May 28, 2008
- Postmaintenance Test 37.02, Unit 2, Replacement steam generator determination of full power reference temperature (Tref), May 30, 2008
- Work Package C0220174, Unit 2, Containment fan cooling Unit 2-4 timing relay replacement, May 30, 2008

- Work Package C0220342, Unit 1, Emergency Diesel Generator 1-1 room rollup Door 105 maintenance, June 4, 2008

These activities were selected based upon the structure, system, or component's ability to impact risk. The inspectors evaluated these activities for the following (as applicable): the effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed; acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate; tests were performed as written in accordance with properly reviewed and approved procedures; equipment was returned to its operational status following testing (temporary modifications or jumpers required for test performance were properly removed after test completion), and test documentation was properly evaluated. The inspectors evaluated the activities against Technical Specifications, the FSAR, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with postmaintenance tests to determine whether the licensee was identifying problems and entering them in the corrective action program and that the problems were being corrected commensurate with their importance to safety. Documents reviewed are listed in the attachment.

This inspection constitutes seven samples as defined in Inspection Procedure 71111.19.

b. Findings

No findings of significance were identified.

1R20 Outage Activities (71111.20)

.1 Refueling Outage Activities

a. Inspection Scope

The inspectors reviewed the Outage Safety Plan and the contingency plans for the Unit 2 refueling outage activities, between April 1 and April 13, 2008, to confirm that the licensee appropriately considered risk, industry experience, and previous site-specific problems in developing and implementing a plan that assured maintenance of defense in-depth. During the refueling outage, the inspectors observed portions of the shutdown and cooldown processes and monitored licensee controls over the outage activities listed below:

- Licensee configuration management, including maintenance of defense in-depth commensurate with the Outage Safety Plan for key safety functions and in compliance with the applicable Technical Specifications when taking equipment out of service

- Implementation of clearance activities and confirmation that tags were properly hung and equipment appropriately configured to safely support the work or testing

- Controls over the status and configuration of electrical systems to ensure that Technical Specifications and Outage Safety Plan requirements were met, and controls over switchyard activities

- Monitoring of decay heat removal processes, systems, and components

- Controls over activities that could affect reactivity

- Licensee identification and resolution of problems related to refueling outage activities

Documents reviewed during the inspection are listed in the attachment.

This inspection constitutes one refueling outage sample as defined in Inspection Procedure 71111.20.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

.1 Routine Surveillance Testing

a. Inspection Scope

The inspectors reviewed the test results for the following activities to determine whether risk significant systems and equipment were capable of performing their intended safety function and to verify testing was conducted in accordance with applicable procedural and Technical Specification requirements:

- Surveillance R0313858-01, Units 1 and 2, Fire pump test, April 1, 2008

- Surveillance R0288676-01, Unit 2, Functional testing of reactor trip/turbine trip, April 8, 2008

- Surveillance STP R-25, Unit 1, Quadrant power tilt ratio, April 8, 2008

- Surveillance STP V-5A2, Unit 2, Emergency core cooling system check valve leak test, April 8, 2008

- Surveillance STP R-2B1, Unit 1, Reactor heat balance, April 9, 2008

- Surveillance STP R-19, Unit 2, Shutdown margin, April 9, 2008

- Surveillance STP R-8A, Unit 2, Reactor coolant system leakage test following steam generator replacement, April 10, 2008

The inspectors observed in-plant activities and reviewed procedures and associated records to determine whether: any preconditioning occurred; effects of the testing were adequately addressed by control room personnel or engineers prior to the commencement of the testing; acceptance criteria were clearly stated, demonstrated operational readiness, and were consistent with the system design basis; plant equipment calibration was correct, accurate, and properly documented; as left setpoints were within required ranges; the calibration frequency was in accordance with Technical Specifications, the FSAR, procedures, and applicable commitments; measuring and test equipment calibration was current; test equipment was used within the required range and accuracy; applicable prerequisites described in the test procedures were satisfied; test frequencies met Technical Specification requirements to demonstrate operability and reliability; tests were performed in accordance with the test procedures and other applicable procedures; jumpers and lifted leads were controlled and restored where used; test data and results were accurate, complete, within limits, and valid; test equipment was removed after testing; where applicable, test results not meeting acceptance criteria were addressed with an adequate operability evaluation or the system or component was declared inoperable; where applicable for safety related instrument control surveillance tests, reference setting data were accurately incorporated in the test procedure; where applicable, actual conditions encountering high resistance electrical contacts were such that the intended safety function could still be accomplished; prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test; equipment was returned to a position or status required to support the performance of the safety functions; and all problems identified during the testing were appropriately documented and disposition in the corrective action program. Documents reviewed are listed in the attachment.

This inspection constitutes seven routine surveillance testing samples as defined in Inspection Procedure 71111.22.

b. Findings

No findings of significance were identified.

.2 Inservice Testing Surveillance

a. Inspection Scope

The inspectors reviewed the test results for the following activities to determine whether risk significant systems and equipment were capable of performing their intended safety function and to verify testing was conducted in accordance with applicable procedural and Technical Specification requirements:

- Surveillance R0310944, Inservice test of containment spray Pump 2-1, April 16, 2008
- Surveillance R0312265, Full stroke exercise of containment spray Valve CS-9001A, April 16, 2008
- Surveillance R0310766, Inservice test of safety injection Pump 2-2, April 9, 2008

The inspectors observed in-plant activities and reviewed procedures and associated records to determine whether: any preconditioning occurred; effects of the testing were adequately addressed by control room personnel or engineers prior to the commencement of the testing; acceptance criteria were clearly stated, demonstrated operational readiness, and were consistent with the system design basis; plant equipment calibration was correct, accurate, and properly documented; as left setpoints were within required ranges; and the calibration frequency was in accordance with Technical Specifications, the FSAR, procedures, and applicable commitments; measuring and test equipment calibration was current; test equipment was used within the required range and accuracy; applicable prerequisites described in the test procedures were satisfied; test frequencies met Technical Specifications requirements to demonstrate operability and reliability; tests were performed in accordance with the test procedures and other applicable procedures; jumpers and lifted leads were controlled and restored where used; test data and results were accurate, complete, within limits, and valid; test equipment was removed after testing; where applicable for inservice testing activities, testing was performed in accordance with the applicable version of Section XI, American Society of Mechanical Engineers Code, and reference values were consistent with the system design basis; where applicable, test results not meeting acceptance criteria were addressed with an adequate operability evaluation or the system or component was declared inoperable; where applicable for safety related instrument control surveillance tests, reference setting data were accurately incorporated in the test procedure; where applicable, actual conditions encountering high resistance electrical contacts were such that the intended safety function could still be accomplished; prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test; equipment was returned to a position or status required to support the performance of its safety functions; and all problems identified during the testing were appropriately documented and disposition in the corrective action program. Documents reviewed are listed in the attachment.

This inspection constitutes three inservice inspection samples as defined in Inspection Procedure 71111.22.

b. Findings

No findings of significance were identified.

.3 Reactor Coolant System Leak Detection Inspection Surveillance

a. Inspection Scope

The inspectors reviewed the test results for the following activities to determine whether risk significant systems and equipment were capable of performing their intended safety function and to verify testing was conducted in accordance with applicable procedural and Technical Specification requirements:

- Reactor water balance, Unit 2, April 11, 2008
- Surveillance R0291073, Pressurizer power operated relief valve leak testing, Unit 2, April 9, 2008

The inspectors observed in-plant activities and reviewed procedures and associated records to determine whether: preconditioning occurred; effects of the testing were adequately addressed by control room personnel or engineers prior to the commencement of the testing; acceptance criteria were clearly stated, demonstrated operational readiness, and were consistent with the system design basis; plant equipment calibration was correct, accurate, and properly documented; as left setpoints were within required ranges; and the calibration frequency were in accordance with Technical Specifications, the FSAR, procedures, and applicable commitments; measuring and test equipment calibration was current; test equipment was used within the required range and accuracy; applicable prerequisites described in the test procedures were satisfied; test frequencies met Technical Specifications requirements to demonstrate operability and reliability; tests were performed in accordance with the test procedures and other applicable procedures; jumpers and lifted leads were controlled and restored where used; test data and results were accurate, complete, within limits, and valid; test equipment was removed after testing; where applicable, test results not meeting acceptance criteria were addressed with an adequate operability evaluation or the system or component was declared inoperable; where applicable for safety-related instrument control surveillance tests, reference setting data were accurately incorporated in the test procedure; where applicable, actual conditions encountering high resistance electrical contacts were such that the intended safety function could still be accomplished; prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test; equipment was returned to a position or status required to support the performance of its safety functions; and all problems identified during the testing were appropriately documented and disposition in the corrective action program. Documents reviewed are listed in the attachment.

This inspection constitutes two reactor coolant system leak detection inspection samples as defined in Inspection Procedure 71111.22.

b. Findings

No findings of significance were identified.

.4 Containment Isolation Valves

a. Inspection Scope

The inspectors reviewed the test results for the following activities to determine whether risk significant systems and equipment were capable of performing their intended safety function and to verify testing was conducted in accordance with applicable procedural and Technical Specification requirements:

- Surveillance R0119739, Unit 2, Containment integrated leak rate test Type A
- Surveillance R0309815, Unit 2, Integrated leak rate test measurement system

The inspectors observed in-plant activities, reviewed procedures and associated records to determine whether: any preconditioning occurred; the effects of the testing were adequately addressed by licensee personnel prior to the commencement of the testing; acceptance criteria were clearly stated, plant equipment calibration was correct, accurate, and properly documented; and the calibration frequency was in accordance with Technical Specifications, the FSAR, procedures, and applicable commitments; measuring and test equipment calibration was current; test equipment was used within the required range and accuracy; applicable prerequisites described in the test procedures were satisfied; test frequencies met Technical Specification requirements to demonstrate operability and reliability; tests were performed in accordance with the test procedures and other applicable procedures; test data and results were accurate, complete, within limits, and valid; test equipment was removed after testing; and all problems identified during the testing were appropriately documented and dispositioned in the corrective action program. Documents reviewed are listed in the attachment.

This inspection constitutes two containment isolation valves inspection samples as defined in Inspection Procedure 71111.22.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspectors performed an in-office review of:

- Revision 4-07 to Section 4 of the DCPP Emergency Plan, received on August 27, 2007

- Revision 4-03 to Section 1, Revision 4-09 to Section 5, Revision 4-08 to Section 6, Revision 4-10 to Section 7, and Revision 4-06 to Section 8 of the DCPP Emergency Plan, received on October 12, 2007

- Revision 35 to Emergency Plan Implementing Procedure EP-G-1, "Emergency Classification and Emergency Plan Activation," effective April 10, 2007

- Revision 36 to Emergency Plan Implementing Procedure EP-G-1, "Emergency Classification and Emergency Plan Activation," effective April 4, 2008; and

- Revision 4-08 to Section 4 of the DCPP Emergency Plan, received on May 5, 2008.

These revisions revised the timing of site emergency and fire signal tests, clarified the process for warning site personnel of an emergency, changed dose equivalent Iodine 131 to dose equivalent Xenon 133m as a measure of core damage in Emergency Action Level II.2, identified separate wide range steam generator levels for Units 1 and 2 steam generators as entry conditions to Emergency Action Level VI.5 (resulting from steam generator replacement as identified in Design Change Package M-050790), replaced the reference to the plant process computer in Emergency Action Level VII.6 with the transient recording system, updated titles, and made other minor administrative corrections.

The revisions were compared to their previous revisions, to the criteria of NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and

Preparedness in Support of Nuclear Power Plants," Revision 1, to the criteria of Nuclear Energy Institute (NEI) Report 99-01, "Methodology for Development of Emergency Action Levels," Revisions 2 and 4, and to the standards in 10 CFR 50.47(b) to determine if the revisions adequately implemented the requirements of 10 CFR 50.54(q). The inspectors also reviewed the licensee's revised 10 CFR 50.54(q) evaluation and AR A0562981-2.

This review was not documented in a safety evaluation report and did not constitute approval of the licensee's changes; therefore, these revisions are subject to future inspection.

This inspection constitutes five samples of Emergency Action Level and Emergency Plan Changes as defined in Inspection Procedure 71114.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Data Submission Issue

a. Inspection Scope

The inspectors performed a review of the data submitted by PG&E for the First Quarter 2008 performance indicators for any obvious inconsistencies prior to its public release in accordance with IMC 0608, "Performance Indicator Program."

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

b. Findings

No findings of significance were identified.

.2 Safety System Functional Failures

a. Inspection Scope

The inspectors sampled licensee submittals for the safety system functional failures performance indicator (PI) for Diablo Canyon Units 1 and 2 for the period from the first quarter 2007 through the first quarter 2008. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in Revision 5 of the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," and NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 50.73," definitions and guidance were used. The inspectors reviewed the licensee's operator narrative logs, operability assessments, maintenance rule records, maintenance work orders, issue reports, event reports and NRC integrated inspection reports for the period of the first quarter 2007 through the first quarter 2008 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the attachment.

This inspection constitutes one safety system functional failures sample as defined by Inspection Procedure 71151.

b. Findings

No findings of significance were identified.

.3 Mitigating Systems Performance Index (MSPI) – Emergency AC Power System

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI - emergency AC power system performance indicator for Diablo Canyon Units 1 and 2 for the period from the first quarter 2007 through the first quarter 2008. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in Revision 5 of the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," were used. The inspectors reviewed the licensee's operator narrative logs, MSPI derivation reports, issue reports, event reports and NRC integrated inspection reports for the period from the first quarter 2007 through the first quarter 2008 to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection; and if so, the change was in accordance with applicable NEI guidance. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the attachment.

This inspection constitutes one MSPI - emergency AC power system sample as defined by Inspection Procedure 71151.

b. Findings

No findings of significances were identified.

.4 MSPI – High Pressure Injection System

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI - high pressure injection systems performance indicator for Diablo Canyon Units 1 and 2 for the period from the first quarter 2007 through the first quarter 2008. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in Revision 5 of the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, MSPI derivation reports, event reports and NRC Integrated Inspection reports for the period from the first quarter 2007 through the first quarter 2008 to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection; and if so, the change was in accordance with applicable NEI guidance. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the attachment.

This inspection constitutes one MSPI high pressure injection system sample as defined by Inspection Procedure 71151.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

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

.1 Routine Review of Items Entered Into the Corrective Action Program

a. Inspection Scope

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

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

b. Findings

No findings of significance were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

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

These daily reviews were performed by procedure as part of the inspectors' daily plant status monitoring activities and, as such, did not constitute any separate inspection samples.

b. Findings

No findings of significance were identified.

.3 Semi-Annual Trend Review

a. Inspection Scope

The inspectors performed a review of the licensee's corrective action program and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' review was focused on repetitive equipment issues, but also considered the results of daily inspector corrective action program item screening discussed in Section 4OA2.2 above, licensee trending efforts, and licensee human performance results. The inspectors' review nominally considered the six-month period of January 1, 2008, through June 30, 2008, although some examples expanded beyond those dates where the scope of the trend warranted.

The review also included issues documented outside the normal corrective action program in major equipment problem lists, repetitive and/or reworks maintenance lists, departmental problem/challenges lists, system health reports, quality assurance audit/surveillance reports, self assessment reports, and maintenance rule assessments. The inspectors compared and contrasted their results with the results contained in the licensee's corrective action program trending reports. Corrective actions associated with a sample of the issues identified in the licensee's trending reports were reviewed for adequacy.

This review constituted one semi-annual trend inspection sample.

b. Findings

Continued Adverse Trend in Plant Equipment Material Condition

The inspectors concluded that the adverse trend in plant material condition, first identified during the second quarter 2007, and discussed in Inspection Reports 05000275 and 05000323/2007003 and 05000275 and 05000323/2007005, continued through the first two quarters of 2008. Current examples of poor plant equipment material condition identified by the inspectors included:

- A0714727, Auxiliary Transformer 2-2 Radiator Oil Leak
- A0725374, Startup Transformer 1-1 Radiator Corrosion and Oil Leak
- A0731193 and A0731374, Carbon Dioxide Fire Suppression System Valve FCV-104 Failure and Bypass Leakage of Replacement Valve

- A0726857, Unit 2 Emergency Core Cooling System Check Valve SI-2-8948C Bypass Leakage

- A0726538, Unit 2 Emergency Core Cooling System Test Valve SI-2-8879A bypass leakage

- A0726907, Unit 2 Emergency Core Cooling System Test Valve SI-2-8879C bypass leakage

- A0731511, Emergency Diesel Generator 1-1 Engine Oil Leakage

- A0732161, Emergency Diesel Generator 2-1 Engine Oil Leakage

- A0718696, Oil leakage from Safety Injection Pump 2-2 Motor End Bell

- A0725816, Component Cooling Water Pump 2-2 Oil Leak

- A0714963, Intake Structure Ceiling Crack

Continued Adverse Trend in Managing Maintenance Risk

The inspectors concluded that the adverse trend in maintenance risk management, first identified during the fourth quarter 2007, and discussed in Inspection Report 5000275 and 05000323/2007005, continued during the first two quarters of 2008. The inspectors identified examples of specified risk management actions which were less rigorous than that industry guidance and examples of specified risk management actions were not implemented. The inspectors concluded each example was a minor violation of 10 CFR 50.65(a)4 using the guidance in Manual Chapter 0612, Appendix B, "Issue Screening." The licensee entered this adverse trend into the corrective action program as AR A0711061. Examples included:

- A073916 and A0728874, Containment fan cooler Unit 1-4 was out of service resulting in elevated risk. The risk management actions, which included taping a "Shutdown Risk" sign to electrical cubicle, was less rigorous than industry guidelines described in NUMARC 93-01, NEI Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants, Revision 3.

- A0727852, Risk assessment error, PG&E considered Unit 2 in elevated risk during a containment vent. The risk assessment indicated that risk dropped below the risk management threshold after a containment spray pump was subsequently removed from service.

- A0728874, PG&E concluded a Unit 1 nuclear excore/incore calibration resulted in elevated risk. However, risk management actions did not meet industry guidelines.

- A0728268, PG&E concluded a Unit 2 condensate booster pump motor replacement resulted in elevated risk. However, risk management actions did not meet industry guidelines.

- A0711061, June 4, 2008, PG&E concluded an unplanned outage of Unit 2 Containment Fan Cooler Unit 2-4 resulted in elevated risk. Plant operations continued with the planned maintenance outage of auxiliary saltwater Pump 2-2.

.4 Selected Issue Follow-up Inspection

a. Inspection Scope

During a review of items entered in the licensee's corrective action program, the inspectors completed an in-depth review of:

- A0723606, PG&E response to Part 21 Report 2008-004-00, "Potential Defect in Fairbanks Morse Emergency Diesel Generator Snubber Valve Material and Heat Treatment," March 13, 2008

- A0729445 and A0726129, Reverse rotation of containment fan coolers, June 13, 2008

The above constitutes completion of two in-depth problem identification and resolution samples.

b. Findings

Introduction. The inspectors identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion XV, "Nonconforming Materials, Parts, or Components," after PG&E failed to perform an adequate receipt inspection of emergency diesel generator fuel injector snubber valves.

Description. On March 13, 2008, Entergy Nuclear Operations issued Part 21 Report 2008-004-00, "Potential Defect in Fairbanks Morse Emergency Diesel Generator Snubber Valve Material and Heat Treatment," after observing repetitive diesel generator snubber valve failures. These snubber valves provide pulsation dampening in the fuel injection system. Entergy discovered that improper heat treatment of alloy AISE E52100 used in the snubber valve manufacturing, resulted in the failures. Entergy recommended that a chemical analyzer be used verify that the snubber valves were not manufactured using this susceptible material.

PG&E evaluated Part 21 Report 2008-004-00 (AR A0723606) and concluded that the current receipt inspection was adequate to identify deficient snubber valves. The inspection consisted of conducting non-destructive testing using dye penetrant to identify external cracks. The inspectors identified that the receipt inspection was not adequate to identify improper heat treatment of alloy AISE E52100. The inspectors concluded that the potential existed for defective snubber valves to be installed on station emergency diesel generators. The licensee took corrective actions to inspect the installed snubber valves, revise the receipt inspection, and enter the condition into the corrective action program. The subsequent inspection did not identify any defective snubber valves installed in the plant or in the warehouse stock. The failure of PG&E to provide adequate receipt inspection to identify defective fuel injector snubber valves was a performance deficiency.

Analysis. The finding is more than minor because if left uncorrected, defective snubber valves could have been installed on the emergency diesel generators resulting in a more significant safety concern. The finding affects the Mitigating Systems Cornerstone. Using Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 4, Phase 1 - Initial Screening and Characterization of Findings, the inspectors concluded that the finding is of very low safety significance because it did not represent a loss of system safety function, an actual loss of safety function of a single train for greater the Technical Specification allowed outage time, or screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a crosscutting aspect in the area of problem identification and resolution, associated with the operating experience component, because PG&E failed to adequately evaluate a Part 21 notification and revise the receipt inspection for diesel generator snubber valves [P.2(a)].

Enforcement. 10 CFR Part 50, Appendix B, Criterion XV, required measures be established to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation. Contrary to the above, PG&E failed to establish adequate measures to control the snubber valve parts which do not conform to requirements in order to prevent their inadvertent use or installation. Because the finding is of very low safety significance and has been entered into the licensee's corrective action program as AR A0729807, this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy: NCV 5000275/2008003-03, Inadequate Emergency Diesel Generator Snubber Valve Receipt Inspection.

4OA6 Meetings, Including Exit

On June 25, 2008, the emergency preparedness inspector conducted a telephonic exit meeting to present the results of the in-office inspection of the licensee's changes to their emergency plan and emergency action levels to Mr. M. Persky, Emergency Services Manager, and other members of his staff, who acknowledged the findings.

On June 30, 2008, inspectors discussed the results of the licensed operator requalification program annual operating test inspection with Mr. J. Becerra, Operator Continuing Training Leader. The licensee acknowledged the results. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

On July 1, 2008, the resident inspectors presented the inspection results to Mr. J. Becker, and other members of your staff. The licensee acknowledged the issues presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as an NCV.

- Technical Specification 5.4.1.d required that PG&E implement a fire protection program. The fire protection program requirements, as described by FSAR Section 9.5, Appendix 9.5a, "Fire Hazards Analysis," required that Fire Door 105 be maintained as a fire area boundary and the carbon dioxide suppression system be maintained for protection. Contrary to the above, between January 12, 2007, and May 28, 2008, plant personnel failed to maintain Fire Door 105 as a fire boundary and failed to ensure the carbon dioxide supression system was operable. This was identified in the licensee's corrective action program as AR A0731222. This finding is of very low safety significance because it does not impact the ability of Unit 1 to reach and maintain safe shutdown in the event of a fire in Fire Area TB-1.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

J. Becker, Vice President, Site Vice President and Station Director
R. Hite, Manager, Radiation Protection
S. Ketelsen, Manager, Regulatory Services
K. Langdon, Director, Operations Services
M. Meko, Director, Site Services
K. Peters, Director, Engineering Services
M. Somerville, Manager, Radiation Protection

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000275/2008003-01	NCV	Failure to Scope SPINGs into Maintenance Rule (Section 1R12)
05000323/2008002-02	NCV	Failure to Follow Operability Procedure (Section 1R15)
05000275/2008003-03	NCV	Inadequate Emergency Diesel Generator Snubber Valve Receipt Inspection (Section 4OA2)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather

Procedures

Op J-2: VIII, Guidelines for Reliable Transmission Service for DCPP, Revision 13
O-23, General Operating Instructions for Reliable Transmission at DCPP, Revision 2

Section 1R04: Equipment Alignment

Operating Valve Identification Diagrams

106709 Sheet 2, Accumulators
106709 Sheet 3, High Head Injection
106709 Sheet 4, Intermediate and Low Head Injection
106703 Sheet 3, Auxiliary Feedwater, Revision 71

Electrical Schematics

437588, Accumulator Air Operated Valves
437589, Swing Ingestion Pump

437605, ECCS Motor Operated Valves
437606, ECCS Motor Operated Valves
Logic 19411, Swing Ingestion Pump for System 21

Procedures

OP B-3A, Safety Injection System, Revision 2
OP B-3B, Accumulators, Revision 5
OP J-6B, Diesel Generators, Revision 6
OP J-6C, Diesel Fuel Oil Transfer System, Revision 8

Section 1R05: Fire Protection

Miscellaneous

TSS T0062748, Fire Door 560 not latching, April 15, 2008

Section 1R06: Flooding

Drawings

Mechanical 111906, Intake Structure 18’, Revision 1
Penetration Barrier 9001, April 18, 1998
Penetration Barrier 9002, March 27, 1999
Penetration Barrier 9003, March 27, 1999
Penetration Barrier 9006, April 13, 1999
Penetration Barrier 9005, April 18, 1998

Calculations

M-1025, Intake Structure/CWP Conduit Free Volumes, Revision 1
M-997, Methodology for Qualification of Penetrations Seal Typical Design Details, Revision 10

Documents

Engineering Evaluation, Nes File 131.95, Non-Rated Penetrations Seals in the ASW Pump Room Barriers, October 6, 2004

A0728516, Auxiliary saltwater Water Pump 2-2 Leakage, April 23, 2008

A0408073, Track AE Used to Implement DCP M-049282, Flood Penetration Seals, July 2, 1996

A0408037, Track AE Used to Implement DCP M-049282, Flood Penetration Seals, January 6, 1998

A0416198, Track AE Used to Implement DCP M-049282, Flood Penetration Seals, October 3, 1996

A0408075, Track AE Used to Implement DCP M-049282, Flood Penetration Seals, July 12, 1996

Section 1R11: Licensed Operator Requalification Program

Documents

Lesson ECA1112-C, Loss of ECR/LOCA OC, Revision 15
Lesson FRS1-C, ATWS, Revision 14

Section 1R12 Maintenance Effectiveness

Documents

A0690531, Long Standing RP Instrument Issues Tolerated/Not Resolved, March 8, 2007
A0702172, QV Recommendation: Evaluate SPING and PPC Reliability, June 28, 2007
A0703360, SPING Reliability Does Not Support Current A/S Program, July 18, 2007
A0708667, GEGW SPING Unavailable for 11 Days, October 1, 2007
A0727636, SPING #RP 04.14.014, Channel #3 Fails Intermittently, April 15, 2008
A0728599, Review SPINGs Not Scoped Into the MR Program, April 24, 2008
System Health Report, System 18C, Carbon Dioxide Fire Suppression System, June 3, 2008
Maintenance Rule Scoping Document, System 18C, CO2 System, Revision 2

Procedures

MA1.ID17, Maintenance Rule Monitoring Program, Revision 19
PEP EN-1, Plant Accident Mitigation Diagnostic Aids and Guidelines, Revision 17
STP M-39A3, Routine Surveillance Test of Diesel Generator 1-3(2-3) Room Carbon Dioxide Fire System Operation, Revision 12

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures

AD7.DC6, On-Line Risk Maintenance Management, Revision 13

Action Requests

A0709253, AD7.DC6 Changes to Trip Risk Activities, October 8, 2007

A0731193, Cardox Test Failure (STP M-39A1), May 28, 2008

A0731814, U1 SSPS Train B Output Cabinet A Slave Pushbutton Switch Intermittent, June 5, 2008

Miscellaneous

Operations Policy A-29, Protected Train Restrictions, Revision 6

Licensing and Design Management Probabilistic Risk Assessment, Calculation File No. C.13, Revision 4

Section 1R15: Operability Evaluations

Procedure

MP E-101A, Infrared thermography inspections, Revision 5

Drawings

107709, Sheet 2, Safety Injection, Revision 54
107709, Sheet 3, Safety Injection, Revision 51
107709, Sheet 4, Safety Injection, Revision 54

Documents

A0727443, DMIMS channel 750 alarming and noises heard, April 14, 2008

A0727647, U-2 DMIMS operation post 2R14 is questionable, April 15, 2008

Design Change Package 1-SC-49857, Installation of the new RHR Sump Strainer for Unit 1, Revision 1

Design Calculation, M-1109, Diablo Canyon Units 1 and 2 GSI-191 Containment Recirculation Sump Evaluation: Debris Transport Calculation, Revision 8

Design Calculation, N-042, Fibrous material debris and calcium silicate insulation vapor barrier debris from HELB inside containment, Revision 14

Design Calculation, 205A-DC, Evaluate the impact of having an initial reverse rotation of non-energized CFCU on electrical protection system when SI signal starts CFCU's at low speed, Revision 0

Design Calculation, 89-34, Tabulation of HVAC Class I motor horsepower and maximum brake horsepower for diesel loading, Revision 1

Technical Manual, Westinghouse Elec. Corp. reactor containment fan cooler, Revision 29

Section 1R19: Post Maintenance Testing

Procedures

STP I-4-L501, Steam Generator 1 Wide-Range Level Channel LT-501 Calibration, Revision 2

STP I-4-L502, Steam Generator 2 Wide-Range Level Channel LT-502 Calibration, Revision 3

STP I-4-L503, Steam Generator 3 Wide-Range Level Channel LT-503 Calibration, Revision 2

STP I-4-L504, Steam Generator 4 Wide-Range Level Channel LT-504 Calibration, Revision 3

STP I-4-L517, Steam Generator 1 Narrow Range Level Channel LT-517 Calibration, Revision 8

STP I-4-L518, Steam Generator 1 Narrow Range Level Channel LT-518 Calibration, Revision 7

STP I-4-L519, Steam Generator 1 Narrow Range Level Channel LT-519 Calibration, Revision 10

STP I-4-L527, Steam Generator 2 Narrow Range Level Channel LT-527 Calibration, Revision 7

STP I-4-L528, Steam Generator 2 Narrow Range Level Channel LT-528 Calibration, Revision 8

STP I-4-L529, Steam Generator 2 Narrow Range Level Channel LT-529 Calibration, Revision 9

STP I-4-L537, Steam Generator 3 Narrow Range Level Channel LT-537 Calibration, Revision 7

STP I-4-L538, Steam Generator 3 Narrow Range Level Channel LT-538 Calibration, Revision 7

STP I-4-L539, Steam Generator 3 Narrow Range Level Channel LT-539 Calibration, Revision 9

STP I-4-L547, Steam Generator 4 Narrow Range Level Channel LT-547 Calibration, Revision 7

STP I-4-L548, Steam Generator 4 Narrow Range Level Channel LT-548 Calibration, Revision 7

STP I-4-L549, Steam Generator 4 Narrow Range Level Channel LT-549 Calibration, Revision 9

PMT 04.19, Steam Generator Replacement Testing, Revision 1

STP R-26, RCS Primary Coolant Flow Measurements, Revision 28

PMT 37.02, RSG Functional Test: Determination of Full Power Tref, Revision 2

OM8, Fire Protection Program, Revision 2B

CP M-10, Fire Protection of Safe Shutdown Equipment, Revision 21A

STP M-39A1, Routine Surveillance Test of Diesel Generator 1-1 Room Carbon Dioxide Fire System Operation, Revision 11

Work Orders

C0212440, SGRP: LT-501 (STP) I-4-L501 Cal S/G 1 WR, March 20, 2008
R0288049-01, LT-502 (STP) I-4-L502 Cal S/G 2-2 WR Xmitter, February 12, 2008
C0212453, SGRP: LT-503 (STP) I-4-L503 Cal S/G 3 WR, March 20, 2008
R0288199-01, LT-504 (STP) I-4-L504 Cal S/G 2-4 WR Xmitter, February 9, 2008
C0212434, SGRP: LT-517 (STP) I-4-L517 Cal S/G 1 NR Lvl (PME), March 23, 2008
C0212437, SGRP: LT-518 (STP) I-4-L518 Cal S/G 1 NR Lvl (PME), March 23, 2008
C0212439, SGRP: LT-519 (STP) I-4-L519 Cal S/G 1 NR Lvl (PME), March 23, 2008
C0212443, SGRP: LT-527 (STP) I-4-L527 Cal S/G 1 NR Lvl (PME), March 23, 2008
C0212445, SGRP: LT-528 (STP) I-4-L528 Cal S/G 1 NR Lvl (PME), March 23, 2008
C0212446, SGRP: LT-529 (STP) I-4-L529 Cal S/G 1 NR Lvl (PME), March 23, 2008
C0212449, SGRP: LT-537 (STP) I-4-L537 Cal S/G 1 NR Lvl (PME), March 22, 2008
C0212451, SGRP: LT-538 (STP) I-4-L538 Cal S/G 1 NR Lvl (PME), March 22, 2008
C0212452, SGRP: LT-539 (STP) I-4-L539 Cal S/G 1 NR Lvl (PME), March 22, 2008
C0212457, SGRP: LT-547 (STP) I-4-L547 Cal S/G 1 NR Lvl (PME), March 19, 2008
C0212460, SGRP: LT-548 (STP) I-4-L548 Cal S/G 1 NR Lvl (PME), March 19, 2008
C0212461, SGRP: LT-549 (STP) I-4-L549 Cal S/G 1 NR Lvl (PME), March 19, 2008
C0214670, WP 2-4520A, RSG 2-1 Hot Gaps, April 10, 2008

C0214671, WP 2-4520B, RSG 2-2 Hot Gaps, April 10, 2008
C0214672, WP 2-4520C, RSG 2-3 Hot Gaps, April 10, 2008
C0214674, WP 2-4520D, RSG 2-4 Hot Gaps, April 10, 2008
C0206972, DEG11 RM CO2:Replace Frangible Links, ATMM, STP Asst, January 12, 2007

Documents

Engineering Change Request, ECR-561, ULS Snubber Piston Tolerance at Hot Position, April 7, 2008

Engineering Change Request, ECR-545, RCP 2-2 Loc B2 Adjustable Shim Contingency Detail, April 10, 2008

Engineering Calculation Number M-928, Sheet TB-1, 10 CFR 50 Appendix R Safe Shutdown Analysis, Revision 11

A0727199, SG WR/NR Comparison Data During 2R14 Startup PMT 04.19, April 10, 2008

A0727176, RCS Flow Did Not Meet PMT 04.19 Criterion for U2 RSG's, April 10, 2008

A0728072, P0398A Reads 2% Low Compared to U4300A05, April 18, 2008

A0728194, U-2 Tavg Rising and Diverging from Tref 0.3 to 0.5 Deg F, April 20, 2008

A0728230, Unit 2 Tref Needs to be Increased, April 21, 2008

A0730542, CFCU 2-4 Start Anomaly, May 19, 2008

A0730921, PMT Not Scoped for CFCU 2-4 Timer Replacement, May 23, 2008

A0731517, Improper PMT Scoping for CFCU 2-4 ESF Timer Replacement, June 2, 2008

A0731573, PMT Evaluation for CFCU 2-4, June 3, 2008

A0731222, West Door 105 Did Not Drop During Cardox Test, May 28, 2008

Drawing

441313, Sheet 1, Containment Fan Coolers, Revision 26

Section 1R20: Outage Activities

Procedures

OP L-1, Plant Heatup From Hot Shutdown to Hot Standby, Revision 62
OP L-2, Hot Standby to Startup Mode, Revision 37A

Section 1R22: Surveillance Testing

Procedures

STP P-CSP-21, Routine Surveillance test of Containment Spray Pump 2-1, Revision 9

STP V-3I3A, Full Stroke Exercise of Containment Spray Valve CS-9001A, Revision 6

STP R-25, Calculation of Quadrant Power Tilt Ratio, Revision 26

STP V-27, Leak Testing of Pressurizer PORVs, Revision 2

STP P-SIP-22, Routine Surveillance Test of Safety Injection Pump 2-2, Revision 28

STP R-19, Shutdown Margin determination, Revision 20

STP R-2B1, PPC Operator Heat Balance, Revision 23

STP V-5A2, Emergency Core Cooling System Check Valve Leak Test, Post-Refueling/Post-Maintenance Valves 8948 A-D, 8818 A-D and 8819 A-D, Revision 19

STP R-8A, Reactor Coolant System Leakage Test, Revision 13

STP M-7E, Containment Penetration Valve Lineup for the Integrated Leakage Rate Test, Revision 4

STP M-7, Integrated Leakage Rate Test (ILRT) Type A, Revision 11

Action Requests

A0689372	A0643263	A0643400

Documents

A0668945, SI-2-8948C Leakage During STP V-5A2 in 2R13, May 22, 2006
A0726124, M&TE 202.31.10 OOT Notification, Damaged, April 2, 2008
A0726857, Check Valve SI-2-8938C Exhibited High Leakage in STP V-5A2, April 8, 2008
A0726907, SI-2-8879C Bypass Leakage, April 9, 2008

NIST Calibration Certificates

11941	11942	11943	11944	11945	11946	11947	11948	11824	11826
11827	11828	11829	11830	11831	11832	11833	11834	11835	11836
11837	11838	11839	11840	11841	11842	11842	11844	11845	11846
12907	12908								

Miscellaneous

10 CFR Part 50, Appendix A, Criteria 52, 53, 54, 55, 56, and 57.

10 CFR Part 50, Appendix J.

Regulatory Guide 1.11, Instrument Lines Penetrating Primary Reactor Containment, March 10, 1971

Certificate of Calibration, Certificate 0010486438, 2/15/2008, Exelon Power Labs

Certificate of Calibration, Certificate 0010486440, 2/15/2008, Exelon Power Labs

ANSI/ANS-56.8-1994, Containment System Leakage Testing Requirements

Topical Report BN-TOP-1, Revision 1, Testing Criteria for Integrated Leakage Rate Testing of Primary Containment Structures for Nuclear Power Plants, Bechtel Corporation

Section 4OA1: Performance Indicator Verification

Document

Quality Verification Report, ANSI Qualification Short Form Assessment, EDMS #081220009, May 12, 2008

Section 4OA2: Problem Identification and Resolution

Documents

DCPP Observation Program Report, Quality Verification, File 081500056, May 29, 2008

DCPP Observation Program Report, Quality Verification, File 081360013, May 15, 2008

LIST OF ACRONYMS

AR	Action Request
CFR	Code of Federal Regulations
DCPP	Diablo Canyon Power Plant
FSAR	Final Safety Analysis Report
IOD	immediate operability determination
MSPI	mitigating systems performance index
NCV	noncited violation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
PI	performance indicator
POA	prompt operability assessment
PG&E	Pacific Gas and Electric Company
SDP	Significance Determination Process
SPING	Eberline Instruments SPING-3A Radiation Monitoring System
Tavg	average temperature
TSS	technical specification sheet
WCAP	Westinghouse Commercial Atomic Power