



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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April 24, 2001

Gregory M. Rueger, Senior Vice President
and General Manager
Nuclear Power Generation Bus. Unit
Pacific Gas and Electric Company
Nuclear Power Generation, B32
77 Beale Street, 32nd Floor
P.O. Box 770000
San Francisco, California 94177

SUBJECT: DIABLO CANYON INSPECTION REPORT NO. 50-275/01-02; 50-323/01-02

Dear Mr. Rueger:

On March 31, 2001, the NRC completed a routine resident inspection, which was conducted from February 17 through March 31, 2001, at the Diablo Canyon Nuclear Power Plant, Unit 1 and 2, facility. The enclosed report documents the inspection findings that were discussed on April 6, 2001, with Mr. James R. 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, one finding was identified. This finding had very low safety significance and was entered into your corrective action program.

Pacific Gas and Electric Company filed for voluntary bankruptcy proceedings following the end of this inspection period. The NRC has exercised communications channels to better understand your planned and implemented actions, especially as they relate to your responsibility to safely operate the Diablo Canyon reactors. NRC inspections, to date, have confirmed that you are operating these reactors safely and that public health and safety is, thus far, assured.

In response to these conditions, there will continue to be two differences in how the Region communicates its inspection findings. First, we will continue the 6-week periodicity of our integrated inspection reports (the other reactors in Region IV have a quarterly report frequency, with the exception of San Onofre Nuclear Generating Station). Second, the description of the scope of the individual inspection activities will be significantly more detailed. This is being done to keep the public more fully informed of the breadth and depth of the NRC's inspection and oversight activities.

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

Sincerely,

/RA/

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

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

Enclosure:
NRC Inspection Report No.
50-275/01-03; 50-323/01-03

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Dale Thatcher (**DFT**)

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket Nos: 50-275
50-323

License Nos: DPR-80
DPR-82

Report No: 50-275/01-02
50-323/01-02

Licensee: Pacific Gas and Electric Company

Facility: Diablo Canyon Nuclear Power Plant, Unit 1 and 2

Location: 7 ½ miles NW of Avila Beach
Avila Beach, California

Dates: February 17 through March 31, 2001

Inspectors: D. L. Proulx, Senior Resident Inspector
T. W. Jackson, Resident Inspector

Approved By: W. B. Jones, Chief, Project Branch E
Division of Reactor Projects

ATTACHMENTS:

Attachment: Supplemental Information

SUMMARY OF FINDINGS

IR 05000-275-01-02, IR 05000-323-01-02, on 2/17/01 to 3/31/01, Pacific Gas and Electric. Co.; Diablo Canyon Nuclear Power Plant Units 1 and 2. Resident Inspector Report. Maint. Rule Impl.

This report covers a 6-week routine resident inspection conducted from February 17 through March 31, 2001. One green finding was identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Manual Chapter 0609, "Significance Determination Process." Findings for which the Significance Determination Process does not apply are indicated by "No Color" or by the severity level of the applicable violation. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.

A. Inspector Identified Findings

Cornerstone: Mitigating Systems

- Green. The corrective action system defaults were incorrectly applied such that maintenance rule reviews, to determine if a maintenance preventable functional failure occurred, would be bypassed. The inspectors identified that the maintenance preventable functional failure review did not occur when Unit 2 Startup Transformer 2-1 was inadvertently deenergized for maintenance, instead of Unit 1 Startup Transformer 1-1, and the action request was closed. The licensee subsequently determined that a maintenance preventable functional failure had occurred; however, the system would not be placed into goal setting following a human performance error.

The inspectors evaluated the risk significance of the Startup Transformer 2-1 being unavailable using the Significance Determination Process. The inspectors noted that Startup Transformer 2-1 remained inoperable for less than 1 hour and the Unit 2 diesel engine generators started, as required. The condition did not result in an increase to an initiating event frequency. The offsite power supply, as a mitigating system, was unavailable for a short period of time with the respective diesel engine generators available. Therefore, adequate sources of power remained available to mitigate a reactor trip or loss of offsite power event. The inspectors determined that this issue had very low risk significance (Green) (Section 1R12.2).

Report Details

Summary of Plant Status

Diablo Canyon Unit 1 and 2 operated at essentially 100 percent power throughout this inspection period.

1. REACTOR SAFETY

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

1R04 Equipment Alignments (71111.04)

.1 Complete System Walkdown

Residual Heat Removal System

a. Inspection Scope

From March 7-14, 2001, the inspectors walked down accessible portions of Residual Heat Removal Train 2-1 to assess if the system could perform its intended safety function and if deficiencies were being documented and corrected. The inspectors: (1) reviewed the action request backlog for the residual heat removal system, (2) reviewed applicable procedures, (3) examined the in-plant materiel condition of the system, and (4) verified valve and electrical lineups. The inspectors used Drawing 107710, "Residual Heat Removal," Revision 22, and Procedure OP B-2:I, "RHR System Alignment for Plant Startup," Revision 16.

b. Findings

No findings of significance were identified.

Partial System Walkdowns

.2 Diesel Engine Generator

a. Inspection Scope

From February 27 through March 1, 2001, while Diesel Engine Generator 2-3 was unavailable, the inspectors performed partial system walkdowns of Diesel Engine Generators 2-1 and 2-2. The inspectors reviewed procedures, walked down the system, and verified valve and electrical lineups. The inspectors used Drawings 107721, Sheet 5, "Diesel Engine Generators," Revision 25, and 107721, Sheet 8, "Diesel Engine Generators," Revision 37, and Procedures OP J-6B:I, "Diesel Engine Generator 2-1 - Make Available," Revision 15, and OP J-6B:II, "Diesel Engine Generator 2-2 - Make Available," Revision 16, as guidance.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

Monthly Routine Inspection

a. Inspection Scope

The inspectors performed fire protection walkdowns to assess the material condition of plant fire detection and suppression, fire seal operability, and proper control of transient combustibles. The inspectors used Section 9.5 of the Final Safety Analysis Report Update as guidance. Specific risk-significant areas inspected included the intake structure, the radiological controlled area of the auxiliary building, and the safety-related switchgear rooms in the auxiliary building.

b. Findings

No findings of significance were identified.

1R11 Operator Requalification (71111.11)

a. Inspection Scope

The inspectors witnessed operator performance in the simulator during routine training and requalification examinations. The inspectors also attended the crew and individual debriefs to determine if the evaluators critically assessed operator performance. The inspectors observed:

- On March 1, 2001, simulator scenarios associated with: (1) failure of a pressurizer pressure instrument, (2) loss of 4 kV Bus F, and (3) seismic event coincident with an anticipated transient without scram.
- On March 29, 2001, simulator job performance measures associated with: (1) establishing natural circulation, (2) operating auxiliary feedwater from the hot shutdown panel, and (3) crosstying Vital Bus G with Vital Bus H.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12)

.1 Routine Reviews

a. Inspection Scope

The inspectors reviewed the maintenance rule program implementation for equipment performance problems. The inspectors determined whether the licensee properly placed the equipment into the scope of the rule, properly characterized the failures, and recommended goal setting when required. The inspectors used Procedure MA1.ID17, "Maintenance Rule Monitoring Program," Revision 8, as guidance. The inspectors reviewed the following action requests:

- A0521216, Suspected Lost Mass on Low Pressure Turbine 2C
- A0521245, Radiation Monitor RM-25 Failed Low
- A0521987, Neutron Monitor N-41 Inoperable

b. Findings

No findings of significance were identified.

.2 (Closed) Unresolved Item 323/0016-01: NRC staff to determine whether a maintenance rule violation occurred for the failure to classify the inadvertent loss of Startup Transformer 2-1 as a maintenance preventable functional failure (MPFF).

During a previous inspection period, the inspectors reviewed Action Request A0517849, which had been closed and entered into "History." This action request stated that on October 23, 2000 (Refueling Outage 1R10), while implementing a clearance order for the Unit 1 Startup Transformer 1-1, the operator inadvertently removed Unit 2 Startup Transformer 2-1 from service. This resulted in all three Unit 2 diesel engine generators starting. Operators responded to this inadvertent action, returned Startup Transformer 2-1 to service, and secured each of the diesel engine generators. Nuclear Quality Services personnel elevated this issue to a quality evaluation (the second tier of importance in the corrective action program) because of the impact on Unit 2.

The inspectors noted that this issue constituted an operator error in the performance of a maintenance activity. The performance criteria for the startup transformers provided that for a single MPFF, that the Startup Transformer 2-1 be reviewed for the goal setting requirements of 10 CFR 50.65(a)(1). However, the licensee had closed Action Request A0517849 with the field for MPFF marked as "No." The NRC staff evaluated whether the licensee considered the startup transformers for the goal setting requirements of 10 CFR 50.65(a)(1). Although this incident indicated that the licensee had not effectively controlled the components removal from service for preventive maintenance, the inspectors determined a violation of 10 CFR 50.65(a)(2) did not occur.

The licensee initiated Action Request A0524635 for this issue. Subsequently, the Maintenance Rule Expert Panel members reviewed the condition that had resulted in the MPFF. The members concluded that the startup transformer would not be placed into

the goal setting requirements of 10 CFR 50.65(a)(1), based in part on the MPFF resulting from personnel error and not from actual poor maintenance practices.

The inspectors noted that Procedure MA1.ID17 (nonquality) described the normal process for evaluating equipment failures for MPFFs. Section 5.4.2 of Procedure MA1.ID17 stated that, upon failure of a maintenance rule scoped system, the action request would be coded with maintenance rule functional failure P (pending). The action request would then be routed to the system engineer, who would make the MPFF determination. Following the system engineer evaluation, the Maintenance Rule Expert Panel would review and approve the evaluation. If the Maintenance Rule Expert Panel agreed that an MPFF occurred, the action request would be again routed to the system engineer for goal setting evaluation, which would also be reviewed by the Maintenance Rule Expert Panel. The inspectors found that the action request had an initiating code that allowed the corrective action system to enter a default value of "No" in the field for the MPFF determination. Neither the Action Request Review Team nor the quality assurance organization identified this discrepancy prior to closure of Action Request A0517849. Thus, the process as described in Procedure MA1.ID17 did not occur with respect to Action Request A0517849. The inspectors noted that, if this corrective action system deficiency went uncorrected, additional MPFF reviews could be missed and prevent goal setting from being implemented for equipment with degraded reliability. Therefore, this issue is being treated as an NRC inspection finding.

The inspectors evaluated the risk significance of the Startup Transformer 2-1 being unavailable using the Significance Determination Process. The inspectors noted that Startup Transformer 2-1 remained inoperable for less than 1 hour and the Unit 2 diesel engine generators started as required. The condition did not result in an increase to an initiating event frequency. The offsite power supply, as a mitigating system, was unavailable for a short period of time with the respective diesel engine generators available. Therefore, adequate sources of power remained available to mitigate a reactor trip or loss of offsite power event. The inspectors determined that this issue had very low risk significance (Green).

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

Risk Assessments

a. Inspection Scope

Throughout the inspection period, the inspectors reviewed daily and weekly work schedules to determine when the licensee had scheduled risk-significant activities. The inspectors reviewed selected activities regarding risk evaluations and overall plant configuration control. The inspectors verified that the licensee established the applicable contingencies, as discussed in the risk assessments. The inspectors used Procedure AD7.DC6, "On-Line Maintenance Risk Management," Revision 5, as guidance and reviewed the activities associated with the following:

- Diesel Engine Generator 1-2 maintenance outage window

- Battery Charger 1-1 inoperable coincident with Control Room Ventilation System Fan S-35
- Diesel Engine Generator 2-3 maintenance outage window

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed operability evaluations and supporting documents to determine if the associated systems could meet their intended safety functions despite the degraded status. The inspectors reviewed the applicable Technical Specification Bases and Final Safety Analysis Report Update sections in support of this inspection. The inspectors reviewed the following action requests:

- A0526128 Main Steam Isolation Valve/Check Valve Disc Material Evaluation
- A0525928 Diesel Engine Generator 1-2 Failed its Start Time
- A0526377 Technical Specification 3.6.3, Which Condition Applies when Valve AIR-I-2-585 is Inoperable

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors evaluated portions of postmaintenance testing to determine if the test adequately demonstrated that the maintenance activity was performed properly. The inspectors reviewed the work orders and witnessed portions of the postmaintenance tests performed in accordance with Procedure TP TO-0000, "Diesel Engine Generator 2-3 On-Line-Maintenance," Revision 0, from February 27 through March 1, 2001.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

Routine Observations

a. Inspection Scope

The inspectors evaluated performance of surveillance Procedure STP M-9A, "Diesel Engine Generator Routine Surveillance Test," Revision 57A, on March 15, 2001. The inspectors performed a technical review of the procedure, observed the test, and reviewed the completed test data.

b. Findings

No findings of significance were identified.

1EP6 Emergency Preparedness Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors witnessed the emergency preparedness drill conducted on February 23, 2001. The licensee conducted this drill following the end of the workday to assess drill performance during back shift hours. The challenging scenario consisted of a seismic event followed by a steam generator tube rupture and offsite release, in order to exercise each of the emergency response facilities. The inspectors witnessed licensee performance in the control room (simulator) and the Technical Support Center and attended the self-critique of the drill.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA6 Management Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. J. Becker, Station Director, and other members of licensee management on April 6, 2001. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

Licensee

J. R. Becker, Station Director
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D. H. Oatley, Vice President
J. W. Tompkins, Director, Nuclear Quality Analysis and Licensing
R. A. Waltos, Director, Maintenance Services

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Opened and Closed During this Inspection

None

Previous Items Closed

| | | |
|-------------|-----|--|
| 323/0016-01 | URI | NRC staff to determine whether a maintenance rule violation occurred for the failure to classify the inadvertent loss of Startup Transformer 2-1 as an MPFF (Section 1R12.2) |
|-------------|-----|--|

LIST OF ACRONYMS USED

| | |
|------|--|
| CFR | Code of Federal Regulations |
| MPFF | maintenance preventable functional failure |
| NRC | Nuclear Regulatory Commission |
| URI | unresolved Item |