

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-275/82-07

Docket No. 50-275 (CON) License No. CPPR-39 Safeguards Group _____

Licensee: Pacific Gas and Electric Company

P. O. Box 7442

San Francisco, California 94120

Facility Name: Diablo Canyon Unit 1

Inspection at: Diablo Canyon Site, San Luis Obispo County, California

Inspection conducted: February 8-12, and 22-26, 1982

Inspectors: *J. F. Burdoin* 3/26/82
J. F. Burdoin, Reactor Inspector Date Signed

J. F. Burdoin FOR 3/26/82
G. Hernandez, Reactor Inspector Date Signed

Approved by: *J. H. Eckhardt* 3/26/82
J. H. Eckhardt, Acting Chief Date Signed
Reactor Projects Section 1

Summary:

Inspection during period of February 8-12 and 22-26, 1982 (Report No. 50-275/82-07).

Areas Inspected: Announced inspections by regional based inspectors of modifications to piping and electrical raceway supports and of other modifications resulting from the revised annulus spectra. The inspection involved 106 inspector hours by two NRC inspectors.

Results: Of the three areas examined, one item of noncompliance was identified in the area of safety related pipe support and restraint systems (failure to accomplish work in accordance with approved quality assurance instructions, see paragraph 2).

DETAILS

1. Individuals Contacted

a. Pacific Gas and Electric Company (PG&E)

- +*R. D. Etzler, Project Superintendent
- +*D. A. Rockwell, Resident Electrical Engineer
- +*J. A. Ammon, Resident Mechanical Engineer
- + C. L. Braff, Piping Hanger Group Supervisor
- *J. R. Bratton, Lead QC Engineer
- + D. R. Bell, QC Engineer
- J. J. Nystrom, QC Engineer
- + T. E. Pierce, QC Engineer
- C. H. Issel, Electrical Inspector
- V. A. Smart, Electrical Inspector
- + M. J. Lecours, QA Engineer
- *M. Dobrzensky, QA Engineer
- + S. J. Foat, QC Engineer
- M. J. Mello, Mechanical Inspector

Various other engineering and QC personnel.

b. H. P. Foley Company (Foley)

- V. H. Tennyson, QC Manager
- J. L. Thompson, QA Engineering Group Supervisor
- J. W. Strait, QC Supervisor

c. Pullman Power Products Corp.

- H. W. Karner, QA/QC Manager
- D. L. McGrew, Supervisor Pipe Hanger Department
- K. T. Niles, QA Controller
- C. D. Agueda, QA Controller
- R. M. Llewellyn, QA Controller
- R. Marks, QC Supervisor
- T. Hanley, QC Inspector

*Denotes attendees at exit meeting on February 12, 1982.

+Denotes attendees at exit meeting on February 26, 1982.

NRC Resident Inspectors J. D. Carlson and M. M. Mendonca attended both exit meetings. Other NRC personnel who attended the February 26, 1982 exit meeting are: T. W. Bishop, P. J. Morrill, J. R. Fair, and K. S. Herring.

2. Safety Related Pipe Support and Restraint Systems

The seismic verification has resulted in ninety-two large bore piping hangers requiring modifications. As of this inspection, eighty-two hanger modification packages have been received onsite and changes to forty-five hangers have been completed. Verification of these completed hangers with as-built drawings has not yet been completed.

Approximately sixty-six small bore (2" diameter and smaller) piping hangers require modifications. Forty-four of these modifications are to provide two-way vertical restraint of the pipe. To date, modifications to fifty-one small bore hangers have been completed.

The inspectors examined modifications to large and small bore pipe supports in Unit 1 containment to ascertain by visual examination whether the pipe supports met the requirements specified by licensee's drawings, procedures and specifications.

- a. The following pipe supports were examined in the containment and found acceptable:

<u>Large Bore Pipe Support Number</u>	<u>Small Bore Pipe Support Number</u>
(1) 40-26V	(1) 2151-67
(2) 41-8R	(2) 2151-71
(3) 42-32R	(3) 2151-72
(4) 42-80R	(4) 2151-157
(5) 43-2R	(5) 2155-34
(6) 57N-11R	(6) 2155-36
(7) 176-123V	(7) 2155-38
(8) 176-138R	(8) 2155-141
(9) 12-39SL	(9) 2155-223
(10) 12-84SL	(10) 2155-233
(11) 22-337SL	(11) 2155-236
(12) 22-341SL	(12) 2155-237
(13) 22-344SL	(13) 2155-241
(14) 22-345SL	
(15) 176-113G	
(16) 176-114G	
(17) 176-116G	

All of the supports had been examined and accepted by Pullman's quality control and all of the supports appeared to meet the applicable requirements.

b. The following pipe supports were examined and found unacceptable:

(1) Pipe Support Number 57-117R:

Undercut was found in one area of the T-shoe welds that was approximately 5/8" long by 1/16" deep, and adjacent to the undercut was a slag pocket that made it impossible to determine visually if the undercut was deeper or longer. Pullman Power Products Engineering Specification Diablo (ESD) Number 223 in paragraph 6.8.2.4(b) states in part, that, "The final surface of all welds shall be substantially free of sharp surface irregularities, excess, surface slag, slag inclusions, and shall have a good workmanship appearance." and in paragraph 6.8.2.4(c) that, "Undercut, extending the length of the weld shall not exceed 1/32" in depth. Local undercut shall not exceed 1/16" when the length of a local undercut area does not exceed 1/2" in any 6" length of weld."

The inspectors also found one arc strike on the Class I pipe for this support. ESD 223 in paragraph 6.8.2.4(D) states in part, that "No arc strikes on pipe shall be permitted."

This pipe support was examined and accepted by Quality Control on February 4, 1982.

(2) Pipe Support Number 41-60R:

A gouge was found on the supporting structural steel for this support which measured 0.5 inches in length and 0.080 inches in depth. PG&E Structural Steel Specification Diablo Canyon Number 8833XR states that the maximum allowable depth for gouges and other similar discontinuities shall be 0.062 inches.

This pipe support was examined and accepted by Quality Control on February 4, 1982.

(3) Pipe Support Number 2155-42:

This support was found to have one weld that was not as detailed on the as-built drawing. The weld detail as specified was later determined to be a drafting error, and the weld on the support is as the Designer/Engineer intended. Also, on one end of the support a number of weld discrepancies were found "circled" with a soap stone marker indicating that work on this support was incomplete. However, in both cases the Quality Control Inspector failed to notice the discrepancies and turned the support in as examined and acceptable. ESD 223 in paragraph 6.8.2.5(A) states in part, that, "The fillet weld size shall be as specified on the drawing," and in paragraph

6.8.2.4(b) states in part, that, "The final surface of all welds shall be substantially free of sharp surface irregularities, excess surface slag, slag inclusions, and shall have a good workmanship appearance."

This support was examined and accepted by Quality Control on January 27, 1982.

(4) Pipe Support Number 2180-18:

The inspector noted that two bolts on the T-shoe strap for pipe support 2180-18 did not have full thread engagement. ESD 223 in paragraph 6.4.3.3 states that, "The Field QC Inspector shall verify that all lock nuts are in place and tight and that there is full thread engagement at all connections, at least flush".

This support was examined and accepted by Quality Control on December 1, 1980.

The failure to perform work in accordance with approved procedures is considered an apparent item of noncompliance with 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings". (50-275/82-07/01).

3. Seismic Limiters (Snubbers) and Spring Hangers

During examination of the pipe support modifications the inspectors noted the following:

- a. Pipe Support Number 176-141SL was found to have two snubbers which had the four bolts/capscrews on the transition tube flange which did not have full thread engagement or locking devices. A PG&E memo dated June 4, 1980 required that from that date all new PSA snubber installations or rework on snubbers should have the bolts safety wired. However, the licensee never verified that all the snubbers installed prior to June 4, 1980 had the flange bolts safety wired. Also, the licensee presented the inspector with a letter from Pacific Scientific (PSA) that appeared to imply that it was immaterial whether or not the bolt/capscrews extended through the snubber flange as long as the bolts used were supplied by PSA.

This matter is considered unresolved pending further investigation. (50-275/82-07/02).

- b. Pipe Support Number 2180-18 was found to have the spring hanger rod attachment supported on the threads of the beam attachment bolt. Discussions with the licensee personnel indicated that the beam attachment, and the bolt and nut were all vendor supplied items (ITT-Grinnell). The inspector questioned whether the vendor had considered the reduction in load rating when the threaded portion of the bolt is used as the base. Several other spring hangers in the area were observed supported in a similar fashion.

This item is considered unresolved pending further investigation to ascertain whether this condition is acceptable. (50-275/82-07/03).

4. Modifications to Electrical Raceway Support Details

Approximately 150 beam type supports (detail S-221) are to be modified; and to date, the following modified supports have been examined:

<u>Hangers</u>	<u>Location</u>
E-2001 (F-117-3-667)	Annulus Area
E-2002 (F-117-3-543)	Annulus Area
E-2003 (F-117-3-544)	Annulus Area
E-2004 (F-117-1-559)	Annulus Area
E-2100 (F-117-3-545)	Annulus Area
E-2101 (F-117-3-661)	Annulus Area
E-2102 (F-117-3-546)	Annulus Area

No items of noncompliance or deviations were identified.

Approximately 13 supports (detail S-241) are to be modified. The modifications to these electrical raceway supports have not been started. Consequently no field inspections of this work were made.

5. Other Modifications Reviewed

a. Fan Cooler Weld

The weld modifications to Fan Cooler 1-3 support #18 were inspected in the containment and the documentation records for the modifications were examined and found acceptable.

b. Instrument Tubing Supports

The modifications to instrument tubing PT-932 and FE-980 and 926 supports were inspected in the containment annulus area and the documentation records for the modifications to the supports were examined and found acceptable.

No items of noncompliance or deviations were identified.

6. Management Interview

Meetings were held with the licensee representatives (identified in paragraph 1) on February 12 and 26, 1982. The scope of the inspections and summaries of the findings, as noted in this report, were discussed.