

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-275/84-13 and 50-323/84-05
Docket Nos. 50-275 and 50-323
License Nos. DPR-76 and Construction Permit CPPR-69
Licensee: Pacific Gas and Electric Company
77 Beale Street, Room 1435
San Francisco, California 94106
Facility Name: Diablo Canyon Units 1 and 2
Inspection at: Diablo Canyon Site, San Luis Obispo County, California
Inspection conducted: April 30 - May 4, 1984

Inspector:

J. F. Burdoin

J. F. Burdoin, Reactor Inspector

7/11/84

Date Signed

Approved By:

T. Young Jr.

T. Young, Jr., Chief, Engineering Section

7-11-84

Date Signed

Summary:

Inspection during period of April 30 - May 4, 1984 (Report Nos. 50-275/84-13 and 50-323/84-05)

Areas Inspected: Unannounced inspection by regional inspector of modifications to safety related pipe support and various follow-up items.

The inspection involved 33 inspection hours by one inspector.

Results: Of the areas examined, a violation was identified in the area of safety related pipe and electrical raceway supports failure to follow approved quality control procedures, see paragraph 6.

DETAILS

1. Individuals Contacted

a. Pacific Gas and Electric Company (PG&E)/Project Team General Construction (PTGC)

- *R. R. Lieber, Field Construction Manager
- *R. A. Hobgood, QC Supervisor
- *C. M. Seward, QA Supervisor
- *D. A. Stetson, Technical Assistant, QC Supervisor
- *K. A. Nilson, Mechanical Field Engineer
- *J. C. Walker, QA Auditor
- *S. Furnis-Lawrence, Staff Engineer
- *J. Longworth, Onsite Project Engineer
- *D. K. CosGrove, QA Engineer
- *G. E. Thomas, Assistant Pipesupport Supervisor
- D. O'Conner, Mechanical Field Engineer
- P. A. Werts, Piping Support Field Engineer
- A. J. Kulikowski, Piping Support Field Engineer
- J. M. Hudson, Lead Electrical Inspector
- M. E. Leppke, Onsite Engineering Group Supervisor
- A. W. Novak, Mechanical Inspector

Various other engineering and QC personnel.

*Denotes attendees at exit meeting on May 4, 1984.

2. Area Inspection

A independent inspection was made in Unit 2 Auxiliary Building areas at elevations 85 ft., 73 ft., and 58 ft. The equipment inspected included the central sampling panel, RHR Pump Rooms 2-1, 2-2 and charging pumps 2-1, 2-2 and 2-3.

No violations of NRC requirements were identified.

3. Licensee Action on Previous Enforcement Items

a. (Closed) Noncompliance (50-275/83-24-01 and 50-323/83-17-01) - Incomplete Pipe Supports and Electrical Raceway Support In With Requirements

The licensee's corrective actions for the pipe supports and the raceway support identified in this enforcement item were addressed in detail in Inspection Reports 50-275/84-04 and 50-323/84-04. It is concluded following additional review of the item that the licensee's corrective actions are acceptable. Therefore, this item is closed.

4. Follow-up of Previous Inspection Items

a. (Closed) Item (50-275/81-26-02) TMI Task Action Item II.B.1.,

Reactor Coolant System Vent

This item was identified in Inspection Report 50-275/81-26 as remaining open pending the receipt and installation of environmentally qualified electrical connections on the four solenoid valves located on the reactor head. The inspector reviewed the design package DC1-EE-15042, work request E-1508 and the quality control records for the installation of conax conductor seal assemblies on reactor head solenoid vent valves 8078A, 8078B, 8078C and 8078D. The installation has been completed. This item is closed.

b) (Closed) Item (50-275/83-24-03) Structural Modifications to Polar Crane Unit 1 Containment

This item was identified in Inspection Report 50-275/83-24 as remaining open pending completion of structural modifications to the Polar Crane in Unit 1 containment. It has been determined from a visual inspection of the Polar Crane and an audit of the licensee's quality control documentation for the work (DCN No. DC1-EC-5173, SK-468994, 6310-C1-13...) that the modifications have been completed. This item is closed.

c) (Closed) Item (50-275/83-17-05) Repair of Gouges and Marks in RCS Piping

This item was identified in Inspection Report 50-275/83-17 and the method of repair was addressed in Inspection Report 50-275/83-21. It has been determined from an audit of the licensee's documentation (MVR, M-4445 and NCR No. DC1-83-TN-N015) for the repairs of the piping gouges and marks and an examination of the quality control records that the repairs have been completed. This item is closed.

No violations of NRC requirements were identified.

5. Item of Concern

A Lawrence Livermore National Laboratory, contract inspector expressed a concern about flame cut holes in various annulus tangential beams (elevation 117') in Unit 2 containment. The issue of concern is that the removal of metal from the flange of a beam can result in a reduction of the beams stress resistance rating.

Findings

A contract inspector while inspecting modifications to the structural steel in the annulus area of Unit 2 containment discovered abandoned flame cut holes in top flanges of annulus tangential beams at elevation 117'. Investigation determined that flame cut holes were made during an earlier construction period for the installation of the containment ventilation recirculation duct. The flame cut holes had been made for the installation of hold-down bolts for the recirculation duct supports.

A review of the licensee's memo (File No. 143, 929 dated April 1, 1984 from Project Engineering to Field Construction Manager Diablo Canyon) provided the following information:

- a. Specification 5422 Sec. 3.8.2 allows the holes for bolted connection to be flame cut.
- b. An engineering evaluation of structural capacity of the floor beams found that the actual stresses in the beam are less than the calculated allowable stresses after taking into consideration the metal area lost to the holes. Therefore, any abandoned holes which are not required for the duct supports may be left as is and no repair is required.

It is concluded that the licensee's response has adequately addressed the issue of concern. Therefore, this item is closed.

No violations of NRC requirements were identified.

6. Technical Assistance Contract

A contract has been awarded by NRC Region V to the Lawrence Livermore National Laboratory (LLNL) to provide assistance in inspecting the plant modifications being implemented at Diablo Canyon as a result of the design verification program. Enclosures C, D and E contain the contractors progress reports for February, March and April, 1984.

- a. During inspections of modifications in Unit 2, the following violation to NRC requirements was identified: (Note: the violation has several parts).
 - 1) Pipe Supports
 - a) 7-97V "As-built" drawings were in error. The installation was correct but two fillet welds were shown incorrectly on the drawing.
 - b) 7-56R "As-built" drawings did not correctly identify those undersize welds found on the pipe support. Two of the welds did not meet AISC recommended minimum size for fillet welds.
 - c) 5-5R "As-built" drawings are required to show actual fillet weld size. Contrary to this weld at connection of item 5 to item 3 is undersize 1/16" for 1-1/4" of the 4" total weld length. Current "as-built" drawings do not reflect this condition.
 - d) 333-42R Stitch welds 1-1/2-inches long on 3-inch centers were found to be 3/8" to 1/2" short in length at four locations.

The above discrepancies were not processed in accordance with Pullman Power Products, Engineering Specification Diablo (ESD) Number 223 which states as follows:

Paragraph 6.8.2.5, "Fillet weld sizes for supports, A) the fillet weld size shall be as specified on the approved for construction drawing...As-Built is required to show weld size."

Paragraph 6.1.6, "All pipe supports shall be fabricated and installed in accordance with the approved for construction drawing(s)."

- e) 948-36G Two identical plates are attached to the North and East walls of the containment. The grouting of the North plate to fill in the concrete/plate surfaces was required by ESD procedures because the bearing surface was affected. The East plate was inadvertently grouted without identifying that the grouting was in the wrong location.

The above discrepancy was not processed in accordance with the H. P. Foley, quality control procedure; QCPC-10 which states in paragraph 3.1, "The Project Manager has the responsibility for employing all measures necessary to accomplish the work in accordance with the requirements of the contract documents and this procedure."

2) Electrical Raceway Supports

- a) GW-115-3-122, Two new S-6 braces were required by the design and only one was installed.
- b) C-119-1-2, support was installed reversed from that portrayed on design drawings. The "as-built" drawings were revised to reflect installation error without proper documentation.
- c) FW-85-1-300, the conduit clamp was not in place on the support and the span exceeded the 8 foot maximum criteria for this specific hanger.

The above discrepancies were not processed in accordance with H. P. Foley Quality Control Procedure QCPE-9, which states in paragraph 3.1, "The Project Manager has the responsibility for employing all measures necessary to accomplish the work in accordance with the requirements of the contract documents and this procedures."

These failures to perform work in accordance with approved procedures are considered to be an apparent violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, procedures, and drawings" (50-323/84-05-01).

One violation of NRC requirements was identified.

b. During inspection of modifications to Unit 2, the following minor deficiencies were identified:

1) Pipe Supports

- a) A loose nut was found on each of hangers 8-46V and 50-45V.
- b) An adjacent trapeze support is askew and sandwiched between NPS clamps of hanger 414-7R and may preclude hanger from functioning as intended.
- c) Snubber 78-245S6 appeared to have been stepped on causing the clamp to rotate and placing the snubber in a bind.
- d) Gap between washers of snubber 70-28S4 bearing and the NPS clamp exceeds requirement of one washer thickness.

2) Electrical Raceway Supports

A S-6 brace on support GW-100-3-43 (Type S-48-L) had a half inch hole not identified on the "as-built" drawing. Also, the hanger drawing lacked clarity.

Minor variation reports (MVR) have been prepared on all of the above identified deficiencies to document and initiate corrective actions as required for these items.

These items are of minor consequences and proper dispositions initiated by the licensee to correct these deficiencies are acceptable to the staff.

No violations of NRC requirements were identified.

7. Exit Meeting

On May 4, 1984, the inspector met with the licensee's representatives identified in paragraph 1. During this meeting, the inspector summarized the scope of the inspection activities and reviewed the inspection findings as described in this report. The licensee acknowledged the concerns and the apparent violation identified in this report.