

U. S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

REGION V

Report No. 50-275/80-16  
50-323/80-08  
Docket No. 50-275/50-232 License No. CPPR-39, CPPR-69 Safeguards Group \_\_\_\_\_  
Licensee: Pacific Gas and Electric Company  
77 Beale Street  
San Francisco, California 94106

Facility Name: Diablo Canyon Units 1 and 2

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

Inspection conducted: August 12 - 15, 1980

Inspectors: *D. F. Kirsch* 9-15-80  
D. F. Kirsch, Reactor Inspector Date Signed  
*J. O. Elin* 9-15-80  
J. O. Elin, Reactor Inspector Date Signed

Approved By: *R. C. Haynes* 9/15/80  
R. C. Haynes, Chief, Projects Section Date Signed  
Reactor Construction and Engineering Support Branch

Summary:

Inspection during periods of August 12-15, 1980 (Report Nos. 50-275/80-16 and 50-323/80-08)

Areas Inspected: Routine unannounced inspection by regional based inspectors of construction and modification activities including: licensee actions on previous inspection findings and 50.55(e) items; Unit 1 modifications per the TMI Short Term Lessons Learned Requirements; followup on IE Bulletins and Circulars; QA audits review, and nonconformance report review. The inspection involved 44 inspector hours onsite by two NRC inspectors.

Results: No items of noncompliance or deviations were identified.

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## DETAILS

### 1. Individuals Contacted

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

\*D. A. Rockwell, Acting Project Superintendent  
\*M. E. Leppke, Resident Mechanical Engineer  
\*R. Twiddy, QA Supervisor  
\*S. J. Foat, Acting QC Coordinator  
\*G. L. Johnson, QC Inspector  
\*I. L. MacDonald, Scheduling Engineer  
W. Raymond, Manager Quality Assurance

Various other QC and construction engineering personnel.

#### b. H. P. Foley, Co. (Foley)

J. Thompson, Acting QA Manager

Various other QC and crafts personnel.

#### c. Pullman Power Products (PPP)

Two crafts personnel (welder and helper).

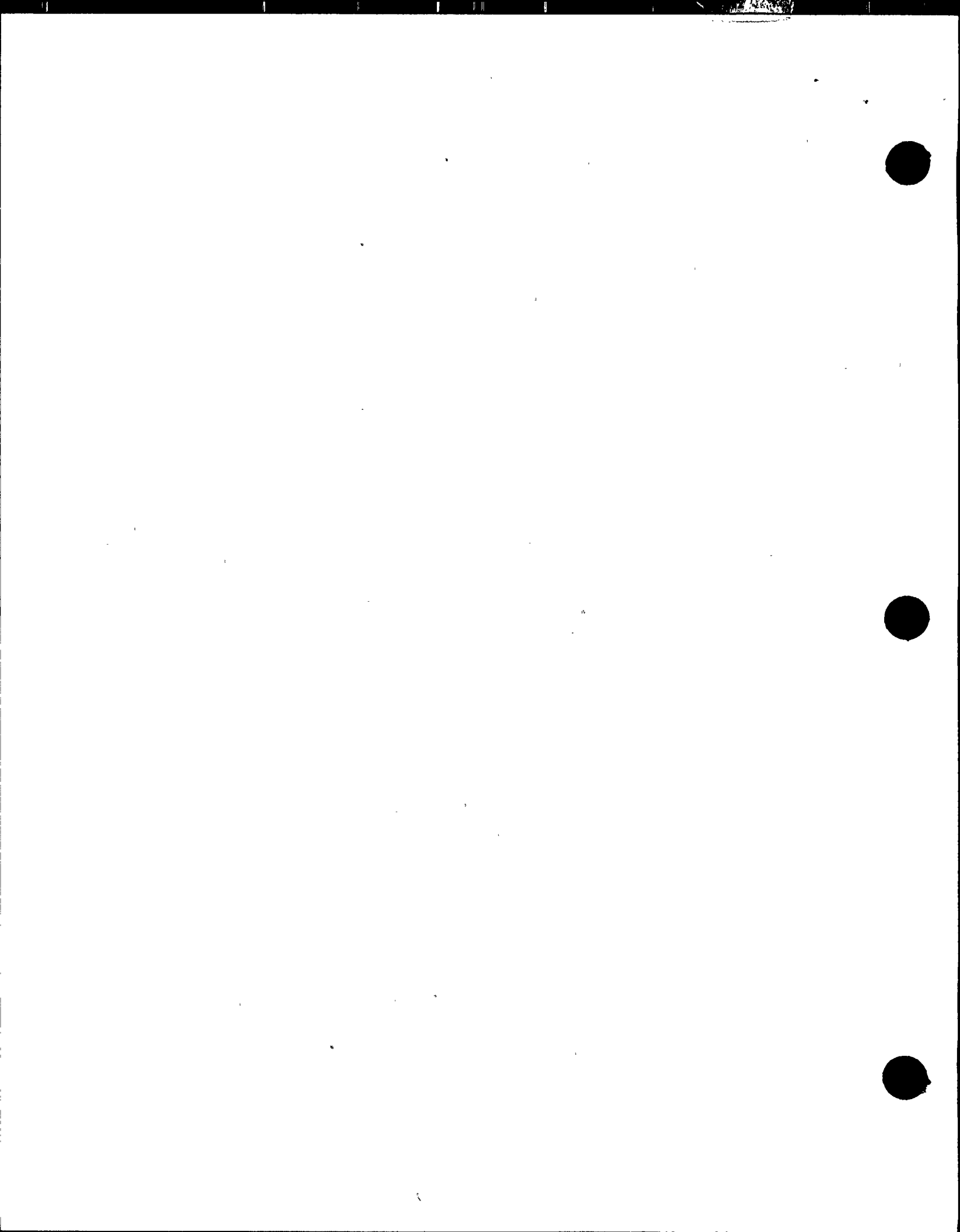
#### d. Other Personnel

\*T. Young, NRC Senior Resident Inspector  
\*M. J. Bagaglio, NRC Resident Inspector

\*Exit Interview Attendees

### 2. Site Tour

Upon arrival on site the inspectors toured the facility to observe in-process and completed work activities to ascertain general compliance with regulatory requirements, codes, standards and procedures. Activities examined included: a) reinforcing steel installation, concrete preplacement activities and formwork for the Technical Support Center and remote sampling facility, b) selected support and electrical panel installations for the internal and external hydrogen recombiner systems, c) selected raceway installations for the new auxiliary feedwater flow control valve operators, and (d) in-process IE Bulletin 79-02 modifications to add stiffener plates to base plates attached to concrete with concrete anchors.



Discussions with crafts personnel engaged in the addition of stiffener plates to base plates indicated that apparently the Pullman Power Products procedures affecting these modifications did not require releasing the torque on the concrete anchor bolts prior to welding the stiffener plates in place. The inspector brought this concern to the attention of responsible licensee management. The licensee took the following corrective actions: (a) Pullman was instructed to place a note on all affected modification drawings requiring that the torque be released on concrete anchor bolts prior to baseplate welding, (b) Pullman would issue a PG&E approved QA instruction requiring the release of anchor bolt torque prior to baseplate welding to assure concrete anchor integrity, (c) the contents of the QA instruction would be incorporated into the Pullman procedures upon the next revision and (d) a reinspection of all previously completed baseplates and concrete anchor bolts, modified in response to IE Bulletin 79-02, would be accomplished and documented. Pullman had included requirements for releasing anchor bolt torque in previous programs and has procedures in effect requiring QC verification of torque for bolting activities. The implementation of the licensee's actions will be examined during a future inspection. (275/80-16-01).

The inspector also examined the receiving inspection reports and certified material test reports for two heats of No. 8 rebar and one heat of No. 10 rebar. The rebar storage and hold areas appeared to be well marked and segregated with all rebar on dunnage.

No items of noncompliance or deviations were identified.

3. Licensee Action on Previous Enforcement Items

(Closed)(275/80-10-05) Deficiency: Failure to document electrical raceway support inspections as required by procedure.

The licensee's response to the specific item of noncompliance was submitted by PG&E letter dated June 17, 1980. The inspector examined the specified corrective actions to verify implementation and sampled about 10 conduit installations to verify compliance with procedure specified requirements. No items of noncompliance or deviations were identified.

4. Licensee Action on Previously Identified Followup Items

a. (Closed) (275/80-10-02) Followup Item: Site Mechanical Engineering Instructions (SMEI) did not reflect code requirements

The inspector had identified that certain licensee procedures appeared to be overly restrictive in the area of weld reinforcement and inspectors were using code specified requirements instead of procedural specified criteria for weld inspection on the external hydrogen recombiner system.



The licensee had reviewed the SMEI procedure set and made revisions, as required, to properly implement code requirements. The inspector sampled and examined six SMEI procedures (covering subjects such as pipe support installation and inspection, pipe visual inspection, drawing control, and weld identification, reinforcement and undercutting) to verify review and implementation of code requirements and had no further questions.

b. (Closed) (275/80-10/03) Possible Debris Access in Panels SPHA and SPGA

The licensee evaluated the need for the questioned ventilation holes and found them to be unnecessary. The panels have been modified with metal plates to provide protection from possible debris access. Control power entry into the breaker enclosure is via a separate terminal box mounted on the enclosure. This item is closed.

c. (Closed) (275/80/04) Classification of Wattmeter Housing Panels

A Design Change Request (DC-1-G-E-1858) has been submitted to reclassify these panels as Class IE. The inspector reviewed the panel mounting per the licensee's drawing for standard seismic category 1 mounts (DWG 050030). No problems were noted. The licensee will inspect the installation of these panels per their standard procedures for Class IE equipment. This item is closed.

5. Licensee Action on 50.55(e) Items

a. (Open) Cracked Plastic Cam Followers in G.E. Type Switches

The licensee reported by telecon on January 21, 1980 that cracking had been observed in the plastic cam followers for General Electric Type SBM switches installed in Unit 1. A preliminary written report was submitted on March 10, 1980. The licensee will replace switches of the SBM type with switches of a different design prior to operation. The inspector observed work in progress to replace these switches. The inspector noted possible cracks on the cam followers of type SBM switches removed from Unit 1 4160 volt switchgear but did not note any switches which were inoperable.

This item will be examined during a future inspection.

b. (Open) Insulation failure of Electrical Cables Routed to the Unit 1 Intake Structure

The licensee reported by telecon on February 28, 1980, a deficiency involving insulation failure on a number of electrical cables routed to the Unit 1 intake structure, and submitted a preliminary written report on March 21, 1980. The inspector discussed two apparent construction deficiencies identified by the licensee: (1) Concrete trench walls to support the 6" thick concrete cap had not been installed and (2) PVC conduit in the area had not been provided with the support configuration required by drawings.





The inspector reviewed the new design for this cable support structure which encases the PVC conduit in a "monolith" block of concrete keyed to the crib wall and intake structure pull box. Photographs taken at various stages of the excavation and repair were reviewed together with observation of completed work.

The inspector discussed with the licensee similar problems with the Unit 2 intake structure cable routing. The licensee plans to make similar repairs to the Unit 2 intake structure. This work will be detailed in the licensee's final report on this item.

This item will be examined during a future inspection.

6. Unit 1 Modifications Related to TMI

The licensee was engaged in the Unit 1 installation of certain modifications as committed in the PG&E response to NUREG-0578 (Short Term Lessons Learned Requirements).

a. Emergency Power Supply for Pressurizer Heater Groups 1-2 and 1-3

The inspector examined the installation of seven electrical circuits and two conduits, including supports, related to this modification for compliance with procedures. In addition, the following documentation related to the above observations were examined: raceway inspection reports; support inspection worksheets and reports; circuit pulling records, megger and termination documentation; one torque wrench calibration recall/calibration records, and the recall/calibration for two termination tools.

No items of noncompliance or deviations were identified.

b. Hydrogen Recombiner System

The inspector examined nine electrical circuits, three of which had cables pulled and six had cables pulled and terminated, and three conduit installations for compliance with procedures. In addition, the following documentation related to the above observations were examined: raceway inspection reports; support inspection work sheets and reports; circuit pulling records, megger and termination documentation; and the recall/calibration documentation for one termination tool.

No items of noncompliance or deviations were identified.



c. Acoustic Flow Monitor on Pressurizer Safety Valves

The inspector examined the installation of three acoustic flow sensor circuits on the Unit 1 pressurizer safety valves for compliance with procedures. It was noted that safety wire on the acoustic detectors was broken. The licensee stated that these safety wires would be replaced. All other work appeared to have been accomplished in accordance with established procedures.

No items of noncompliance or deviations were identified.

7. Safety Related Concrete Placement

The inspector observed work and work activities associated with a concrete placement for the technical support center. The inspector observed batch plant operations, acceptance testing, and placement activities for compliance with procedures and industry standards. The placement was halted after approximately five yards due to a bearing failure on the lift crane.

No items of noncompliance or deviation were noted.

8. Modifications to Auxiliary Feedwater Control System

The inspector examined modifications being performed to the auxiliary feedwater system for compliance with procedures. The installation of 8 conduits/raceways and their supports were inspected along with applicable support inspection work sheets and inspection reports. Cable pulling activities had not started on the modification at the time of the inspection.

No items of noncompliance or deviation were noted.

9. Licensee's Response to IE Bulletin 80-16 and IE Circular 80-16

The inspector reviewed the licensee's actions to date in response to IEB 80-16 and IEC 80-16 of June 26, 1980. This bulletin and circular detailed problems with Rosemount Model 1151 and 1152 pressure transmitters and Model 510 DU trip units.

The licensee stated that the response was not complete at the time of inspection. It had been established, however, that 510 DU trip units were not utilized at Diablo Canyon and Rosemount pressure transmitters utilized as steam flow detectors may in some conditions exceed the 140% upper range limit condition described in the bulletin. These pressure transmitters will be addressed in the licensee's response.



10. Nonconformance Report Review

The inspector examined the civil, mechanical, electrical and clean-up crew minor variation reports issued since May, 1980, and the nonconformance reports issued since February, 1980. The reports appeared to have been evaluated and resolved as required by the QA program.

11. QA Audits

The licensee's internal audit system was inspected by examining 18 QA Audits of General Construction activities performed since June 1, 1980. In those cases where findings required corrective action to be taken the corrective actions had been completed in accordance with the licensee's nonconformance reporting system or open item resolution system.

No items of noncompliance or deviations from the licensee's QA audit and reporting system were identified.

12. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on August 15, 1980 and summarized the inspection purpose, scope and findings.

