

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

REGION V

IE Inspection Report No. 50-133/76-04

Licensee Pacific Gas & Electric Company

Docket No. 50-133

77 Beale Street

License No. DPR-7

San Francisco, California 94106

Priority

Facility Humboldt Bay Unit No. 3

Category C

Location Eureka, California

Type of Facility BWR (65 MWe)

Type of Inspection Special, Announced, Construction

Dates of Inspection March 22-24, 1976

Dates of Previous Inspection March 18-24, 1976

Principal Inspector L. J. Garvin III

L. J. Garvin, Reactor Inspector

13 April 76  
Date

Accompanying Inspectors L. J. Garvin III

for D. F. Kirsch, Reactor Inspector

13 April 76  
Date

Date

Other Accompanying Personnel: None

Reviewed by W. G. Albert

W. G. Albert, Reactor Inspector

4/13/76  
Date

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## Summary

### Enforcement Action

None

### Licensee Action on Previously Identified Enforcement Items

Not applicable

### Design Changes

The licensee is presently completing the engineering and procurement activities for structural modifications on Humboldt Bay Unit 3. These modifications will upgrade the seismic capability of the facility.

### Other Significant Findings

1. Licensee representatives stated that by April 1, 1976 the requirements of the Quality Assurance Manual for Operating Nuclear Power Plants would be fully implemented on Humboldt Bay Unit 3. (Paragraph 2 of Details)
2. The licensee has not fully implemented QA manual requirements with regard to checking of procurement documents and auditing of procurement activities. (Paragraph 3.a of Details)
3. Licensee implementation of QA manual requirements for qualifying suppliers appears to have the potential for approval of unqualified suppliers. (Paragraphs 3.b and 3.c of Details)
4. The system for training personnel did not appear to be adequately implemented. (Paragraph 3.d of Details)

### Management Interview

At the conclusion of the inspection, an exit interview was held with Messrs. G. V. Richards, Director, Quality Assurance, J. O. Schuyler, Project Engineer, B. E. Roddeck, Supervising Buyer and other members of their staffs to discuss inspection findings. The following items summarize the discussion. Licensee representatives stated that the corrective actions described below will be completed by May 1, 1976.

A. Training

The licensee stated that a program for training of engineering, procurement and QA personnel will be defined and implemented.

B. Procedures and Documentation

The licensee stated that departmental procedures will be reviewed to ensure inclusion of appropriate quality review and documentation requirements within quality assurance, engineering and procurement.

C. Supplier Qualification

The licensee stated that a Qualified Suppliers List will be promulgated to ensure only qualified suppliers are selected for safety related materials and services.

## Details

### 1. Persons Contacted

G. V. Richards, Director, Quality Assurance  
J. O. Schuyler, Project Engineer  
B. E. Roddick, Supervising Buyer, Materials  
N. L. Ziomek, Assistant to Project Engineer  
B. G. Good, QA Engineer  
J. Pillers, QA Engineer  
F. W. Brady, Civil Group Supervisor  
L. Harrison, Staff Engineer, Civil

### 2. Project Status

The engineering design, specification and materials procurement phases for the Humboldt Bay Unit 3 structural modifications are nearing completion. Minor construction operations are in progress at the facility location.

The Quality Assurance Manual for Operating Nuclear Power Plants is scheduled to be fully implemented for the Humboldt Bay facility. This manual is the corporate QA manual for operating power plants. The QA program description is contained in Chapter 17 of the Diablo Canyon FSAR. Licensing approved the use of the program for the Humboldt facility with an implementation date of April 1, 1976.

### 3. Procurement Quality Assurance

- a. The procurement documents for specification numbers 3660, 3641, 3642 and 3643 were examined. The listing of drawings and specifications appeared to be in order and authorization to request quotations was documented. Records showing that the procurement package and quotations were compared, evaluated and that the contract was awarded in accordance with procedures were in order.

It was noted that evidence was unavailable to show that the documents had been checked by an individual or group not involved in their preparation, as required by the Quality Assurance Manual. In addition, it was noted that the content of the procurement documents, though adequate, was not consistent and that document content requirements had not been completely defined. The possibility that inconsistent requirements could be applied by personnel checking the procurement documents was pointed out.



The inspector noted that QA department audits of procurement activities have been scheduled but twice delayed, resulting in procurement activities nearing completion without the formal verification of quality by the QA department.

- b. The inspector observed that the Santa Clara facility of the Pittsburgh-DesMoines Steel Company (PDM) was selected to detail, fabricate and deliver structural and miscellaneous steel in accordance with specification number 3660. The QA department approved the PDM quality assurance program based upon review of the PDM-QA manual and past experience with PDM as a supplier. Further examination of records disclosed, however, that the past experience was based upon PDM-Provo performance and not PDM-Santa Clara. Evidence that the PDM-Santa Clara facility had demonstrated that a satisfactory QA program was in effect, as required by PG&E QA Manual supplier qualification policy, was not available. The inspector pointed out that supplier qualification procedures in use apparently permitted approval of an unqualified supplier if that supplier is another division of the same company. The inspector noted that the other procurement documents reviewed contained adequate evidence concerning supplier demonstration of satisfactorily effected QA programs.
- c. The preparation and distribution of a Qualified Suppliers List had not been completed. Licensee representatives stated that the list was in the preparation process and would be distributed following its approval.

During examination of qualified supplier information transmitted to Materials Department by other departments, the inspector observed that the various departments involved with supplier evaluation used some unapproved forms.

- d. The training program and associated records were examined. It was observed that no training program existed for personnel responsible for the conduct of independent audits of procurement documents. In addition, it was noted that while training records of QA department personnel were available, a program for the training and certification of QA department personnel in the provisions of the Quality Assurance Manual for Operating Nuclear Power Plants had not been implemented.

- e. The Materials Department procedures for implementation of QA manual requirements regarding procurement control were examined. It was noted that these procedures were in the approval stage and licensee representatives stated that they would be issued by April 1, 1976.

Procurement documentation appeared to be permanently stored and readily accessible. The inspector had no further questions as a result of this examination.

- f. The audit plans and corrective actions for the last two audits of Bechtel Corporation were examined. The inspector had no further questions regarding audit scope and finding resolution.

#### 4. Engineering Quality Assurance

##### a. Engineering Department Instruction Manual

The engineering department instruction manual for the Humboldt Bay power plant was reviewed. The procedures for design review and review of design criteria were examined during the review. Procedure HPE-4, Design Review, described the review process to be conducted for all design documents. The instruction did not require documentation of the required review of design documents.

The procedure (HPE-4) seemed to require review of all design documents which were produced either in-house or by an outside engineering firm. However, conversation with a licensee representative disclosed that only a portion of the documents generated by an outside engineering firm were subject to full review. The licensee stated that the engineering manual will be revised to better define the review process.

##### b. Training

During the review of the Engineering instruction manual it was noted that it did not contain requirements for the training of engineers. Records of the training of engineering personnel were requested. No records existed to document the training of engineering department personnel, however, each engineer questioned exhibited knowledge of the contents of the engineering group's instruction manual.

c. References

During the inspection of the engineering group the references that were available for use by engineers were examined. There were adequate references available for use by engineers reviewing design documents.

d. Engineering Review

The review of specifications 3660 (structural and miscellaneous steel), 3662 (structural steel for equipment supports), 3643 (installation, inspection and documentation of pipe support components), 3641 (materials and hardware for pipe support components) and 3642 (mechanical shock suppressors) was examined. Additionally the review of the design criteria for seismic design was examined. The seismic design criteria seemed to have been reviewed and approved in accordance with the controlling engineering group instruction (HPE-3). The records of the review of the specifications did not exist because the controlling instruction did not require documentation of the review. The specifications each were stamped as "accepted" by the engineering group. This stamp is applied when the document is acceptable to the engineering group. No other evidence of the required review was shown the inspector. Discussion with engineering group personnel disclosed that the review had been accomplished as required by the instruction (HPE-4).