

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

Report No. 99900109/79-01

Program No. 51300

Company: Pittsburgh-Des Moines Steel Company  
Eastern Division, Neville Island  
Pittsburgh, Pennsylvania 15225

Inspection Conducted: May 21-25, 1979

Inspector: J. W. Sutton 6-13-79  
J. W. Sutton, Contractor Inspector, Vendor  
Inspection Branch Date

Observer: J. W. Sutton for 6-13-79  
M. L. Boyle, NRR Date

Approved by: D. E. Whitesell for 6-13-79  
D. E. Whitesell, Chief, Components Section I,  
Vendor Inspection Branch Date

Summary

Inspection on May 21-25, 1979 (99900109/79-01)

Areas Inspected: Implementation of 10 CFR 50, Appendix B criteria, and applicable codes and standards including review of previous inspection findings, review of QA program (organization), testing of completed products, welding procedures, review of vendor activities, and audits. The inspection involved thirty-two (32) inspector-hours by one (1) NRC inspector.

Results: In the six (6) areas inspected no deviations or unresolved items were identified in three (3) areas. The following were identified in the remaining three (3) areas.

Deviations: Testing of Completed Products: Fabrication Check List not prepared (Notice of Deviation, Item A). Calibration stickers not attached to test recorders (Notice of Deviation, Item B). The Engineering Instruction Specification did not reference customer's required tests (Notice of Deviation, Item C). QA documentation clerk not documenting his monitoring of the Purchasing Checker's activities (Notice of Deviation, Item D).

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Unresolved Items

1. Clarification of corporate line of authority for the QA Program is required. (Details Section C.3.b(1)).
2. Availability of design and stress analyses for the ANI should be clarified. (Details Section C.3.b(2)).
3. Clarification is required as to how the corporate QA Auditor can perform an annual corporate QA audit of the central Division. (Details Section F.3.b).

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DetailsA. Persons Contacted

- J. H. Adams, Corporate Chief Engineer
- \*B. J. Hughes, Eastern Division QA Manager
- G. C. Harper, Eastern Division Manager
- K. J. Kolkmeier, Vice President and Group  
Manager, Operations
- D. Metzler, Welding Superintendent
- T. J. McGuire, QA Engineer
- \*M. J. Schuller, Plant QA Manager
- G. Williams, Test Engineer

Factory Mutual Engineering

- \*M. Minick, Authorized Nuclear Inspector
- \*G. Muckle, Authorized Nuclear Inspector

\*Denotes those persons who attended the exit interview.

B. Action on Previous Inspection Findings

(Closed) Unresolved Item (Report No. 78-01): Calibration Procedure CP-1 does not identify all of the equipment that is used in quality activities.

The inspector reviewed the revised Calibration Procedure CP-1 which has been issued by QA. The revised procedure lists all of the equipment that is presently being used in quality activities.

C. QA Program Review (Organization - Program)1. Objectives

The objectives of this inspection were to ascertain whether the QA Program has been documented in writing, and it is incorrectly implemented, and will ensure that the completed components were manufactured in compliance with code requirements and meet the prescribed quality standards. Also, to ascertain whether the program is consistent with NRC regulations, contract, and code requirements.

2. Method of Accomplishment

- a. Review of PDM's Corporate QA manual, Revision 4, dated March 27, 1979.

- b. Review of PDM's Appendix A. (Pittsburgh Plant) QA Manual, Revision 4, issued January 1, 1979.
- c. Review of appropriate organization charts to verify that the QA staff is independent from the pressures of cost and scheduling and has access to upper management.
- d. Review of the documents concerning the authority, duties, and responsibilities of the Quality Assurance staff, to verify that they have the independence to identify quality problems, initiate appropriate corrective action, and the authority to stop work.
- e. Review of Section 3, Subparagraph 3.2.1, Design and Analysis, to verify that appropriate review and approval by authorized personnel are provided for.

### 3. Findings

#### a. Deviations

None.

#### b. Unresolved Items

- (1) The inspector was informed that the position designation of corporate chief engineer has been eliminated.

At the time of the inspection, the designation of responsibilities as stated in the corporate QA manual did not correctly delineate the organizational structure as it exists. The corporate Chief Engineer's position has been eliminated and, under Section 1.5.1, the corporate Chief Engineers had the ultimate responsibility for establishing engineering policy, and the establishment of the QA Program. The inspector was assured by corporate personnel that steps were being taken to correct and resolve this item. A QA manual revision may be required.

- (2) It was brought to managements attention that the code requires the ANI to verify that all design reports, including stress analysis, are properly certified by Registered Professional Engineers. This requirement was not addressed in the QA manual. Management indicated that the item would be resolved.

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D. Testing of Completed Products

1. Objectives

The objectives of this area of the inspection were to verify that:

- a. Testing activities are controlled in accordance with the QA Manual commitments and applicable NRC regulations and the ASME Code requirements.
- b. Products are assembled in accordance with approved procedures and materials comply with approved specification.
- c. Functional tests of products are performed in accordance with approved test documents.
- d. That the system is being properly implemented.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of the QA manual subsection 13.4, "Examination and Testing," Paragraph 13.4.1, Hydrostatic and Pneumatic testing.
- b. Review of Design Specification No. 10855-C-152(Q) Revision 4, for Personnel Air Lock No. 303L.
- c. Revised Engineering Mechanical and Electrical drawing for Air Lock 303L.
- d. Reviewed Electrical Purchase Orders Nos. 11-0000-37317 and 11-0000-37277.
- e. Reviewed Warehouse and Buyout Material list for electrical cable and switches for the above Purchase Orders.
- f. Reviewed IEEE Standard 383-1974 and Vendors Flame Tests for Cables.
- g. Reviewed PDM's shop test procedure SPAT-1.
- h. Reviewed PDM's calibration procedure CP-1, dated May 11, 1979.
- i. Reviewed calibration records for test instruments used during over pressure test of Air Lock 303L.
- j. Review of test reports to verify that test results are within the specified acceptance limits and were properly instrumented, documented, and the procedures correctly implemented.

- k. Witness of over pressure test.
- l. Discussion with shop personnel.

3. Finding

a. Deviations

See Notice of Deviation Items A, B, C, D.

b. Unresolved Items

None.

c. General

During examination of the instruments to be used for the overpressure test, the Test Engineer showed the inspector the certification records that the two (2) recorders being used had been properly calibrated. However, the calibration stickers had not been affixed to the instruments as required by QA procedures. Notice of Deviation, Item B.

E. Control of Special Processes, Welding Procedure Specifications Use and Control

1. Objectives

The objectives of this area of the inspection were to verify that welding procedure specifications used for production welding are controlled and used in accordance with the PDM QA Program and NRC and the contract and Code requirements.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of the corporate QA manual subsection 13.2 "Welding."
- b. Review of the following welding procedures, 73-61, 7647, welding procedure specifications, 68-4-5, 67-44.
- c. Review of FCL 1133-1 Assembly 74H.
- d. Review of welding, Job 15676.
- e. Review of PDM Welding Data Book.
- f. Review of four (4) welder performance and qualification records.



- g. Observation of welding activities in the shop area.
- h. Review of equipment calibration requirements.
- i. Discussions with shop personnel.

3. Findings

a. Deviation

None.

b. Unresolved Item

None.

c. General

Time did not permit all welding activities to be completely reviewed. Further review of this activity will be performed during a subsequent inspection.

F. Audits

1. Objectives

- a. To ascertain that procedures have been prepared and approved by the company to prescribe a system for auditing which is consistent with the commitments of the QA Program.
- b. To determine that the audit procedures and schedules are being properly and effectively implemented by the company.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of the corporate QA manual, Section 15, "Audits."
- b. Review of the current audit program files for audits performed by corporate and QA Division Auditors to verify that:
  - (1) Audits are performed in accordance with approved procedures and instructions.
  - (2) Corrective actions are taken for deficiencies identified by audits.

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- (3) Provisions have been made for re-audit of deficient areas.
- (4) Audits are scheduled and performed in accordance with approved checklist.
- (5) Provisions exist for reporting on the effectiveness of QA Program to responsible management.

- c. Review of the current audit schedule.
- d. Review of the lead auditors qualification procedure revision 2, dated September 1, 1977.
- e. Review of qualification records of auditors.

### 3. Findings

#### a. Deviations

None.

#### b. Unresolved Item

The inspector requested that clarification be made as to how the QA Coordinator will be able to perform an annual corporate audit of the Central Division QA activities. At present the QA Coordinator and the Central Division QA manager are the same person. Section 15.1.1 requires that the Lead Auditor for the corporate Chief Engineers annual audit be the corporate QA Coordinator. Corporate management indicated that this item will be reviewed and necessary steps taken to resolve this item.

### G. Review of Vendor's Activities

#### 1. Objectives

The objectives of this area of the inspection were:

- a. To review the vendor's activities to assess its impact on future IE inspections.
- b. Review of fabrication/manufacturing techniques and equipment.
- c. Review of current work loads.

#### 2. Method of Accomplishment

The preceding objectives were accomplished by observing the manufacturing/fabrication processes implemented by the vendor, and discussions with the vendor's cognizant personnel.



### 3. Findings

The vendor has the capability to design, manufacture, and test, Class 1, 2 & 3 and MC Vessels, Class 2, 3 storage tanks and Class CS core support structures.

The vendor has the capability for cutting, forming and welding all metals, metal plates up to 6 inches thick.

The vendor has the capability for all NDE, (MT), (PT), (RT), (UT) activities. The vendor can heat treat components up to 24 feet in diameter. Shipping of completed products by rail, truck or river barge is possible from the plant.

The vendor holds valid ASME Certificates of Authorization No. 1492-5 for "N" Stamp and 1494-5 for NPT Stamp.

The current active nuclear contracts for 6 projects represents approximately 60 percent of the present workload.

### H. Exit Interview

The inspector met with management representatives (denoted in paragraph A) at the conclusion of the inspection. The inspector summarized the scope and findings of the inspection. The management representatives had no comment in response to the items discussed by the inspector.

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