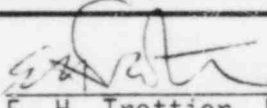
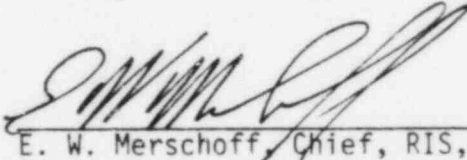


ORGANIZATION: ILLINOIS FABRICATORS, INC.
BRADLEY, ILLINOIS

| | | |
|--|----------------------------------|---------------------------------|
| REPORT NO.: 99901036/85-01 | INSPECTION DATE(S): 11/6-8/85 | INSPECTION ON-SITE HOURS: 40 |
| CORRESPONDENCE ADDRESS: Illinois Fabricators, Inc. ATTN: Mr. R. A. Hawker, President 265 South Kinzie Bradley, Illinois 60915 | | |
| ORGANIZATIONAL CONTACT: Mr. Charles R. Hawker, Vice President TELEPHONE NUMBER: (815) 939-3551 | | |
| PRINCIPAL PRODUCT: Custom fabricated steel, specializing in battery trays and instrument control panels. | | |
| NUCLEAR INDUSTRY ACTIVITY: None since November, 1980 | | |
| ASSIGNED INSPECTOR:  E. H. Trottier, Reactive Inspection Section (RIS) 17 Jan 86 Date | | |
| OTHER INSPECTOR(S): Jeffrey B. Jacobson, RIS | | |
| APPROVED BY:  E. W. Merschhoff, Chief, RIS, Vendor Program Branch 24 Jan 86 Date | | |
| INSPECTION BASES AND SCOPE: A. BASES: 10 CFR 50 Appendix B and 10 CFR Part 21 B. SCOPE: This inspection was performed to evaluate the allegation received by the Region III office of the Nuclear Regulatory Commission on September 25, 1985 concerning fabrication of two safety-related containment ventilation control panels without benefit of a QA program. | | |
| PLANT SITE APPLICABILITY: Clinton Power Station (50-461). | | |

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A. Inspection Issues

The issue that resulted in this inspection was the allegation received by Region III of the Nuclear Regulatory Commission on September 25, 1985. The allegation related to the quality assurance controls in effect at Illinois Fabricators, Inc. where two containment ventilation control panels were fabricated. The panels were fabricated for MCC Powers who designed, engineered and installed the completed control panels at Illinois Power Company's Clinton Power Station near Clinton, Illinois. This inspection sought to establish whether an appropriate quality assurance program was in place at the Illinois Fabricators, Inc., the company that fabricated the panels.

B. Inspection Findings

Although Illinois Fabricators did not have a quality assurance program in place that would meet the requirements of 10 CFR 50 Appendix B, the safety related work was performed under the control of MCC Power's quality assurance program and, as such, was properly controlled.

Specifically, the inspector verified that Illinois Fabricators received and accepted all quality-related requirements referenced by and attached to the purchase order for fabrication of the panels as follows:

1. Packaging

Equipment and material were required to be shipped in containers "... in keeping with good commercial practices to prevent damage during shipment and storage at buyer's [MCC Powers, Inc.] warehouse."

The inspector reviewed the Receiving Inspection Report for each panel (1PL43JA and B). The overall appearance of each panel was inspected by a member of the MCC Powers QA staff and accepted on 12/2/80. In addition to overall appearance, the Receiving Inspection Report verified conformance to four other criteria. These criteria were:

- a. Fabrication in accordance with approved drawings.
- b. No evidence of distortion from cutting/punching operations.
- c. No evidence of significant paint defects.
- d. No missing hardware, gaskets or accessories.

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The inspection accepted each criterion separately and noted acceptance by individual check marks in appropriate boxes. The Receipt Inspection Report was signed by a member of the MCC Powers QA staff.

2. Source Inspection

The panels were "... subject to source inspection at the supplier's [Illinois Fabricators] plant by MCC Powers Quality Assurance representative, ... one week before fabrication" began.

The inspector reviewed the Vendor Surveillance Report (source inspection) performed by the Manager of Quality Assurance for MCC Powers on November 11, 1980 at the Illinois Fabricators facility in Bradley, Illinois. The summary section of the report cites the MCC Powers purchase order and job numbers, and clearly identifies the ultimate destination of the panels as "the Clinton Nuclear Power Station," The summary section concludes with the following statement: "It is the opinion of MCC Powers that Illinois Fabricators is an established, viable, and competent manufacturer fully capable of supplying MCC Powers with an acceptable product line with appropriate design support and documentation evidence."

The final section of the source inspection report is titled "Objective Evidence." In it, the Manager of QA for MCC Powers summarized his plant tour, reviewed panel base material purchase orders (including Certificates of Conformance), and welder qualification records.

3. Certifications and Test Reports

Copies of applicable documents required by MCC Powers under this item were to be "... signed by a responsible member of the supplier's [Illinois Fabricators] Quality Assurance function." and forwarded to MCC Powers.

The inspector reviewed the "QW-484 Manufacturer's Record of Welder or Welding Operation Qualification Tests" for both Illinois Fabricators welders designated to undergo qualification. The inspector was advised by Illinois Fabricators that although the lead welder had been selected and did perform the welding, a backup or alternate welder was also qualified. The inspector's review of each welder's QW-484 form verified that all information was entered and the form signed by the Vice President of Illinois Fabricators.

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The inspector reviewed both the "QW-482 Welding Procedure Specification (WPS)" documented on ASME Form E-6, and the "QW-483 Procedure Qualification Record (PQR)" for the welding procedure used on the panels. Each form was completed as required, with the physical tests associated with the PQR performed by Pittsburgh Testing Laboratory and signed by their manager of the Chicago District.

4. Certification of Conformance

Illinois Fabricators was required to "... certify that all materials and furnished items supplied under this order were inspected and/or tested and conform with all requirements of the published specifications and requirements of this [purchase] order."

The inspector reviewed the statement of certification by Illinois Fabricators, Inc. that "... all materials and finished items supplied under P. O. 377-10870 conform with specifications received with the purchase order." The certification was signed by the President of Illinois Fabricators, Inc.

In addition to verifying Illinois Fabricators' conformance to the requirements established by MCC Powers, the inspector reviewed the Contract Specification governing HVAC controls. The Contract Specification was written "... by Baldwin Associates on March 22, 1978 by and between MCC Powers, a unit of Mark Controls Corp., ... and Baldwin Associates, ... for HVAC Controls, complete for Clinton Station."

The inspector found no weld-related requirements in Article 112, Codes and Standards, Division 1 - General Requirements. It was noted, however, that the subarticle dealing with control panels found in Division 3 - Technical Requirements, states, "Each panel shall be 3/16 inch steel plate, all welded-construction and built and reinforced in such a manner that no deflection will occur due to the weight of instruments, other apparatus, etc."

A review of the material referenced in the Welder Qualification Tests (QW-484) and the Welding Procedure Specification (QW-482) referenced in item 3 above, verified the thickness range as "1/16 - 3/8 [inch]," with the actual test plate being "5/16 [inch] thick." The base metal specified in QW-482 is "Commercial Quality Mild Steel," and "carbon steel plate" in QW-483. Thus, all available records indicate that Illinois Fabricators, Inc. fully satisfied the material and performance requirements specified by MCC Powers, Inc.

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C. Other Observations and Comments

The inspector noted that Illinois Fabricators, Inc. established a comprehensive Quality Assurance Program in support of expected participation in the construction of the now inactive Marble Hill Nuclear Generating Station. Revision 0 to the QA manual that was to have been used is dated 6-13-83 and contains 19 sections that appropriately address the eighteen criteria of Appendix B to 10 CFR 50.

The inspector examined purchase orders and other documents for items that would be required to support the fabrication and supply of safety-related components for the Marble Hill Station. These documents included calibration certificates for measuring and testing equipment, and welder certifications. No deficiencies were noted.

INSPECTOR E.H. TRIVIER
SCOPE Allegation 85-164

DOCUMENTS EXAMINED

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| ITEM NO. | TYPE OF DOCUMENT | DOCUMENT NO. | REV. | DATE | TITLE / SUBJECT |
|----------|------------------------|--------------|------|------------|---|
| 1 | QCD | — | — | 12 Nov 80 | Vendor Surveillance Report [Three Powers of Ill. Fab.] |
| 2 | QCD SPEC | QW-482 | — | 26 Mar 80 | Welding Procedure Specification 01 |
| 3 | QCD SPEC | QW-482 | A | 19 Nov 80 | " " " 02 |
| 4 | QCD | QW-483 | — | 22 Feb 80 | Procedure Qualification Record (POR-01) |
| 5 | QCD | QW-483 | — | 22 Feb 80 | " " " (POR-02) |
| 6 | QCD | QW-484 | — | — | Welder Qualification Tests (R. Hammond, Jr.) |
| 7 | QCD | QW-484 | — | — | " " " (A. Hanes, Jr.) |
| 8 | RPT | — | — | 2 Dec 80 | Panel Enclosure Receiving Inspection Report (PL 43 JA) |
| 9 | RPT | — | — | 2 Dec 80 | " " " " (PL 43 JB) |
| 10 | CERT | — | — | — | Certification of Performance (Ill. Fab to Three Powers) |
| 11 | P.O. | 377-10870 | — | 30 Sept 80 | Purchase Order, Panels A+B (Contract 379-N-1801) |
| 12 | QCD | 674-4S | A | 3 Oct 80 | QA Requirements List for Purchased Mat'l + Equipment |
| 13 | SPEC | — | — | — | "Cutting Cards" (Strip Travelers) for Panels A+B |
| 14 | QAM | — | 0 | 13 Jan 83 | Ill. Fab. QA Manual for Marble Hill (2 Sections) |
| 15 | P.O. | 2937 | — | — | Calibration Services (Cal pers - Included Cal. Cert. of 5 Dec 83) |

TYPE OF DOC:

DWG - DRAWING
SPEC - SPECIFICATION
PRO - PROCEDURE
QAM - QA MANUAL
QCD - QC DOCUMENT
P.O. - PURCHASE ORDER

LTR - LETTER
~~RPT~~ - ~~REPORT~~
~~CERT~~ - ~~CERTIFICATION~~
—
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|----------|------------------|---------------------------------|------|------------|--|
| 16 | CERT | QAP-301 | 3 | - | Welder Qual Test Certification by AWS D1.1-79 |
| 17 | SPEC | QAP-301 12-29-11 12-29-11 | - | 22 June 78 | Contract Specification - Bulkhead Asta (under Sargent & Lundy) |

TYPE OF DOC:

DWG - DRAWING
SPEC - SPECIFICATION
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QAM - QA MANUAL
QCD - QC DOCUMENT
P.O. - PURCHASE ORDER

LETTER - LETTER

Illinois Fabricators Inc

Dates 6-8 Nov 85

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