

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

Report No. 99900342/80-01

Program No. 51300

Company: Lakeside Bridge and Steel Company
5300 N. 33rd Street
Milwaukee, Wisconsin 53209

Inspection Conducted: June 2-6, 1980

Inspector:

Uldis Potapovs
L. E. Ellershaw, Contractor Inspector
Components Section II
Vendor Inspection Branch

6-13-80
Date

Approved by:

Uldis Potapovs
Uldis Potapovs, Chief
Vendor Inspector Branch

6-13-80
Date

Summary

Inspection conducted June 2-6, 1980 (99900342/80-01)

Areas Inspected: Implementation of 10 CFR 50, Appendix B, Criteria, and applicable codes and standards including: previous inspection findings; radiography, weld material control; and three Construction Deficiency Reports. The inspection involved thirty-four inspector-hours on site.

Results: In the areas inspected, no deviations from commitment or unresolved items were identified.

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DETAILS SECTION

(Prepared by L. E. Ellershaw)

A. Persons Contacted

F. Cullen, Welding Foreman
W. E. Jonas, QA Engineer, NDE Level III Examiner
R. Rozek, Director, Quality Assurance
A. Wos, QA Engineer

B. Action on Previous Inspection Findings

1. (Closed) Item A (Report No. 79-02): This item dealt with the failure of welders to measure interpass temperatures.

Lakeside Bridge and Steel Company (LB&S) has implemented their committed corrective action in that, the inspector observed seven in-process welding operations, in which all welders were equipped with tempil-sticks and they were measuring interpass temperatures.

2. (Closed) Item B (Report No. 79-02): This item dealt with vendors being placed on the Approved Vendor List in which the performed evaluation was not based upon written checklists pertinent to activities performed by the vendors.

LB&S had implemented their committed corrective action in that the pertinent activities have been evaluated and the information recorded on the LB&S Vendor Checklist. The Director of QA is now reviewing all vendor audit results.

C. Radiography

1. Objectives

The objectives of this area of the inspection were to verify that LB&S had implemented the requirements for Radiographic Examination (RT) in accordance with the QA Manual and applicable NRC and ASME Code requirements.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of QA Manual Section 14, "Examination and Testing."
- b. Observation of in-process radiography being performed on Job No. 9210, a containment vessel equipment hatch.
- c. Review of Manufacturing Process Sheet No. 3-0 which specified RT per Radiographic Procedure 7.10, Revision 1.

- d. Review Procedure 7.10, Revision 1, and verification of the RT set-up as required by the procedure i.e., type and location penetrometer, shims used, geometric unsharpness, identity of the radiographed location, and certification of the source.
- e. Review of the nondestructive examination personnel qualifications and records.
- f. Discussion with cognizant personnel.

3. Findings

a. Deviation From Commitment

None

b. Unresolved Item

None

D. Weld Material Control

1. Objectives

The objectives of this area of the inspection were to verify that LB&S had implemented the requirements for the control and identification of welding materials in accordance with the QA Manual and applicable NRC and ASME Code requirements.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of QA Manual Section 10.0, "Welding," Revision 3 dated October 25, 1978.
- b. Observation of welding material storage areas including the holding ovens.
- c. Review of weld material issue slips and verification that the specified material was the only weld material in the possession of the welders.
- d. Review of Certified Material Test Reports for the issued welding material, including the test results for flux/wire combinations being used in submerged arc welding.
- e. Discussions with cognizant personnel.

3. Findings

a. Deviation From Commitments

None

E. Construction Deficiency Report (CDR):

This CDR deals with incorrect radiographic technique, in that penetrameters were placed on the film side rather than the source side, with subsequent erroneous evaluations of the film.

The initial report of the CDR was made by Tennessee Valley Authority (TVA) on January 15, 1980 and dealt with radiographic examination of the Hartsville Nuclear Plant, Unit B-1 drywell vent structure. Ultimately, this was expanded to include the reactor pressure vessel pedestal for Unit 1, of the Phipps Bend Nuclear Plant.

Lakeside Bridge & Steel Company (LB&S) does not perform any radiographic Examination (RT). All RT, at that time, was subcontracted to McManus Inspection Services, Milwaukee, Wisconsin. The RT procedure approved for use on these jobs, was Procedure No. 7.17, Revision 1 and 2.

The procedure requires that penetrameters be placed on the source of radiation side of the item being tested. All data, including placement of penetrameters, is to be recorded on a Radiographic Inspection Report (RIP). All RIPs, filled in by McManus, show source side placement of penetrameters. This subsequently, was shown to be false in certain cases. It appears that McManus placed the penetrameters in the most convenient position, which was often on the film side. The LB&S Level III Examiner stated that on the occasions he observed McManus performing RT, the penetrameters were placed on the source side. All RT performed by McManus was at LB&S.

LB&S removed McManus from their Approved Vendors List on January 29, 1980. RT is now performed by Wisconsin Industrial Testing, Inc., approved by LB&S on January 31, 1980, on the basis of vendor evaluation. Observation of in-process RT being performed by Wisconsin Industrial Testing, Inc. (WIT) showed compliance with the requirements of the procedure (See paragraph C). A review was made of the WIT personnel qualifications including eye examinations. These were found to be in accordance with SNT-TC-1A and ASME Code requirements.

A radiographic film review has been performed by LB&S on all TVA work. A determination was made as to which film was inadequate and additional RT was performed. Defects found in the new RT have been and are being repaired at the sites (Hartsville and Phipps Bend), by LB&S.

The actions taken to prevent recurrence are as follows: LB&S is training a Level I RT examiner who will be assisting in the set-up of RT being performed by WIT, and the LB&S Level III examiner will be reviewing all reader sheets and film with his approval signature necessary before parts can be released for shipment.

F. Construction Deficiency Reports (CDR):

This CDR was generated by Duke Power Company as a result of their being notified by LB&S of incorrect radiographic technique used at LB&S by McManus Inspection Services, on equipment hatch welds. In addition, the penetrameters were incorrectly identified in that they were placed on the film side without a lead letter "F" being placed on the penetrameter.

The affected site was Catawba, Unit 1. LB&S went to the Catawba site, and re-radiographed the equipment hatch welds.

The result of re-radiography showed approximately eleven rejectable indications, necessitating repairs. These repairs have been accomplished with radiography of the repairs showing them to be acceptable.

The actions taken to prevent recurrence are the same as stated in paragraph E.

G. Construction Deficiency Report (CDB):

The CDB was generated by Duke Power Company (DPC) as a result of incorrect radiographic technique employed on the steam generator enclosure welds for the Catawba Unit 1 site. Part of the RT was performed using a film side penetrameter. This RT was performed by WIT at LB&S. WIT did indicate on the reader sheets and on the penetrameters that the penetrameters were film side. The ASME Code allows placement of penetrameters on the film side only if the source side is inaccessible. DPC evaluated the welds on the steam generator enclosure and determined that there were no inaccessible areas. As a result, those areas in which the reader sheet and the penetrameters were marked film side were re-radiographed by LB&S/WIT, at the site. The re-radiography showed no rejectable indications. There was one area which was repaired even though it met the acceptance criteria of the ASME Code.

The actions taken to prevent recurrence are the same as stated in paragraph E.

H. Conclusions

As a result of the generic implications of the three CDRs, LB&S committed to complete a review of all jobs, in which required radiography was performed by McManus Inspection Services, with written notice to NRC detailing the results of their evaluation by July 31, 1980. In addition to the written notice, LB&S will provide NRC with copies of any required notifications to their customers as a result of this evaluation. It should be noted that LB&S had started to perform the evaluation, as shown by their notification to Duke Power Company.

During this inspection, the following jobs, including equipment description and sites, were identified as having had radiography performed by McManus Inspection Services:

<u>Job No.</u>	<u>Equipment</u>	<u>Site</u>
9112	Support Steel	Virgil Summer
9126 - 9136	Pipe Whip Restraints	St. Lucie-2
*9144	Reactor Pressure Vessel Pedestal	Phipps Bend-1
*9161	Dry Well Vent Structure	Hartsville-1
9182	Steam Generator and Reactor Vessel Supports	Marble Hill-1
*9210	Equipment Hatch	Catawba-1
9211	Reactor Pressure Vessel Support	Black Fox-1
*9218	Steam Generator Enclosures	Catawba-1

The Job Nos. identified with an asterisk have undergone an evaluation by LB&S, with corrective action taken where necessary.

I. Exit Interview

A meeting was held at the conclusion of this inspection on June 6, 1980, with the following management representatives:

- G. Behnke, Executive Vice President
- F. Bohacek, Superintendent
- w. E. Jones, QA Engineer, NDE Level III Examiner
- A. Jurevics, Vice President Engineering
- E. Kasdorf, President
- R. T. Rozek, Director, Quality Assurance
- A. J. Wos, QA Engineer.

The scope and findings of this inspection were summarized. Management acknowledged the statements relative to the findings.