

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

Region I

Report No. 50-410/79-01

Docket No. 50-410

License No. CPPR-112 Priority -- Category A

Licensee: Niagara Mohawk Power Corporation

300 Erie Boulevard, West

Syracuse, New York 13202

Facility Name: Nine Mile Point Nuclear Station, Unit 2

Inspection at: Scriba, New York

Inspection conducted: January 8-11, 1979

Inspectors: Louis Narrow
L. Narrow, Reactor Inspector

1/29/79
date signed

W. F. Sanders
W. F. Sanders, Reactor Inspector

Jan 29, 1979
date signed

G. A. Walton
G. A. Walton, Reactor Inspector

Jan, 29, 1979
date signed

A. N. Fasano
A. N. Fasano, Reactor Inspector

Jan 29, 1979
date signed

Approved by: R. W. McGaughy
R. W. McGaughy, Chief, Construction
Projects Section, RC & ES Branch

February 2, 1979
date signed

Inspection Summary

Inspection on January 8-11, 1979 (Report No. 50-410/79-01)

Areas Inspected: Routine unannounced inspection by regional based inspectors, which commenced during the evening shift of January 8, 1979, for review of QC programs for structural steel erection and welding; biological shield welding; document control; UT inspection of cadweld sleeve to knuckle welds; and the status of outstanding items. The inspection involved 80 inspector-hours on site by four NRC regional based inspectors.

Results: No items of noncompliance were identified.

7908200 576



DETAILS

1. Persons Contacted

Niagara Mohawk Power Corporation

*S. H. Haybrook, Senior Site Construction Representative
*C. G. Honors, QA Engineer
*C. D. Terry, Senior Site QA Representative
K. D. Ward, QA Engineer

Stone and Webster Engineering Corporation (S&W)

P. Barbadora, Field QC Engineer
P. Fadden, Field Engineer
*B. F. Gallagher, Senior Resident Engineer
*C. E. Gay, Superintendent, Field QC
*J. E. Karr, Project QA Manager
F. Kovenski, Lead Structural Engineer
N. Ramsey, Night Superintendent
S. Sessoms, NDE Engineer (Boston Office)

Graver Tank and Manufacturing Company (Graver)

J. A. Fennema, Site Manager
M. Skates, QC Supervisor

ITT Grinnell Corporation (Grinnell)

R. Graiko, Project Engineer
D. R. Giguere, Manager, QC

Chicago Bridge and Iron Company (CBI)

T. Dougherty, Welding QC Supervisor

The inspector also interviewed other licensee and contractor employees during the inspection.

*denotes those present at the exit interview.



2. Plant Tour

The inspectors made a tour of the site to observe work activities in progress, completed work and the status of construction. The inspectors examined work items for any obvious defects or noncompliances with regulatory requirements and observed QC activities and evidence of quality control of the work. Specific activities observed by the inspectors included weather protection for winter construction, installation of reinforcing steel and the primary containment liner which is described in more detail in Paragraph 9 of this report.

No items of noncompliance were identified.

3. General

The inspector informed the licensee's representative that certain power supplies provided by Bailey Controls were potentially defective and that some of these power supplies may have been furnished to Niagara Mohawk Power Company. Investigations by the licensee indicated that these items had not been provided for the Nine Mile Point, Unit 2 plant.

Mr. C. E. Gay has been appointed Superintendent of Field QC, replacing Mr. B. W. Gatlin, who was transferred to another site.

Termination of Graver Tank and Manufacturing Company's contract for fabrication and installation of the containment liner is in litigation with work by Graver continuing under a temporary restraining order.

4. Piping Alignment and Support

The inspector visually examined multiple pipe support 108 TP-107-1, Mark No. 2-SWP-PSR-084-B3, service water system. The service water pipe remains to be aligned and the support remains to be inspected by the licensee representatives. The clearances between the pipe and the vertical members of the supports do not appear to meet the specified requirements.

This item was discussed with the licensee representatives and is considered to be an unresolved item pending completion of alignment and inspection by field QC 410 (79-01-01).



5. Document Control and Distribution

The inspector reviewed the procedures shown below of the S&W "Combined Procedure for the Operation of Document Control/Records Management" for conformance to the requirements of Appendix D of the PSAR and the S&W "Standard Nuclear Quality Assurance Program SWSQAP 1-74" as modified for the Nine Mile Point, Unit 2 project.

" DM-1, Policy Manual dated December 2, 1977

" SDM-8, Distribution Site dated December 2, 1977

The inspector also reviewed monthly audits of document control by S&W Field QC and examined a random selection of drawings at eight field locations. No obsolete drawings were identified, and drawings in the field conformed to records maintained by Document Control with one exception. Two green (issued for construction) prints of Drawing No. EC 30 M, Revision 5, were observed at Walsh Field locations although they were not carried on Document Control records. Discussions with Walsh and S&W personnel and review of drawing distribution records showed that Walsh had been on distribution for these prints until September, 1978. The requested distribution was revised at that time. These prints should have been destroyed at that time and were destroyed at all other locations inspected. However, the existing procedure does not require confirmation of destruction of such prints.

This item is unresolved pending review by an NRC inspector of methods prescribed for confirming destruction of prints which are removed from distribution lists (410/79-01-02).

6. Safety Related Structures and Supports

The inspector interviewed cognizant licensee personnel, reviewed documentation, and visually inspected inside storage areas. The inspector visually inspected the upper bolting of one completed beam. The inspection addressed Quality Assurance/Control procedures and documented work instructions for assurance that the following attributes are addressed by the licensee and/or his representatives:

- a. plans and instructions established for quality control over safety related structural steel;



- b. hold points established for witnessing and inspection;
- c. receiving inspection and reporting requirements;
- d. requirements for storage, identification, and certification records;
- e. installation, inspections, and records.

The following documents were reviewed for the above attributes:

- S&W Specification for Structural Steel - Category 1, NMP2 - S204A, Revision 2, May 30, 1978
- QS-10.17, Structural Steel Erection, Revision A
- QS-10.43, Hanger Installation, Revision 0
- QAD-10.5, Structural Steel and Rock Bolt Reinforcement Inspection, Revision B
- CMP-4.1-5.78, Construction Methods Procedure for Structural Steel Erection, May 1978
- File for Preplan Specification 204A
- QAD-18.1, Program Audits, Revision B
- QAD-18.11, QA Program Audits of Sellers, Revision 0
- N&D File for Specification 204A
- Inspection Report - S9023102, December 29, 1978

The inspector reviewed the record for high strength bolting, (IRS 8025223), and visually inspected the upper bolting for beam, item No. B 2210 - B 1297, between columns A 506 and D 505. The connection was identified on Cives Corporation Drawing E-10. The high strength bolts, washers, and nuts were visually examined and found to be kept within a dry enclosure. Sizes were segregated and under control.



The inspector participated in a conference call with the lead structural engineer, S&W, on January 11, 1979. The criteria for thread engagement, location determination of bolt threads with respect to the shear plane for bearing type connections and the effect on final bolt tension when final torquing is delayed, was discussed. The results of the conference indicated that the licensee is evaluating the current thread engagement criteria and intends to review the surface conditions of bolting material in place.

The inspector had no further questions.

7. S&W Procedures for Compliance with 10 CFR 21

The inspector examined the procedures listed below which provide for reporting, maintaining records, and including the requirements of 10 CFR 21 in purchase orders placed by S&W in the field.

- Quality Standard QA-16.3, Revision 0, "Reporting Defects and Failures to Comply under 10 CFR 21"
- QS-16.2, Revision 0, "Reporting Deficiencies to the Nuclear Regulatory Commission"
- QA-17.1, Revision A, "Quality Assurance Records System"
- Field Purchasing Manual - Section V, Revised July 7, 1978.

No items of noncompliance were identified.

8. Cadweld Sleeve Attachment Welds

The inspector audited the inspection and repair activity of the cadweld sleeve attachment weld to the B-7 containment liner shell plate (knuckle area). The welds were shop welded by Graver and subsequent inspection in the field revealed defective welds. The contractor was nondestructively examining the welds using ultrasonics. The inspector reviewed or witnessed the following activities:

- " Ultrasonic Examination procedure QAD 9.51 dated December 18, 1978
- " Ultrasonic examination of four welds using angle and longitudinal waves



- Recording of ultrasonic data

The inspector determined that the licensee was taking appropriate actions to identify the defective weld areas.

No items of noncompliance were identified.

9. Structural Steel Procedure and Record Review

The inspector reviewed material certification, welding procedures, welding technique sheets, and welder qualifications for category I structural steels.

These items were evaluated against the AWS D 1.1 code applicable for structural steel installation.

The inspector examined the following documents relative to the above:

- Material Certified Test Reports - Heat M3916, Mark A2204, Heat 70B665, Heat 183W154, Heat 180A655
- Welding procedure W200A
- Welding technique sheets - W1A Revision 0, W1B Revision 0, W1C Revision 0, W1T Revision 0, W1X Revision 0, W70G Revision 2
- Welder Qualifications - I 12, I 14, I 33, I 11

No items of noncompliance were identified.

10. Primary Containment

Visual inspections were made of the completed work and work in progress in the primary containment liner. The specific areas examined were the bottom floor liners, Reactor Pedestal structure, installed penetrations for instrumentation, Beam seats and general surfaces of the containment liner at four elevations. All of these items were in the suppression pool section of the containment. During this inspection, several items were noted as apparent items of nonconformance which were traced through documentation, review and approval stages as required by the QA program.



Specific items noted:

- a. Bulged liner plate surface in areas close to penetrations and plate junctions. Particular note was made of an assembly JH 32 at elevation 217' which had a sizeable bulge. Subsequent review with quality control indicated that the conditions were within the specification tolerances.
- b. Rust conditions prevalent on installed penetration weldments and stainless steel plate surfaces were found to be controlled by nonconformance reports PNCR's 328 and 318 which specified actions to be taken and acceptance criteria.
- c. Disposition of contractor identified rejects related to welder qualifications on attaching stainless steel plate to containment side wall. The welders had been requalified.
- d. Questions of allowable straightness for welded penetration inserts. These were later found to be within specification tolerances.

No items of noncompliance were identified.

11. Record Review

The Quality related records for the containment liner had been moved from the job site by the contractor, Graver, relative to the termination of the contract by the licensee. An inspection was made in Oswego of the documentation storage facility, record retention and retrievability of records. The following records were randomly selected for review.

- Erection Control Sheet No. FP 0762 - B7-2 and B7A-2 cadweld sleeves to B7 rings and inside sleeve no. 29 to plate 7-B7
- Erection Control Sheet No. FP 0763 - Sleeve No. 30 to plate 7-B7
- Erection Control Sheet No. FP 0764 - Sleeve No. 31 to plate 7-B7
- Erection Control Sheet No. FP 1502 - Sleeve No. 2 to plate 5-B7



- Erection Control Sheet No. FP 1502 - Sleeve No. 3 to plate 5-B7

These records were inspected for completeness, planning, and integration of required NDE and inspection operations in the appropriate sequences as required by the specifications. The listing and details of nonconformance records which identified and resolved rejectable conditions identified by the contractor, were reviewed for compliance to the requirements of the QA program.

No items of noncompliance were identified.

12. Biological Shield Construction

An inspection was made of the Engineering Specification NMP2 - S204Y Biological "Shield Wall Assembly" and the related CB&I procedures listed below:

- Penetrant testing - PT 16X - Water Washable
- Magnetic Particle - MT 16X
- General Weld Procedure - GWPS - GMA - Gas Metal Arc
- General Weld Procedure - SMA - Shielded Metal Arc
- Contract Quality Assurance Handbook - RT-1N

The inspector noted that the completed structure would be fabricated from 3 ring weldments each ring containing 3 weldments which were fabricated off site. The 9 sections will be joined together by welding, inside of a fabricated, circular steel building which will be insulated on the inside. Upon completion of welding, the entire structure will be post weld stress relieved inside of the building. The assembly of the 9 sections had not been started as of this inspection; therefore, the inspection consists of a visual inspection of the individual weldments and the fabrication fixtures and facilities.

No items of noncompliance were identified.



13. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (78-09-02): Equipment storage history card records do not show check of humidity indicators. Inspection Report No. P-002858 and E&DCR No. C21224 had identified failure to check humidity indicators. Pump was inspected and dessicant installed November 2, 1978.

14. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, or items of noncompliance. Unresolved items disclosed during the inspection are discussed in Paragraphs 4 and 5.

15. Exit Interview

At the conclusion of the inspection on January 11, 1979, a meeting was held with representatives of the licensee. The inspector summarized the results of the inspection as described in this report.

