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

Region I

Report No. 50-410/79-09

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: November 28-30, 1979

Inspectors: A C Cerne — A. C. Cerne, Reactor Inspector — Dec 17, 1979 — date signed

W. F. Sanders — W. F. Sanders, Reactor Inspector — Dec 17, 1979 — date signed

_____ — _____ — date signed

Approved by: Lewis Tallow for — R. W. McGaughy, Chief, Construction Projects Section, RC&ES Branch — 12/26/79 — date signed

Inspection Summary:

Inspection on November 28-30, 1979 (Report No. 50-410/79-09)
Areas Inspected: Routine, uannounced inspection by regional based inspectors, of containment liner weld repairs; containment liner rigging activities; audit follow-up actions; and review of the outstanding GE relief valve issue. The inspection involved 37 inspector-hours on site by two regional based inspectors.
Results: No items of noncompliance were identified.

Region I Form 12
(Rev. April 77)

DETAILS

1. Persons Contacted

Niagara Mohawk Power Corporation (NMPC)

*S. E. Czuba, QA Engineer
*R. Dahlin, Syracuse Staff
*J. L. Dillon, QA Engineer
*C. G. Honors, Construction Engineer
K. M. Nilsson, Construction Engineer
*R. A. Norman, Senior Site QA Representative
M. Oleson, Assistant Resident Engineer
*R. L. Patch, QA Technician
I. S. Stupal, Manager of Construction, NMP2

Stone and Webster Engineering Corporation (S&W)

R. Bernard, Project QA Manager
*B. F. Gallagher, Senior Resident Engineer
*C. E. Gay, Superintendent of Field QC
R. L. Kelvin, Senior QC Engineer
E. Magilley, Senior QC Engineer
*M. G. Pace, Assistant Project QA Manager
B. Perkins, NDE Specialist
*J. E. Rogers, Chief Office Engineer
*L. E. Shea, Head, Site Engineering Office
J. Taylor, Senior QC Engineer

ITT Grinnell Corporation (Grinnell)

D. R. Giguere, Field QC Manager
R. Graiko, Project Engineer
D. L. Grodi, Inprocess Inspection Supervisor

Walsh Construction Company

J. F. Conlon, Senior Reactor Engineer

Chicago Bridge and Iron Company (CBI)

T. J. Dougherty, Project Welding and QA Superintendent
C. Hall, Project Superintendent
N. Vanwingerden, Contract Supervisor

*Denotes those present at the exit interview.

2. Plant Tour

The inspector observed work activities in-progress, completed work and plant status in several areas of the plant during general inspection of the plant. The inspector examined work for any obvious defects or noncompliance with regulatory requirements or license conditions. Particular note was taken of presence of quality control inspectors and quality control evidence such as inspection records, material identification, nonconforming material identification, housekeeping and equipment preservation. The inspector interviewed craft personnel, supervision, and quality inspection personnel as such personnel were available in the work areas.

Specifically, the inspector witnessed the conduct of MT examination of a weld on the third ring of the biological shield and checked weld rod control and preheat requirements in an interview with a craftsman who was welding on the containment drywell liner. He also verified that procedural requirements were being met in the areas of cold weather concrete protection and curing, core drilling, and the bending of reinforcing steel in cases of these activities, noted during tours of the plant over the course of the inspection.

No items of noncompliance were identified.

3. Licensee Action on Previous Inspection Findings

(Open) Unresolved Item (79-07-04): Dikkers Safety Relief Valve Status. The inspector reviewed correspondence, interviewed personnel, and determined that the questionable radiographs had been shipped from the Netherlands on November 15, 1979 directly to GE in San Jose, California. Correspondence also indicates that GE is aware of the problems found by the NRC review of similar radiographs at the Grand Gulf site (reference Inspection Report Nos. 416 and 417/79-23).

The inspector also reviewed S&W/GE Nuclear Energy Group Quality Assurance Interface Procedure 9M-1, Revision 1, and examined S&W Material Receiving and Receiving Inspection Reports, GE Procurement Quality Control Reports, and the NV-1 Code Data Reports to verify the existence of documentation required at the time of receipt of the 18 valves on site.

These 18 valves remain in "Reject" status until a determination is made regarding the acceptability of their radiographs. Pending NRC review of the final licensee decision in this matter, this item remains unresolved.

4. Primary Containment Liner

a. An inspection was made of items that were designated as significant deficiencies caused by inadequate nondestructive examinations (NDE) performed at the vendor shops on fabricated weldments and sections listed below:

1. Knuckle horizontal and vertical weld seams

2. Base ring T welds

3. Cad weld sleeves welded to knuckle and imbeds

4. Beam seats

5. Penetrations, instrument collar to pipe welds

The licensee had previously reported these as NDE and welding deficiencies in accordance with Title 10, Section 50.55(e) of the Code of Federal Regulations. The deficiencies were initially revealed as a result of an audit of the fabricator shop by the Architect Engineer, on September, 1978 where it was discovered that certain Ultrasonic Testing techniques were not properly implemented. The auditors noted that the ultrasonic examinations had been performed using a sound beam entry angle of 45° and scanning in one direction. Due to the geometric configuration of the weld grooves, this angle did not produce a full volumetric examination of the weld and the heat affected (HAZ) and would not identify defects that were oriented perpendicular to the plate surfaces. This problem led to initiation of a retest program which incorporated revised test procedures and scanning techniques using various transducer angles. The program is presently in progress on the deficient weldments that have been installed into the containment liner and testing has revealed unacceptable welds that require repairs. The inspector was informed that the major portion of welds which require repair were originally welded using the Flux Core process (GMAW). Pertinent revisions of the NDE procedure and the improved scan techniques were reviewed with a license representative and the Architect Engineer NDE specialist for assurance that the procedures and techniques in progress would thoroughly examine the weld volume and heat affected zones. No items of noncompliance were identified.

b. The inspector randomly selected noncomformance and Disposition Reports (N&D) related to the deficiencies for a review of the

problem descriptions and subsequent corrective actions. No items of noncompliance were identified.

c. A visual inspection was made of the items listed in paragraph a. This included test preparation of the instrument penetrations in the suppression chamber for ultrasonic inspection of the adaptor ring to the sleeve welds and observations of the ultrasonic examination in progress on one of the beam seat imbeds. No items of noncompliance were identified.

5. Containment Liner Erection - Special Lifts

The inspector reviewed procedures and records and interviewed personnel regarding the rigging and handling of the containment liner lower knuckle and lower cone sections. Each of these assemblies weighs over 100 tons and required adherence to special procedures in lifting and setting them into final position. The applicable procedures (S&W Field Construction Procedures FCP-9, Revision 5, and FCP-12, Revision 12) were checked specifically for QC controls to assure quality of the assemblies during and after the lift process.

While QC inspection of these two lifts was not procedurally required, examination of the CBI Master Check List for Control and Certification (Revision 4) revealed an attribute check to assure the performance of rigging and handling in accordance with CBI Special Instructions SI-1 and SI-2, both Revision 1. The inspector verified compliance with these instructions with regard to the completion and approval of Equipment Lift Cards (Lift Record No 246 for the lower knuckle and 283 for the lower cone).

Additionally, the inspector noted that a requirement for the visual inspection of the lower knuckle beam seats had been documented on CBI Nonconformance Control List No. 1, and dispositioned on April 18, 1979 with satisfactory completion of this inspection.

The above items were evaluated with regard to criteria established in Division 4 of the CBI Nuclear Quality Assurance Manual for ASME III Products, Issue No. 8; and ANSI Standard N45.2.2. Additional criteria required by S&W Quality Standard QS-13.1, Revision B, with regard to inspection of these lifts, were discussed with licensee personnel. The inspector reviewed S&W Quality Assurance Inspection Reports QAIRs W9015386 and W9015411 and NMPC QA Surveillance Reports 0142-79 and 0161-79 to establish the extent to which the lifts associated with the setting of the lower knuckle had been monitored. In the case of the rigging and handling of the lower cone, the inspector reviewed NMPC

Surveillance Report 0366-79 and discussed the advisability of formal QC inspection and documentation of such "special" lifts, over and above the random inspection requirements, applied to all similarly categorized "Class B" lifts. The licensee indicated that this would be evaluated during an audit of contractor rigging procedures and activities, to be conducted in the near future.

The inspector had no further questions on this issue. No items of noncompliance were identified.

6. Review of Audit Follow-up

The inspector reviewed the S&W Contractor Audit Report No. NM2-C1 (June 1, 1979) for ITT Grinnell Industrial Piping and the appropriate corrective action Audit Report No. NM2-C3 (August 10, 1979). For those items identified in the original audit and carried as still open in the subsequent audit, the inspector checked the status of proposed corrective action. He reviewed the applicable portions of S&W Specification P301C, Revision 1; S&W Quality Assurance Directive QAD-18.5, Revision B; and Grinnell Field QC Procedures FQC-4.2-16-2 and FQC-4.2-14 (not yet approved). The adequacy of activities implemented to effect corrective action was evaluated with regard to Section 16 of both the NMPC Quality Assurance Manual and the S&W Quality Assurance Program Manual.

No items of noncompliance were identified; however, one item remains unresolved as discussed below.

One audit finding (Report C1) regarding the inspection of installed pipe supports recommended that the issuance of the subject Grinnell inspection procedure (FQC-4.2-14) be expedited. The follow-up audit (Report C3) found this issue to be as yet unresolved. As of this NRC inspection, six months after the issuance of the original audit finding, the inspector determined that the subject procedure had not been approved or issued. Since the question of "prompt" and "timely" corrective action depends upon its relation to and effect upon the quality of the installed pipe hangers, the inspector examined the attributes listed in a draft of FQC-4.2-14 and interviewed personnel to determine if any adverse effect upon quality is created by the fact that no approved version of this procedure currently exists. Several of the attributes refer to inspection in accordance with the "latest approved Engineering Detail Drawing" and the inspector was informed that these are not available until after installation of the support and final approval of the actual installation details by engineering. These supports are classified as "temporary" until such approval is

provided. While the inspector indicated some concern over this system of installation with subsequent approval and inspection, he recognizes that utilization of such a system with proper controls is not detrimental to quality.

Pending review by the inspector of the procedural controls over this pipe support installation system, examination of some of the finally approved Engineering Detail Drawings, and further discussion with the licensee on the adequacy of corrective action followup, this issue is unresolved (410/79-09-01).

7. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. An unresolved item disclosed during the inspection is discussed in Paragraph 6.

8. Exit Interview

At the conclusion of the inspection on November 30, 1979, a meeting was held at the Nine Mile Point Unit 2 site with representatives of the licensee. Attendees at this meeting included personnel whose names are indicated by notation (*) in paragraph 1. The inspector summarized the results of the inspection as described in this report.