

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-220/86-10

Docket No. 50-220

License No. DPR-63 Category C

Licensee: Niagara Mohawk Power Corporation

300 Erie Boulevard West

Syracuse, New York 13202

Facility Name: Nine Mile Point Unit 1

Inspection At: Scriba, New York

Inspection Conducted: June 16-20, 1986

Inspectors: *J. A. McBrearty* 7-9-86
R. A. McBrearty, Reactor Engineer date

Approved by: *J. D. Wiggins* 7-9-86
J. D. Wiggins, Chief, Materials and date
Processes Section, EB, DRS

Inspection Summary: Inspection on June 16-20, 1986 (Report No. 50-220/86-10)

Areas Inspected: Routine, unannounced inspection by one regional based inspector of Control Rod Drive Stub Tube examinations, Data review regarding Recirculation System and Emergency Condenser piping and activities related to the Hydrogen Water Chemistry Sampling Line hydrostatic pressure test.

Results: One violation was identified: placing the Hydrogen Water Chemistry Sampling Line in service prior to performing the hydrostatic pressure test.

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DETAILS

1. Persons Contacted

Niagara Mohawk Power Corporation

- *J. Boyler, Engineer
- *T. Breigle, Quality Assurance Engineer
- *W. Connolly, Quality Assurance Program Manager
- *W. Drews, Technical Superintendent
- *F. Hawksley, ISI
- *H. Master III, Quality Assurance Engineer
- *P. Mazzaferro, Assistant Supervisor-Technical Support
- *T. Perkins, General Superintendent
- *R. Randall, Supervisor-Technical Support
- *T. Roman, Station Superintendent
- *G. Snyder, Associate Generation Engineer
- *B. Wolken, Engineer
- T. White, Assistant Generation Specialist

Chicago Bridge and Iron

C. Kirk, Welding Quality Assurance Superintendent

United States Regulatory Commission

*W. Cook, Senior Resident Inspector

*Denotes those present at the exit meeting.

2. Hydrogen Water Chemistry System Hydrostatic Pressure Test

The Hydrogen Water Chemistry System modification involved the installation of a sampling line from a perforated LPRM tube through an already existing containment penetration. The modification was to be done in accordance with the rules of the 1980 edition of ASME Section III, Subsection NC with the Summer 1982 Addenda. Welding was to be controlled by ASME Section IX, 1980 edition through Summer 1982 Addenda.

The inspector reviewed the following to ascertain compliance with the applicable requirements of ASME Section III, Subsection NC:

- o Niagara Mohawk Design Transmittal N1Y85M9271 LF
- o Niagara Mohawk Procedure No. N1-ISI-HYD-94
- o CB&I Procedure SI-11, Rev. 1
- o CB&I Traveler RSL-1, Contract No. 863060/64



The inspector found that the controlling documents did not clearly define the sequence in which work on the system was to be accomplished with respect to the Code-required hydrostatic pressure testing. Construction and testing requirements, in some cases, were delineated in narrative form in both the licensee's and contractor's procedures and were then incorporated in the CB&I Traveler which governed the field work. The Traveler was found to permit system hydrostatic tests to occur prior to a final welding operation between the containment penetration and the sampling system piping. This resulted in the system being placed in operation before the completed system was hydrostatic pressure tested as required by ASME Section III. Also, as a result of the incorrect sequence provided by the Traveler, a pin hole leak developed in the system piping at the reactor building side of the containment penetration which was not detected until the plant was in a startup mode and pressurized.

The fact that an inadequate field installation procedure was used for this modification is a violation of the applicable ASME Section III requirements. (220/86-10-01)

3. Control Rod Drive (CRD) Stub Tube Examination

The inspector reviewed documents, interviewed licensee personnel, and examined nondestructive examination records associated with CRD Stub Tube cracking. The following were included in the inspector's review:

- Stub Tube/Control Rod Drive Penetration Repair Program
- Inspection Plans for Spring 1986 Refueling Outage
- Procedure No. 6284-ISI-082, Revision 1, "Ultrasonic Examination Procedure For Reactor Vessel Control Rod Drive Housings From the I.D."
- Procedure No. 00000-ISI-029, Revision 5, "Generic Manual Ultrasonic Examination Procedure"
- Nondestructive Examination Data associated with CRD 30-07, 30-47, 34-07 and 46-27.

The above review was done to ascertain compliance with licensee commitments and to verify that the examinations were done by qualified personnel.

The inspector found that CRD Housing leaks were repaired by a rolling technique which had previously been used to make repairs. The affected components were ultrasonically examined before and after the rolling operation by qualified technicians using approved procedures. The licensee had committed to ultrasonically examine at least one previously rolled housing during each refueling outage. The examination of CRD 46-27 fulfilled that commitment.



The inspector found that licensee commitments were met and that required examinations were completed.

No violations were identified.

4. Preservice Inspection (PSI) Data Review

During 1986 refueling outage, the licensee replaced emergency condenser piping and performed Induction Heat Stress Improvement (IHSI) on 26 welds in the recirculation system.

The inspector reviewed the 1986 Outage PSI Plan For Replaced Piping and Components at Nine Mile Point Unit 1 - Document No. 81A1030, Revision 0. This Plan delineated the PSI requirements and provided appropriate diagrams to identify the areas for examination of those Class 1, 2 and 3 portions of piping and components which were replaced or given IHSI during the outage. The examinations were intended to meet the ASME Code Section XI, 1980 Edition through Winter 1981 Addenda. In addition, selected weld examination data were reviewed to ascertain that program requirements, code requirements and regulatory requirements were met. The following were included in the inspector's review:

- 32-FW-12S-5, Recirculation System 28" diameter valve to pipe weld
- 32-FW-12S-2, Recirculation System 28" diameter elbow to pipe weld
- 39-FW-4043-09, Emergency Condenser 10" diameter safe-end to pipe weld
- 39-SW-4043-019, Emergency Condenser 10" x 12" reducer to pipe weld

The recirculation system ultrasonic examinations were done using UDRPS automated techniques, and the emergency condenser welds were examined with manual techniques. Additionally, the welds were liquid penetrant examined per Section XI requirements.

The inspector found that applicable code and regulatory requirements were met, the examination results were properly documented, and the examinations were done by qualified personnel using approved procedures.

5. Personnel Qualification/Certification Records

Certification records were reviewed for personnel who were associated with the NDE performed on the welds listed in paragraph 4. This included the automated examinations performed on the recirculation system welds. The review was done to ascertain that the individuals were properly qualified to perform their assigned duties.

The records indicated that the examiners were qualified in accordance with SNT-TC-1A and the Nuclear Energy Services qualification program.



The individual who analyzed the UDRPS automated data was certified to UT Level II limited to automated techniques and had received EPRI training in IGSCC planar flaw sizing, and in the examination of weld overlays. He had successfully passed the practical examinations, given at the EPRI NDE Center, in flaw sizing and IGSCC detection - data acquisition and analysis using the UDRPS system. His activities at Nine Mile Point Unit 1 were limited to the analysis of data collected by UDRPS during the examination of recirculation system welds.

No violations were identified.

6. Quality Assurance/Quality Control Interface

In connection with the review of the procedures used to control the installation of the hydrogen sampling modification discussed in paragraph 2, above, the inspector noted contractor QC hold points established in the Traveler. The inspector thus concluded that CB&I QC had reviewed the Traveler so that appropriate hold points could be established. The inspector also noted that, despite this QC review, the inadequacy of the Traveler with regards to the sequencing of hydrostatic testing and work activities was not identified.

7. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on June 20, 1986. The inspector summarized the purpose and the scope of the inspection and the findings. At no time during this inspection was written material provided by the inspector to the licensee.

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