U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 83-08

Docket No. 50-220

License No. DPR-63 Priority -- Category C

Licensee: Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, New York 13202

Facility Name: Nine Mile Point Nuclear Station, Unit 1

Inspection At: Scriba, New York

Inspection Conducted: April 1-30, 1983

Inspectors: S D Hudson — 5/11/83
S. D. Hudson, Senior Resident Inspector — date

S.D. Hudson for — 5/11/83
L. T. Doerflein, Resident Inspector — date

for J.F. Stolz — 5/18/83
R. A. McBrearty, Reactor Engineer — date

Approved by: H B Kister — 5/18/83
H. B. Kister, Chief, Reactor Projects Section 1C — date

Inspection Summary:

Inspection on April 1-30, 1983 (Report No. 50-220/83-08)

Areas Inspected: Routine inspection by two resident inspectors and one region-based inspector (132 hours). Areas inspected included: plant tours, observation of physical security, modifications, Q. A. program, inservice inspection, training, refueling, licensee's response to IE Bulletin, and periodic reports.

Results: One violation was identified. (Failure to control the use of jumpers, paragraph 3.c).

Region I Form 12
(Rev. February 1982)

DETAILS

1. Persons Contacted

Niagara Mohawk Power Corporation

J. Aldrich, Supervisor, Operations
T. Breigle, Lead Q. C. Engineer
W. Connolly, Supervisor, Q. A. - Operations
K. Dahlberg, Site Maintenance Superintendent
W. Drews, Technical Superintendent
J. Duell, Supervisor, Chemistry and Radiation Protection
F. Hawksley, ISI Coordinator
E. Leach, Superintendent of Chemistry and Radiation Management
T. Perkins, General Superintendent, Nuclear Generation
B. Reekie, Q. A. Inspector
T. Roman, Station Superintendent

Nuclear Energy Services

P. Barry, NDE Level III
M. Stamm, NDE Level III

The inspectors also interviewed other licensee personnel during the course of the inspection including shift supervisors, administrative, operations, health physics, security, instrument and control, and contractor personnel.

2. Summary of Plant Activities

The plant remained out of service throughout the inspection period. The recirc piping replacement was completed and the reactor vessel was filled on April 8. Following control rod blade replacement, fuel reloading began on April 25.

3. Plant Tours

(1) During the inspection period, the inspector made multiple tours of plant areas to make an independent assessment of equipment conditions, radiological conditions, safety, and adherence to regulatory requirements. The following areas were inspected:

-- Control Room

-- Turbine Building

-- Auxiliary Control Room

-- Vital Switchgear Rooms

-- Yard Areas

-- Radwaste Area

-- Diesel Generator Rooms

-- Screen House

-- Reactor Building

-- Drywell

(2) The following items were observed or verified:

(a) Radiation Protection:

-- Personnel monitoring was properly conducted.

-- Randomly selected radiation protection instruments were calibrated and operable.

-- Area surveys were conducted and the Radiation Work Permits were appropriate for the as-found conditions.

-- Radiation Work Permit (RWP) requirements were being followed.

On April 28, 1983, the inspector observed the radiological precautions implemented for the divers performing the repair of the reactor steam dryer. The dryer was located in the internal storage pit. The highest radiation level measured in contact with the dryer was 1.4 Rem/hr. A tent had been built over the entire storage pit and a filter exhaust unit was in operation. The inspector reviewed the pre-dive check list for the morning and the current dive in progress. Continuous radiation protection coverage was assigned to monitor the divers.

(b) Fire Protection:

-- Fire doors were unobstructed and in their proper position.

-- Ignition sources and combustible materials were controlled in accordance with the licensee's approved procedures.

-- Fire watches were posted during periods when smoke detection equipment was out of service.

-- Randomly selected fire extinguishers were accessible and inspected on schedule.

(c) Equipment Controls:

-- Jumpers and equipment mark-ups did not conflict with Technical Specification requirements.

-- Mark-ups were performed in accordance with approved procedures.

-- The inspector independently verified that the following mark-up had been properly conducted by observing the position of breakers and/or valves:

RMU #3029 on #103 Emergency Diesel Generator

-- The inspector independently verified that the following jumper had been properly installed:

Jumper #1259 on Reactor Vessel Level Instrumentation

-- On April 27, 1983, the inspector also examined Core Spray Cabinets #1S63 and 1S73 to ensure that the core spray system's actuation logic had been restored to normal. The core spray system is required to be operable since reloading of the fuel began on April 25. The inspector noticed an unnumbered jumper in cabinet #1S63 from terminal Y-10 to Y-17 and jumper #10 in cabinet #1S73 from terminal J-10 to K-2. These jumpers defeated the interlock designed to prevent the simultaneous opening of the core spray isolation valves inside and outside of the primary containment. This interlock is not required when the plant is depressurized but helps to protect the low pressure piping in the core spray system when the reactor is operating at normal operating pressure. However, there was no assurance that the jumpers would be removed prior to start-up. Jumper Log #1392 indicated that the jumpers had been removed on April 13, 1983.

Administrative Procedure APN-7A, "Placement of Jumpers or Blocks or Lifting of Leads," Revision 8, dated September 7, 1982, Section 4.1 requires that all jumpers shall be identified by a serial number. Section 4.3.3 states in part" "After restoration, the person performing and the person verifying the restoration shall sign the jumper/ block log ..." The use of unnumbered jumpers and the failure to remove jumpers when the log indicates that they have been removed is a violation of the Administrative Procedures (50-220/83-08-01).

The inspector also observed four lifted leads in cabinet #1S63, specifically leads #12, 13, 14, 15 on terminal

board "L". These lifted leads deactivated one of the two level indicators for the area under the torus and were not listed in the Jumper/Lifted Lead Log. A licensee examination of the cabinet had previously identified that the leads were lifted and the licensee plans to reconnect the leads prior to start-up. Additionally, the licensee stated an examination would be made of the interior of the Control Room panels and the cabinets in the Auxiliary Control Room to verify that there were no unidentified jumpers or lifted leads prior to start-up. The licensee's actions will be examined at a future inspection (50-220/83-08-02).

(d) Review of Logs and Operating Records:

The inspector reviewed the following logs and inspections for the period April 1-30, 1983:

-- Control Room Log Book

-- Station Shift Supervisor's Log Book

-- Station Shift Supervisor's Instructions

The logs and instructions were reviewed to:

-- Obtain information on plant problems and operation;

-- Detect changes and trends in performance;

-- Detect possible conflicts with technical specifications or regulatory requirements;

-- Determine that records are being maintained as required; and

-- Determine that the reporting requirements of technical specifications are met.

4. Observation of Physical Security

The inspector verified that selected aspects of the plants physical security system were in accordance with regulatory requirements, physical security plan and approved procedures. The following observations relating to the physical security were made:

-- The security force was properly manned and appeared capable of performing their assigned functions.

-- Protected area barriers were intact - gates and doors closed and locked if not attended.

-- Isolation zones were free of visual obstructions and objects that could aid an intruder in penetrating the protected area.

-- Persons and packages were checked prior to entry into the protected area.

-- Vehicles were properly authorized, searched and escorted or controlled within the protected area.

-- Persons within the protected area displayed photo-identification badges, persons in vital areas were properly authorized, and persons requiring an escort were properly escorted.

No violations were identified.

5. Contractor Installed Modifications

A contractor is currently performing a modification to install new valve stations in the containment spray raw water lines. These valves will allow raw water (lake water) to be injected into either the core spray or containment spray system. The contractor is also providing Quality Control inspections in accordance with established hold points. The licensee's Quality Assurance (Q. A.) is performing spot checks to verify implementation of the contractor's Q. A. program.

The inspector reviewed an audit, dated April 7, 1983, performed by the licensee to ensure that the contractor has an established Q. A. program that meets the requirements of 10 CFR 50, Appendix B. No major concerns were identified. The inspector also reviewed Quality Control Inspection Report No. 83-185. This report documented the licensee checks of weld fit-ups, the contractor's welder qualification program, and material traceability. The resident inspector accompanied the licensee Q. A. inspector to witness the fit-up check of weld #T1-W4 on the raw water to containment spray intertie valves and observed the contractor's Q. A. inspection of the fit-up on weld T2-W16 on the raw water to core spray intertie valves.

No violations were identified.

6. Quality Assurance (Q. A.) Program Implementation

The inspector reviewed the licensee's method for documenting conditions affecting quality to ensure that they are properly recorded and promptly corrected. The inspector reviewed 36 Quality Control Inspection Reports (QCIR's) and 2 Nonconformance Reports written during the feedwater sparger replacement and nozzle inspection performed during the Spring 1981 refueling outage. This work was performed by a contractor who also had an approved Q. A. program for this project.

The QCIR form has a block to indicate that a follow-up inspection is required for the activity examined. The inspector noticed several examples of QCIR's for which follow-up was indicated but no documented follow-up was found. There were also several examples for which follow-up was indicated although the QCIR indicated that the activity observed was satisfactory. The inspector reviewed Quality Assurance Procedures 10.30, "Inspection of Electric Generation Station Activities," and 16.40, "Control and Use of the Nonconformance Report". These procedures do not clearly describe when a QCIR follow-up is required or a Nonconformance Report is warranted. The licensee's representative acknowledged the inspector concerns and showed him draft procedure revisions already in progress which will address this. He also stated that QCIR's 81-820, 819, 748 and 746 will be reviewed to ensure that adequate corrective action was completed. The licensee's actions will be examined at a future inspection (50-220/83-08-03).

No violations were identified.

7. Inservice Inspection

The inspector observed portions of the scheduled inspection of the core spray spargers and examined some of the video tapes on the inspection. The tapes examined includes the two indications previously identified during the 1981 refueling outage. The licensee's review of the tapes from the current outage and the 1981 refueling outage concludes that the size of the indications has not increased. Also, no new indications were identified.

On April 5, 1983, during a scheduled visual inservice inspection, the licensee detected two cracks in the reactor steam dryer. One crack is approximately 15" long; the other crack is approximately 36" long. Repair of the cracks, which involves grinding out the indications and covering the grind-out area with a bolted patch, are in progress. These repairs will be completed prior to start-up.

No violations were identified.

8. Training

On April 26 and 27, 1983, the inspector attended a general employee training session. The inspector verified that training was provided on administrative plans and procedures, industrial safety, security procedures, industrial safety, security procedures, quality assurance, emergency plan and procedures, fire protection, and radiological health and safety as required by procedure APN-10D, "General Employee Training and Radiation Protection Training Programs," Revision 2, dated July 1982. The inspector noted that training on Regulatory Guide 8.13, concerning prenatal radiation exposure, was also provided. The inspector determined that the technical content of the lectures was adequate and that the licensee has properly implemented its general employee and radiation

protection training program.

No violations were identified.

9. Refueling Activities

The inspector reviewed the licensee's reload checkoff list and several of the completed surveillance tests performed in accordance with this checklist to verify that all surveillance testing required by the Technical Specifications for fuel handling had been completed. During this review, operability was verified for the refueling interlocks, secondary containment, protective instrumentation, the Source Range Monitoring, Emergency Diesel Generators, Core Spray, Emergency Ventilation, and 125V DC Battery Systems.

The inspector noted that the restoration section of ST-W5, "I.R.M. Rod Block and Scram Instrument Channel Test," and ST-W8, "SRM Rod Block Instrument Channel Test," required that the Refuel Instrument Trip Bypass switch to be placed in the "noncoincidence" position at the completion of the test. The switches were found to be in the proper position (i.e., "coincidence") as required by OP-34, "Refueling Procedure". The licensee promptly corrected the two surveillance tests.

The inspector also witnessed portions of refueling operations and verified that it was performed in accordance with approved procedures N1-OP-34, "Refueling Procedure," Revision 5, dated May 15, 1979, and N1-FHP-27, "Whole Core Off Load-Reload," Revision 5, dated February 3, 1982. The inspector also verified that the licensee's staffing during the refueling was in accordance with Technical Specifications.

No violations were identified.

10. Licensee's Response to IE Bulletin 83-02

Bulletin 83-02 requires that licensee's of BWR facilities identified in Table 1 of the Bulletin perform a demonstration of the effectiveness of the ultrasonic testing (UT) methodology used to examine welds in recirculation system piping. These demonstrations are to be performed at the EPRI NDE Center on service - induced cracked pipe samples made available for this purpose.

Because the recirculation system was replaced during the current outage and has not been in service, the Niagara Mohawk Power Corporation is not identified in Table 1, and is not required to comply with the licensee actions described by the Bulletin.

On April 28 and 29, 1983, the licensee sent a six member team of his inservice inspection vendor personnel to the EPRI NDE Center to perform the demonstrations required by the Bulletin. The team included four Level II members and two Level III members. Scanning and data recording

was done by the Level II individuals and the Level III individuals performed the data evaluation and classified the findings into two categories, "crack" or "no crack".

The Bulletin requires that eighty percent of the total number of cracks must be detected in the pre-selected samples with a six hour time limit for scanning and recording of data.

The team completed the scanning and data recording function within the allotted six hours, and presented the final data within the additional time permitted for data evaluation and plotting.

The data presented for NRC consideration failed to identify the required number of cracks, therefore, the demonstration was considered unacceptable. The failure has no impact on the anticipated plant start-up date, or on the acceptance of the newly installed recirculation system.

The licensee informed the inspector by telephone on May 2, 1983, that he had arranged for his inservice inspection organization to return to the EPRI NDE Center on May 19 and 20, 1983 in an attempt to successfully perform the demonstration required by Bulletin 83-02.

No violations were identified.

11. Review of Periodic Report

The following report was reviewed to determine that the reporting requirements of Technical Specifications are being met and that plant operations are accurately reported:

-- Monthly Operating Report for March 1983

No violations were identified.

12. Exit Interview

At periodic intervals during the course of the inspection, meetings were held with senior station management to discuss the inspection scope and findings.