U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-410/86-60

Docket No. 50-410

License No. NPF-54

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: October 31 - November 5, 1986

Inspector: M. Evans 11/25/86
M. Evans, Reactor Engineer date

Approved by: D. Florek 11/26/86
D. Florek, Chief, Test Programs Section date
OB, DRS

Inspection Summary: Inspection on October 31 - November 5, 1986 (Report No. 50-410/86-60).

Areas Inspected: Routine unannounced inspection by one region based inspector of initial fuel load activities, QA/QC interfaces, independent verifications and calculations, and plant tours and meetings.

Results: No violations were identified.

NOTE: For acronyms not defined, refer to NUREG-0544 "Handbook of Acronyms and Initialism."

DETAILS

1.0 Persons Contacted

Niagara Mohawk Power Corporation

*R. Abbott, Station Superintendent
*J. Conway, Power Ascension Manager
*P. Eddy, Site Representative, NY State PSC
*T. Perkins, General Superintendent
*A. Pinter, Site Licensing Engineer

Other NRC Personnel

*W. Cook, Senior Resident Inspector
*C. Marshall, Resident Inspector
*W. Schmidt, Resident Inspector

*Denotes those present at the exit meeting on November 5, 1986.

The inspector also contacted other members of the licensee's technical, QA and operations staff.

2.0 Initial Fuel Load Witnessing

Scope

The U. S. Nuclear Regulatory Commission inspectors began onsite shift coverage on November 1, 1986 in anticipation of fuel loading. Initial fuel loading commenced on November 2, at 8:45 a.m. Onsite shift coverage was maintained throughout the first 72 hours of fuel loading.

Fuel loading and associated testing activities were observed in the Control Room, on the refueling floor and on the refueling bridge. In addition to observations of fuel loading and testing activities, the inspector performed general plant tours.

The Senior Resident Inspector and Resident Inspectors also participated in the inspection of fuel loading activities. The details of their inspection activities are included in Inspection Report 50-410/86-56.

Fuel load activities were reviewed to verify that:

-- The current, approved revisions of the fuel handling and test procedures were available and being followed.

-- The crew requirements, as defined in the approved procedures, were being met in the control room and on the refuel floor and that technical specification minimum staffing requirements were being satisfied.

-- Continuous communications were established and maintained between the refueling bridge and the control room during core alterations.

-- Proper access controls, housekeeping requirements and radiological protective measures were in effect on the refuel floor.

-- Refueling status boards were maintained current in the control room and on the refueling floor

-- Required nuclear instrumentation was available and operating properly.

Power Ascension Procedure N2-SUT-3-OV, Fuel Load, was being performed by the licensee.

The following specific activities were observed:

-- General operation of the refueling bridge

-- Movement of new fuel from the spent fuel pool to the reactor vessel.

-- Overall test control and coordination from the control room.

-- Conduct of various surveillance tests including:

- Reactor Mode Switch Refuel Position Interlocks
- SRM Channel Functional Check
- SRM Response Checks
- Shift Checks on Refuel Bridge

-- Maintenance of inverse multiplication plots.

-- Shift Turnovers.

Discussion

Prior to fuel movement into the core, the inspector verified that the shorting links were removed and witnessed source checks of all the SRMs. By review of the I and C completed surveillance log and a sampling of completed surveillance procedures the inspector verified that surveillances were completed for other nuclear instrumentation. The inspector also witnessed the conduct of the shift test briefing conducted prior to movement of fuel and observed that the briefing was comprehensive and thorough.

The first fuel bundle was loaded into the core at 8:45 a.m. on November 2, 1986. Shortly after fuel loading began, one of the four source range monitors (SRM "A") was considered inoperable due to unexplained counts on the meter. Technical Specifications and the fuel loading pattern chosen by the licensee allowed fuel loading to continue and up to 64 bundles to be loaded before SRM "A" was required to be operable in the "A" core quadrant. Trouble shooting later revealed a loose lead on the SRM "A" preamplifier, which the licensee repaired prior to loading the bundles in the "A" core quadrant.

Actual fuel movements proceeded without incident during the first 72 hours of fuel loading. The inspector witnessed several movements of fuel from the spent fuel pool into the reactor vessel and noted that the operators worked efficiently yet cautiously. The inspector witnessed the conduct of several shift briefings and periodically reviewed the control room log. The licensee experienced a few equipment problems during the initial fuel loading including a severed refuel bridge main grapple cable and a severed SRM "D" drive cable. The inspector noted that the licensee handled all problems encountered in a conservative manner. At the completion of NRC shift coverage of fuel loading activities, 108 fuel bundles had been loaded into the core.

Findings

No violations were identified within the scope of this review.

3.0 QA/QC Interface

During the witnessing of initial fuel loading activities as discussed in paragraph 2.0, the inspector observed continuous QC coverage of these activities in the control room and on the refuel floor and bridge.

4.0 Independent Verification and Calculations

During this inspection, the inspector performed the following independent calculations and verifications:

-- On a sampling basis, performed the calculations used for inverse multiplication plots.

-- Verified proper fuel bundle orientation and core location of each fuel bundle for which the inspector witnessed loading of the bundle into the core.

5.0 Plant Tours and Meetings

The inspector made several tours of various areas of the facility including the reactor building, refuel floor and control room to observe work in progress, housekeeping, cleanliness controls, testing activities and fuel loading activities. In addition, the inspector randomly attended the

licensee's morning Startup Plan of the Day meeting during which the current status of fuel loading activities and any holds or delays were discussed. Other items such as preoperational testing, surveillance, and outage activities were also discussed. No unacceptable conditions were observed.

6.0 Exit Interview

A management meeting was held at the conclusion of the inspection on November 5, 1986, to discuss the inspection scope, findings and observations as detailed in this report (see Paragraph 1 for attendees). No written information was provided to the licensee at any time during this inspection. The licensee did not indicate that any proprietary information was contained within the scope of this inspection.