U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-410/86-05

Docket No. 50-410

License No. CPPR Category B

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: March 3-7, 1986

Inspector: for L. Briggs, Lead Reactor Engineer — 4-2-86 date

Approved by: P. Eselgroth, Chief, Test Programs Section, OB, DRS — 4-2-86 date

Inspection Summary: Inspection on March 3-7, 1986 (Report No. 50-410/86-05)

Areas Inspected: Routine, unannounced inspection by one region based inspector of follow-up of previously identified items, preoperational, interim surveillance and preliminary test procedure review, QA/QC interface with the preoperational test program, independent verification and plant tours.

Results: No violations were identified.

DETAILS

1.0 Persons Contacted

R. Abbott, Station Superintendent
*G. Afflerbach, Startup Manager
*T. Arrington, Resident Manager, Stone and Webster Co. (SWEC)
*C. Beckham, Manager, QA Projects
*D. Brassard, Startup and Test (SU&T) Group Manager
*J. Bufis, SU&T Group Manager
*B. Bulger, SU&T (SWEC)
*F. Dam, Senior QC Engineer (SWEC)
*J. Drake, Startup Special Projects Supervisor (SWEC)
*J. Gallagher, Site Licensing Engineer (SWEC)
*W. Hansen, Manager, Nuclear QA Operations
L. Kassakatis, SU&T Group Manager
*T. Lee, Special Projects
*R. Matlock, Deputy Project Director
*C. Millian, Lead Senior Nuclear Compliance and Verification Engineer
J. Orlando, Nuclear QA Supervisor
B. Rao, System Test Engineer (Reactor Protection System)
*M. Ray, Manager, Special Projects
*C. Terry, Project QA Manager (SWEC)
I. Weakley, Special Projects

Other NRC Personnel

*R. Gramm, Senior Resident Inspector, Construction
*S. Hudson, Senior Resident Inspector, Operations

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

2.0 Follow-up of Previously Identified Items

(Open) Unresolved Item (410/85-30-01) Adequacy of licensee documentation to verify system flush velocities. During this inspection the inspector and the Senior Resident Inspector met with the Startup and Test (SU&T) group leader responsible for system flushes. During the meeting the entire system flushing process was discussed and the Low Pressure Core Spray System flush and others were reviewed. The inspectors determined that for systems important to safety sufficient data had been recorded such as pump discharge pressure or flow in some cases to allow a reconstruction of system flows for various flushing valve line ups.

A review of MF.GENE.001, Generic Flushing/Cleaning Procedure, Revision 5 indicated that flushing had been conducted in accordance with that procedure. However, the procedure does not require data such as pump discharge

pressure or flow (when available) to be recorded. The inspectors recommended that the procedure be revised to require at least pump discharge pressure to be recorded for each flushing valve lineup so that system flows and velocities can be reconstructed and verified on the remaining category 1 systems. This data was obtained for previous safety related system flushes because the System Test Engineer desired to do so, not because of any programatic requirements. The licensee is evaluating the need for additional data requirements. This item is continuing to be followed by the Senior Resident Inspector.

(Open) Unresolved Item (410/86-03-01) Licensee to verify correct identification of containment isolation valves listed on Data Sheet 5.2.2 and 5.2.3 of POT 300, Loss of OFFSITE Power/ECCS preoperational test procedure. The licensee verbally informed the inspector that a review had been conducted to verify the containment isolation valves listed in Technical Specifications, FSAR Table 6.2-56 and Data Sheets 5.2.2 and 5.2.3. Documentation of the results of that review were not available during this inspection. This item remains open pending subsequent NRC review of completed licensee action.

3.0 Preoperational, Interim Surveillance and Preliminary Test Procedure Review

3.1 Scope

The procedures identified below were reviewed in preparation for test witnessing, for technical and administrative adequacy and to independently verify that testing is planned to adequately satisfy regulatory guidance and licensee commitments. It was also reviewed to verify licensee review and approval, proper format, test objectives, prerequisites, initial conditions, test data recording requirements and system return to normal.

N2-POT-97, Reactor Protection, Revision 1 (draft);

ES.0097.001, Reactor Protection System (RPS) Trip System Test, Revision 0;

Interim Instrument Functional Procedure (IIFP) N2-ISP-ISC-R202, Instrument Response Time of Reactor Scram (Vessel Water Level), Draft;

N2-ISP-NMS-R201, Flow Biased Simulated Thermal Response, Revision 0;

N2-ISP-NMS-R202, Fixed Neutron Flux Response, Revision 0;

N2-ISP-RPS-R202, Turbine Stop Valve Closure Scram Response, Revision 0;

N2-ISP-RPS-R203, Turbine Control Valve Fast Closure Scram Response, Revision 0;

N2-ISP-RPS-R209, MSIV Closure Scram Response, Revision 0, and;

N2-ISP-ISC-R201, Reactor Protection System Response Time Reactor Steam Dome Pressure High, Revision 0.

3.2 Discussion

N2-POT-97

The inspector conducted a detailed review of the RPS draft procedure. The procedure was written to test all logic circuitry within the RPS cabinets. During the review the inspector had several questions all of which were satisfactorily resolved by the STE during the inspection. Several questions involved incorrect relay terminals (Typographical error) and the use of a 4 to 20 ma signal source (left in paragraph during procedure revision). Additional questions related to clarification of various system interfaces and steps the STE had incorporated to prevent inadvertent actuation of other systems.

The items listed below were procedure omissions or problems that are being incorporated/resolved by the STE to ensure all logic is verified:

Item	Resolution
Test switches S7A thru S7D for turbine stop valves not checked.	Being incorporated into POT-97
Switches S9A and S9B, Recirculation Pump Trip circuit incorrectly wired on print.	STE had also identified. Problem Report No. 01727 and Deficiency Report 07811 issued to correct. Wiring physically corrected on November 6, 1985.
Section 4.2.8.4 placed Nuclear Instrumentation in configuration (tripped) opposite to that established for test (not tripped).	POT-97 revised to reflect desired condition.
Half-Scram logic for reactor pressure, vessel level and drywell pressure not verified.	POT-97 revised to incorporate half-scram logic.

3.3 Findings

No violations were identified. The remainder of the procedures were reviewed and found to be acceptable.

4. QA/QC Interface with the Preoperational Test Program

The inspector reviewed several recent Nuclear Quality Assurance Surveillance Reports (QASR) regarding different activities of the licensee's startup and test department (STD). The following QASRs were reviewed:

- QASR-86-10179, Test Results Review of N2-POT-32, Low Pressure Core Spray (LPCS), review completed February 26, 1986. The QA inspector used QA Checklist SQA-S-145-86, Revision 0, to check various attributes of the completed procedure. Two minor problems were identified and verified corrected on February 26, 1986. One additional item concerning modification of valve 2CSL*MOV104 under Deficiency Report (DR 13885) may require retest of a portion of the system.

- QASR-86-10149, Verification of load shedding circuits. Testing conducted under EE.GENE.006, Revision 5, and DRs 09071 and 09072. The QA inspector noted that actual retest was completed under DRs 08426 and 08427 which did not specify QA witness points as DRs 09071 and 09072 had. The QA inspector requested the completed test data and performed a review of test results which was satisfactorily completed on February 20, 1986.

- QASR-86-10168, Test results review of N2-POT-23-2, Turbine Electro-Hydraulic Control, Revision 1, completed on February 18, 1986. The QA inspector found the results to be in compliance with QA checklist SQA-S-145-86.

- QASR-86-10127, Witnessing of retest of valves 2CSH*MOV118 and 2CSH* MOV110, conducted under N2-POT-33, High Pressure Core Spray (HPCS). Valve 2CSH*MOV110, during the initial test, failed to close (tripped on overcurrent) when 2CSH*MOV118 was opened. DRs 09925 and 11526, Problem Report (PR) 02401 and Field Design Disposition Request (FDDR) KGI-4899 were issued to investigate and correct the problem. On retest a control power fuse for 2CSH*MOV110 was found removed, apparently not reinstalled after it was removed for maintenance. A new fuse was installed per DR 13200 and a retest was satisfactorily performed.

4.1 Findings

No unacceptable conditions were identified.

5.0 Independent Verification

The inspector independently verified that the RPS logic checks to be performed under N2-POT-97 verified essentially all possible combinations identified by the RPS schematic diagrams as discussed in Paragraph 3.2 of this report.

6.0 Plant Tours

The inspector toured various areas of the facility to observe work in progress, housekeeping, cleanliness controls and status of construction and testing activities. The inspector noted that substantial progress had been made concerning plant cleanliness since the last inspection period.

7.0 Exit Interview

A management meeting was held at the conclusion of the inspection on March 7, 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.