August 19, 1987

MEMORANDUM FOR: R. M. Gallo, Chief
Reactor Projects Branch, DRP

FROM: Lee H. Bettenhausen, Chief
Operations Branch
Division of Reactor Safety

SUBJECT: NINE MILE-2 ASSESSMENT OF PERFORMANCE (TEST CONDITION HEATUP)

Attached please find the DRS Input for Nine Mile-2 (50-410) for the period May 11, 1987, through July 10, 1987. A DRS inspection is currently planned for the week August 10-13, 1987, and additional assessment or observation will be provided to you as soon as possible after the inspection. If you need more information regarding this assessment or have questions, please call me on 5291 or M. Evans (5184) and L. Wink (5184), chief contributors to this Input.

Original Signed By:
Lee H. Bettenhausen

Lee H. Bettenhausen, Chief
Operations Branch
Division of Reactor Safety

Attached: DRS Input to Assessment of Performance

RI:DRS	RI:DRS	RI:DRS	RI:DRS
Eselgroth/djh	Bettenhausen	Durr	Johnston
8/19/87	8/19/87	8/21/87	8/21/87

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ASSESSMENT OF LICENSEE PERFORMANCE

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION, UNIT 2

PERIOD: MAY 11, 1987 - JULY 10, 1987

(LOW POWER TESTING - TEST CONDITION HEATUP)

INSPECTION ACTIVITIES

The Test Programs Section conducted six inspections during the period May 11, 1987 through July 10, 1987. The inspections involved 300 direct inspection hours by three region-based inspectors. The period covered activities from precritical preparations through the completion of low power testing (Test Condition Heatup). One violation was identified and classified as a Severity Level IV.

PERFORMANCE ASSESSMENT

1. MANAGEMENT CONTROL

Management oversight and control of activities during the low power testing phase were adequate and generally effective. Management attention to the resolution of technical problems from a safety perspective and the effective functioning of the Site Operations Review Committee (SORC) were considered strengths. Weaknesses were noted in management attention to backshift/weekend activities, communications between groups and the maintenance of an adequate spare parts inventory. These weaknesses have contributed to the delays experienced in the testing schedule.

Daily management meetings are held to coordinate activities. Initial problems were encountered in assembling accurate information on plant status and disseminating the information to the plant staff. Improvements were made when written reports of past activities, critical work items and the current short term schedule were distributed at these meetings. Weaknesses remain, however, in the effective monitoring of activities on backshifts. This has resulted in frequent disagreements among groups at the daily meeting concerning the status of work activities. Increased management attention in this area is needed to improve the information flow and to provide direction for activities during weekend and backshifts.

Numerous equipment problems have been encountered with balance of plant systems (reactor water cleanup, offgas and electrohydraulic control among others). While the plant staff has been quite capable in addressing these problems, their efforts have, in many cases, been hampered by the lack of availability of spare parts on site. Towards the end of low power testing, efforts were made to address this problem and obtain greater support of startup activities from the materials management group. The effectiveness of these measures will be monitored during the balance of the testing program.

Station management and the SORC have been particularly conscious of the safety significance of identified problems. They have consistently demonstrated a clear understanding of both the technical and safety aspects of issues and routinely take actions that are conservative with respect to safety. Particularly noteworthy were the actions taken to address the feedwater temperature stratification problem and the spurious actuations of the redundant reactivity control system.

2. Plant Operations

Plant operations have been conducted in a consistently conservative and safety conscious manner. Operations' implementation of several surveillance and power ascension tests was observed. Prior to testing, a briefing is held, the procedure reviewed, a dry run conducted and possible problems discussed. In addition, actions to be taken in the event of a problem are reviewed. During testing, operations personnel monitored plant parameters and proceeded cautiously with testing after assuring proper plant response. Operations shift supervisory personnel effectively controlled the conduct of testing.

Control room atmosphere was well controlled during all testing witnessed. Operations shift supervisory personnel did an adequate job of limiting the number of persons on the control room during testing.

3. Power Ascension Test Program

The Power Ascension Test Program for low power testing was well implemented. The working interface between the power ascension, operations and engineering departments in regard to power ascension testing functioned well.

Portions of seven power ascension tests were witnessed during the inspection period. All testing was conducted in a very organized and controlled manner. The power ascension shift test supervisors held thorough shift briefings prior to initiation of testing and adequately controlled the conduct of the testing. A few problems were identified early in the inspection period involving incorrect calculation and verification of shut down margin by the power ascension engineers and poor communications between operations and power ascension personnel regarding data taking for SRM/IRM overlap. These problems were immediately corrected, and by the end of TC-HU, operations and power ascension personnel had established an excellent working relationship.

Twelve of nineteen power ascension test result packages for TU-HU were reviewed during this inspection period. The low power testing results were relatively good with a reasonable number of test exceptions (TEs) generated. The TEs were properly documented and appropriate plans were formulated to resolve them. The licensee's results review process progressed smoothly. Technical review of the results appeared thorough and the SORC review was adequate.

During this inspection period, simulator validation of test procedures continued with all procedures through TC-1 exercised and work in progress on TC-2 procedures. Inspector review of TC-3 procedures showed continued effort by the licensee to improve power ascension procedures through review prior to implementation.

4. Engineering Support

The scope and timeliness of engineering support during initial low power testing has been excellent. Test and engineering personnel have worked closely and effectively to resolve problems identified during testing (extensive efforts were involved during piping thermal expansion tests). Support provided for other identified problems has also been good and engineering has been capable of providing resolutions in a timely manner.

5. Quality Assurance Program Implementation

The licensee has established an extensive QA surveillance program plan for startup test activities which includes 24 hour coverage of activities and detailed surveillance checklists for certain preselected tests. During the low power testing phase this program was effectively implemented. Good working relationships were observed between test and QA personnel and the proper functioning of all phases of the QA surveillance program was verified.

6. Organizational Interfaces

The interfaces among the various groups involved in activities during the low power testing phases have been uneven. Particularly effective interfaces exist between the operations, test and site engineering personnel. Problems have been noted in the relationship between Operations and Licensing concerning technical specification interpretations and between Operations, I&C and Maintenance in coordinating activities associated with repairs.

The problems noted have primarily involved poor communications. A number of instances have been noted in which necessary repairs were delayed due to failure to communicate the status of system tagouts (markups) or system return to service was delayed due to failure to inform the operations personnel of the completion of work. This problem is particularly apparent during backshifts and weekends.

A conflict was noted between Operations and Licensing regarding the interpretation of the allowable out of service time for the RCIC system. Responding to an NRC question, Licensing issued a letter stating that a 7 day allowable out of service time would be applied to the RCIC system (conservative interpretation of conflicting requirements of two technical specifications governing the RCIC system). One week later, it was noted that Operations personnel had declared RCIC inoperable and entered a 14 day action statement. When the Operations Superintendent was questioned

on the apparent conflict with the Licensing letter, he stated the he had heard of the letter but the interpretation had been made without consulting him and he would apply a 14 day action statement pending further review. When the Operations Superintendent was questioned later in the day by the Senior Resident Inspector, he stated that he was incorrect and that the 7 day action statement would govern.

7. Enforcement History

One violation was identified for performance of a test without procedural controls and prior to performing a written safety evaluation. On May 25, 1987 a temperature stratification was identified in the feedwater lines. Operators, at the suggestion of engineering personnel, cycled feedwater isolation valves (MOV21A/B) to attempt to disrupt the stratification. No procedure existed for operations or testing with one feedwater line isolated. On May 30, 1987 the problem reoccurred and the actions were repeated. It was only following the second event that management was informed of the problem and of the actions previously taken.

When management was made aware of the stratification problem, their actions were appropriate. A safety evaluation was developed to allow operations with a single feedwater line below 5% power, temporary procedures were developed and approved to control this evolution, and additional testing requirements were imposed. These actions were taken prior to the inspectors informing the licensee of the potential violation.

The root cause of the violation, in the opinion of the inspector, was the lack of backshift/weekend management presence and the associated communications problems that hampered management oversight of activities on these shifts.

CONCLUSION

The licensee has conducted a slow and deliberate low power testing program with a good perspective on nuclear safety. Management oversight and control were adequate and generally effective.

Strengths noted during this phase included professional and well-trained control room operators, a well coordinated and smoothly functioning test program group, an effective and safety conscious review committee (SORC) and an extensive, fully functioning QA surveillance program.

Areas which require improvement include: management attention to backshift/weekend activities, communication, coordination between on-site groups and the materials management (spare parts) program.

Inspection Activities

Report	Dates	Inspector(s)	Hours
87-15	5/11-15/87	Wink	34
87-17	5/19-29/87	Florek/Evans	73
87-16	6/1-5/87	Wink (Operational Assessment Team Member)	35
87-21	6/8-19/87	Wink/Evans	69
87-23	6/22-30/87	Wink/Evans	52
87-26	7/6-10/87	Evans	37