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SUBJECT: Forwards revised "NMP NMPNS Unit 2 Power Update Power Ascension Test Program Interim Startup Rept," for Nov 1995.

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RICHARD B. ABBOTT
Vice President
Nuclear Generation

November 28, 1995
NMP2L 1597

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

RE: Nine Mile Point Unit 2
Docket No. 50-410
NPF-69

Subject: *Nine Mile Point Unit 2 Power Uprate Power Ascension Test Program*

Gentlemen:

This letter transmits the Nine Mile Point Unit 2 (NMP2) "Power Uprate Power Ascension Test Program Interim Startup Report" pursuant to Technical Specifications 6.9.1.1, 6.9.1.2 and 6.9.1.3. This report supersedes in its entirety the interim startup report submitted by Niagara Mohawk in a letter dated August 29, 1995 (NMP2L 1566). Marginal markings indicate changes made to the previous revision dated August 29, 1995. In addition, the table of contents has been revised to reflect pagination changes.

In a letter to the Nuclear Regulatory Commission dated July 22, 1993, Niagara Mohawk proposed a license amendment to allow NMP2 to operate at an uprated power of 3467 megawatts thermal (MWt). This power level represents an increase of approximately 4.3% from the original licensed rated power level of 3323 MWt. The proposed license amendment was supplemented by letters dated February 4, August 23, September 16, October 6, and December 2, 1994; and January 3, January 9, March 8, and April 10, 1995. In response, the Staff issued License Amendment No. 66 with its Safety Evaluation dated April 28, 1995, authorizing the increase. Consistent with the above correspondence, Niagara Mohawk has developed a power uprate power ascension test program which is described below.

The test program includes pre-refueling activities, refueling, heatup and power ascension testing of the reactor, turbine-generator, related auxiliary systems and balance of plant systems. Testing and power escalation is sequenced in four distinct test conditions. The last test condition is divided into two subparts. These test conditions are described below.

Test Condition	Description
A	From pre-refueling up to and including operation at approximately 90% of uprated power (3120 to 3185 MWt)
B	The original rated power level which is approximately 95% of uprated power (3297 to 3323 MWt)
C	Approximately 98% of uprated power (3367 to 3395 MWt)
D.1	Approximately 100% uprated power (3432 to 3467 MWt)
D.2	Approximately 100% uprated power (3432 to 3467 MWt, includes LEFM* corrections)

The requirements for testing are derived from the NMP2 power uprate licensing submittals, the Staff's Safety Evaluation Report, Chapter 14 of the Updated Safety Analysis Report, the General Electric power uprate power ascension test specification and the Technical Specifications for power uprate. The results of these tests are used to determine the acceptability of operating the unit at the uprated power level.

The power uprate power ascension test program was initiated without the LEFM corrections being made to indicated feedwater flow. Appropriate testing, as described in the attached interim startup report, was performed at test conditions A, B, C and D.1. The indicated power for NMP2 reached the uprated power level of 3467 MWt on June 17, 1995. On June 23, 1995, the LEFM corrections were made to the indicated power level and power was increased to test condition D.2. As power was increased, oscillations were noted in turbine control valve #4. Power was decreased to 98.8% of uprated power (with LEFM corrections still applied). Reactor power level was not increased above 98.8% of uprated power until the cause of the oscillations was corrected.

On August 31, 1995, a planned shutdown of NMP2 was initiated to implement corrective actions that would eliminate the control valve oscillations. The corrective actions included: modification of the steam line resonance and diode function generator cards and recalibration and retuning of the Electrohydraulic Control (EHC) System. The unit was restarted, and Niagara Mohawk confirmed that the control valve oscillations had been eliminated by the corrective actions. However, increased hydraulic tubing vibrations were identified on the EHC system at approximately 88% to 96% of uprated power operation. These recorded vibrations were within the fatigue limits for the EHC tubing, and they have not impacted the completion of Power Uprate Power Ascension Testing to date as discussed in Section 2.1 of the attached report.

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* At NMP2, the feedwater flow elements indicate a false high reading of feedwater flow which translates into a false high power reading of approximately 1.2%. These false readings are corrected using the leading edge ultrasonic flow meter (LEFM) as a standard. The LEFM was first utilized in February 1995, prior to implementation of power uprate. The above power levels for test conditions A, B, C and D.1 are without LEFM corrections; however, the above power level for test condition D.2 includes the LEFM corrections.

As of October 31, 1995, the power uprate power ascension test program could not be completed due to the inability to achieve 105% of rated core flow. Specifically, a flow limiter inappropriately prevented operation above 102% of rated core flow. Furthermore, a mismatch of the output of diverse feedwater flow monitoring instrumentation also prevented the completion of testing beyond that already affected by our inability to achieve 105% of rated core flow.

All power uprate power ascension testing performed to date has satisfied the applicable Level 1 Acceptance Criteria. In addition, all applicable Level 2 Acceptance Criteria have been satisfied with the exception of the four following tests:

1. Test 2, "Radiation Measurement"
2. Test 23D, "Maximum Feedwater Runout Capability"
3. Test 77, "BOP Piping Vibration"
4. Test 100, "Steady State Data Collection"

The disposition of the Level 2 Acceptance Criteria for these four tests is discussed in the attached "Power Uprate Power Ascension Test Program Interim Startup Report." Niagara Mohawk has concluded that the disposition of these four tests does not present any safety concerns.

The Power Uprate Test Program, thus far, has demonstrated the unit can be operated safely up to a power of 100% of the uprated power level and up to 102% of rated core flow.

This is an interim report due to the temporary inability, as described above, to achieve 105% of rated core flow and, therefore, complete the remaining tests. Section 2.1 of the attached report describes the required testing that remains to be completed. Per Technical Specifications 6.9.1.3, interim reports will be submitted every 90 days until the remaining tests have been completed. A final startup report will be submitted within 90 days following completion of the remaining tests.

Very truly yours,

RB Abbott

R. B. Abbott
Vice President - Nuclear Generation

RBA/KWK/kap
Attachment

xc: Regional Administrator, Region I
Mr. B. S. Norris, Senior Resident Inspector
Mr. L. B. Marsh, Director, Project Directorate I-1, NRR
Mr. G. E. Edison, Senior Project Manager, NRR
Records Management