UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

NIAGARA MOHAWK POWER CORPORATION

DOCKET NO. 50-220

NINE MILE POINT NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 161
License No. DPR-63

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Niagara Mohawk Power Corporation (the licensee) dated May 2, 1998, as supplemented by letters dated May 21, and 23 (three letters), 1998, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter 1;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (I) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-69 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, as revised through Amendment No. 161 are hereby incorporated into this license. Niagara Mohawk Power Corporation shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

In addition, the license is amended to add new page 3B, containing paragraph C(4), to Facility Operating License No. DPR-63 as follows:

C(4) The licensee shall submit an application for license amendment, including supporting analyses and evaluations by December 18, 1998. This amendment application shall contain the proposed methods for compliance with GDC 19 dose guidelines under accident conditions based upon system design and without reliance upon the use of potassium iodide.

3. This license amendment is effective as of the date of its issuance to be implemented prior to resumption of power operation. This amendment is authorized contingent on compliance with commitments provided by the licensee to meet the dose limits associated with Title 10, Code of Federal Regulations, Part 50, Appendix A, General Design Criterion (GDC) 19 by submitting a license amendment application including supporting analyses and evaluations by December 18, 1998, that contains the proposed methods for compliance with GDC 19 dose limits under accident conditions based on system design and without reliance on the use of potassium iodide.

FOR THE NUCLEAR REGULATORY COMMISSION

S. Singh Bajwa, Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: 1. Page 3B of License DPR-63*
2. Changes to the Technical Specifications

Date of Issuance: May 23, 1998

*Page 3B is attached for convenience, for the composite license to reflect this change.

C(4) The licensee shall submit an application for license amendment, including supporting analyses and evaluations by December 18, 1998. This amendment application shall contain the proposed methods for compliance with GDC 19 dose guidelines under accident conditions based upon system design and without reliance upon the use of potassium iodide.

ATTACHMENT TO LICENSE AMENDMENT NO. 161

AMENDMENT NO. 161 TO FACILITY OPERATING LICENSE NO. DPR-63

DOCKET NO. 50-220

Replace the following page of the Appendix A Technical Specifications with the attached page.

Remove	Insert
99	99
100	100
180	180
246	246
247	247
---	247a (new)

LIMITING CONDITION FOR OPERATION

3.2.4 REACTOR COOLANT ACTIVITY

Applicability:

Applies to the limits on reactor coolant activity at all operating conditions.

Objective:

To assure that in the event of a reactor coolant system line break outside the drywell permissible doses are not exceeded.

Specification:

a. The reactor coolant system radioactivity concentration in water shall not exceed 9.47 microcuries of total iodine per gram of water.

b. If Specification 3.2.4 a, above, cannot be met after a routine surveillance check, the reactor shall be placed in the cold shutdown condition within ten hours.

SURVEILLANCE REQUIREMENT

4.2.4 REACTOR COOLANT ACTIVITY

Applicability:

Applies to the periodic testing requirements of the reactor coolant activity.

Objective:

To assure that limits on coolant activity are not exceeded.

Specification:

a. Samples shall be taken at least every 96 hours and analyzed for gross gamma activity.

b. Isotopic analyses of samples shall be made at least once per month.

BASES FOR 3.2.4 AND 4.2.4 REACTOR COOLANT ACTIVITY

The primary coolant radioactivity concentration limit of 25 μCi total iodine per gram of water was calculated based on a steamline break accident which is isolated in 10.5 seconds. For this accident analysis, all the iodine in the mass of coolant released in this time period is assumed to be released to the atmosphere at the top of the turbine building (30 meters). By limiting the thyroid dose at the site boundary to a maximum of 30 Rem, the iodine concentration in the primary coolant is back-calculated assuming fumigation meteorology, Pasquill Type F at 1m/sec. The iodine concentration in the primary coolant resulting from this analysis is 25 μCi/gm.

A radioactivity concentration limit of 25 μCi/g total iodine could only be reached if the gaseous effluents were near the limit based on the assumed effluent isotopic content (Table A-12 of the FSAR) and the fact that the primary coolant cleanup systems were inoperative. Wh the cleanup system is operating, it is expected that the primary coolant radioactivity would be about 12 μCi/g total iodine. The concentrations expected during operations with a gaseous effluent of about 0.1 μCi/sec would be about 1.5 μCi/g total iodine.

The reactor water sample will be used to assure that the limit of Specification 3.2.4 is not exceeded. The total radioactive iodine activity would not be expected to change rapidly over a period of 96 hours. In addition, the trend of the stack offgas release rate, which is continuously monitored, is a good indicator of the trend of the iodine activity in the reactor coolant.

Since the concentration of radioactivity in the reactor coolant is not continuously measured, coolant sampling would be ineffective as a means to rapidly detect gross fuel element failures. However, as discussed in the bases for Specification 3.6.2, some capability to detect gross fuel element failures is inherent in the radiation monitors in the offgas system and on the main steam lines.

A more restrictive reactor coolant total iodine limit has been imposed for Control Room habitability purposes only. A limit of 9.47 μCi/g is imposed based on the most limiting small break LOCA outside containment. Provided reactor coolant iodine is maintained at or below this value, the Control Room Air Treatment System would not be required to maintain the radiological effects of the line break below GDC19 dose limits.

BASES FOR 3.4.5 AND 4.4.5 CONTROL ROOM AIR TREATMENT SYSTEM

The control room air treatment system is designed to filter the control room atmosphere for intake air. A roughing filter is used for recirculation flow during normal control room air treatment operation. The control room air treatment system is designed to maintain the control room pressure to the design positive pressure (one-sixteenth inch water) so that all leakage should be out leakage. The control room air treatment system starts automatically upon receipt of a LOCA (high drywell pressure or low-low reactor water level) or Main Steam Line Break (MSLB) (high steam flow main-steam line or high temperature main-steam line tunnel) signal. The system can also be manually initiated.

High efficiency particulate absolute (HEPA) filters are installed before the charcoal adsorbers to prevent clogging of the iodine adsorber. The charcoal adsorbers are installed to reduce the potential intake of radioiodine to the control room. The in-place test results should indicate a system leak tightness of less than 1 percent bypass leakage for the charcoal adsorbers and a HEPA efficiency of at least 99 percent removal of DOP particulates. The laboratory carbon sample test results should indicate a radioactive methyl iodide removal efficiency of at least 90 percent for expected accident conditions. If the efficiencies of the HEPA filter and charcoal adsorbers are as specified, adequate radiation protection will be provided such that resulting doses will be less than the allowable levels stated in Criterion 19 of the General Design Criteria for Nuclear Power Plants, Appendix A to 10CFR Part 50. Operation of the fans significantly different from the design flow will change the removal efficiency of the HEPA filters and charcoal adsorbers.

If the system is found to be inoperable, there is no immediate threat to the control room and reactor operation or refueling operation may continue for a limited period of time while repairs are being made. If the makeup system cannot be repaired within seven days, the reactor is shutdown and brought to cold shutdown within 36 hours or refueling operations are terminated.

Pressure drop across the combined HEPA filters and charcoal adsorbers of less than six inches of water at the system design flow rate will indicate that the filters and adsorbers are not clogged by excessive amounts of foreign matter. Pressure drop should be determined at least once per operating cycle to show system performance capability.

The frequency of tests and sample analysis are necessary to show the HEPA filters and charcoal adsorbers can perform as evaluated. The charcoal adsorber efficiency test procedures should allow for the removal of one adsorber tray, emptying of one bed from the tray, mixing the adsorbent thoroughly and obtaining at least two samples. Each sample should be at least two inches in diameter and a length equal to the thickness of the bed. If test results are unacceptable, all adsorbent in the system shall be replaced with an adsorbent qualified according to Table 5-1 of ANSI 509-1980. The replacement charcoal for the adsorber tray removed for the test should meet the same adsorbent quality. Any HEPA filters found defective shall be replaced with filters qualified pursuant to ANSI 509-1980.

TABLE 3.6.2I

CONTROL ROOM AIR TREATMENT SYSTEM INITIATION

Limiting Condition for Operation

	Parameter	Minimum No. of Tripped or Operable Trip Systems	Minimum No. of Operable Instrument Channels per Operable Trip System	Set Point	Reactor Mode Switch Position in Which Function Must Be Operable			
					Shutdown	Refuel	Startup	Run
(1)	Low-Low Reactor Water Level	2	2	≥5 inches (Indicator Scale)			x	x
(2)	High Steam Flow Main-Steam Line	2	2	≤105 psid			x	x
(3)	High Temperature Main-Steam Line Tunnel	2	2	≤200°F			x	x
(4)	High Drywell Pressure	2	2	≤3.5 psig			(a)	(a)

TABLE 4.6.2I

CONTROL ROOM AIR TREATMENT SYSTEM INITIATION

Surveillance Requirement

	Parameter	Sensor Check	Instrument Channel Test	Instrument Channel Calibration
(1)	Low-Low Reactor Water Level	Once/day	Once per quarter[b]	Once per quarter[b]
(2)	High Steam Flow Main-Steam Line	Once/day	Once per quarter[b]	Once per quarter[b]
(3)	High Temperature Main-Steam Line Tunnel	---	Once each operating cycle not to exceed 24 months	Once each operating cycle not to exceed 24 months
(4)	High Drywell Pressure	Once/day	Once per quarter[b]	Once per quarter[b]

NOTES FOR TABLES 3.6.2I AND 4.6.2I

(a) May be bypassed when necessary for containment inerting.

(b) Only the trip circuit will be calibrated and tested at the frequencies specified; the primary sensor will be calibrated and tested once per operating cycle.