February 11, 2002

Mr. John T. Conway
Site Vice President
Nine Mile Point Nuclear Station, LLC
P.O. Box 63
Lycoming, NY 13093

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT NO. 2 - ISSUANCE OF AMENDMENT RE: VENTILATION REQUIREMENTS DURING IRRADIATED FUEL HANDLING (TAC NO. MB1479)

Dear Mr. Conway:

The Commission has issued the enclosed Amendment No. 101 to Facility Operating License No. NPF-69 for Nine Mile Point Nuclear Station, Unit No. 2 (NMP-2). The amendment consists of changes to the Technical Specifications (TSs) in response to an application submitted by Niagara Mohawk Power Corporation (NMPC) on March 29, 2001, as supplemented on October 30, 2001.

On November 7, 2001, NMPC's ownership interest and operating license in NMP2 were transferred to Nine Mile Point Nuclear Station, LLC (NMPNS), thus allowing NMPNS to possess, use and operate NMP2. By letter dated November 20, 2001, NMPNS requested that the Nuclear Regulatory Commission (NRC) continue to review and act on all requests previously submitted by NMPC before the transfer, and to consider such requests as if they had been originally submitted by NMPNS. Accordingly, the NRC staff continued its review of the subject submittals.

The amendment revises the TS and TS Bases to eliminate the requirements for certain engineered features operability during core alterations and movement of irradiated fuel which had decayed for at least 2 days.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

/RA/

Peter S. Tam, Senior Project Manager, Section I
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-410

Enclosures: 1. Amendment No. 101 to NPF-69
2. Safety Evaluation

cc w/encls: See next page

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2. Safety Evaluation

Package: ML020440040
cc w/encls: See next page
ACCESSION NUMBER: **ML020240003** **Amendment 101: ML020430151**

OFFICE	PDI-1\PM	PDI-1\LA	OGC	PDI-1/(A)SC
NAME	PTam	SLittle	AFernandez	JMunday
DATE	1/23/02	1/23/02	2/6/02	2/7/02

OFFICIAL RECORD COPY

DATED: February 11, 2002

AMENDMENT NO. 101 TO FACILITY OPERATING LICENSE NO. NPF-69, NINE MILE POINT, UNIT NO. 2

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NINE MILE POINT NUCLEAR STATION, LLC (NMPNS)

DOCKET NO. 50-410

NINE MILE POINT NUCLEAR STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 101
License No. NPF-69

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

   A. The application for amendment by Niagara Mohawk Power Corporation (the former licensee) dated March 29, 2001, as supplemented on October 30, 2001, and adopted by NMPNS (the licensee) pursuant to a letter dated November 20, 2001, 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. 101 are hereby incorporated into this license. Nine Mile Point Nuclear Station, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented prior to Refueling Outage 8.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Joel Munday, Acting Chief, Section I
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 11, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 101

TO FACILITY OPERATING LICENSE NO. NPF-69

DOCKET NO. 50-410

Replace the following pages of Appendix A, Technical Specifications, with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages	Insert Pages
3.3.6.2-4	3.3.6.2-4
3.6.4.1-1	3.6.4.1-1
3.6.4.1-2	3.6.4.1-2
3.6.4.2-1	3.6.4.2-1
3.6.4.2-3	3.6.4.2-3
3.6.4.3-1	3.6.4.3-1
3.6.4.3-2	3.6.4.3-2
3.6.4.3-3	3.6.4.3-3

The Technical Specification Bases document is controlled by the licensee under Technical Specifications Section 5.5.10, "Technical Specifications (TS) Bases Control Program." The NRC staff recognizes that the licensee will issue retyped pages to reflect the changes indicated in the licensee's October 30, 2001, supplemental amendment application. These pages are:

B 3.3.6.2-6
B 3.6.4.1-1
B 3.6.4.1-2
B 3.6.4.1-3
B 3.6.4.1-4
B 3.6.4.2-1
B 3.6.4.2-2
B 3.6.4.2-5
B 3.6.4.3-2
B 3.6.4.3-3
B 3.6.4.3-4

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

AMENDMENT NO. 101 TO FACILITY OPERATING LICENSE NPF-69

NINE MILE POINT NUCLEAR STATION LLC (NMPNS)

NINE MILE POINT NUCLEAR STATION, UNIT NO. 2

DOCKET N0. 50-410

1.0 INTRODUCTION

By letter dated March 29, 2001, Niagara Mohawk Power Corporation (NMPC, the licensee) submitted an application to amend the Technical Specifications (TS) of Nine Mile Point Nuclear Station, Unit No. 2 (NMP2). NMPC supplemented the application by a submittal dated October 30, 2001. On November 7, 2001, NMPC's ownership interest and operating license in NMP2 were transferred to Nine Mile Point Nuclear Station, LLC (NMPNS), thus allowing NMPNS to possess, use and operate NMP2. By letter dated November 20, 2001, NMPNS requested that the Nuclear Regulatory Commission (NRC) continue to review and act on all requests previously submitted by NMPC before the transfer, and to consider such requests as if they had been originally submitted by NMPNS. Accordingly, the NRC staff continued its review of the subject submittal.

The application proposed revisions to the TS in order to adopt three NRC approved Technical Specification Task Force (TSTF) items. These TSTF items are: TSTF-51, "Revise Containment Requirements During Handling of Irradiated Fuel and Core Alterations," Revision 2; TSTF-204, "Revise DC Sources-Shutdown and Inverters-Shutdown to Address Specific Subsystem Requirements," Revision 3; and TSTF-287, "Ventilation System Envelope Allowed Outage Time," Revision 5. The changes involving TSTF-287 were subsequently approved by the NRC staff in Amendment No. 97, dated August 7, 2001. The changes involving TSTF-204 are being addressed under a separate action.

The proposed changes associated with TSTF-51 were supplemented by the licensee's letter dated October 30, 2001, withdrawing parts of the original application and leaving the balance unchanged (see review details below). On this basis, the staff's proposed finding of no significant hazards consideration (see Section 4.0) is not affected by the October 30, 2001, supplement.

2.0 BACKGROUND

The licensee states that the purpose of the application, as revised, regarding TSTF-51 is to improve the performance of activities during refueling outages. Under the current TS requirements, several outage tasks must be interrupted as a result of equipment hatch closure

due to core alterations and fuel handling activities. For example, moving large pieces of equipment into the Secondary Containment must be stopped, and this is expected to affect the critical path of the next outage. This results in work being delayed or rescheduled to a less advantageous period in an outage. Also, because of the high level of modification, maintenance and repair activities during outages, increased wear on the two airlock doors to the Secondary Containment can occur, resulting in increased repair costs. These repairs would also create a bottleneck situation for processing personnel and equipment in and out of the Secondary Containment. In addition, the establishment of containment boundary several times during an outage further restricts access and requires additional resources.

The licensee proposed to eliminate selected requirements associated with core alterations and movement of decayed irradiated fuel in accordance with the NRC-approved TSTF-51, which is documented in NUREG-1431, Revision 2.

3.0 EVALUATION

The licensee proposed to eliminate the requirements for Secondary Containment isolation and Standby Gas Treatment (SGT) system operability during core alterations and movement of sufficiently decayed irradiated fuel.

After reactor shutdown, decay of the short-lived fission products greatly reduces the fission product inventory present in irradiated fuel. The proposed changes are based on a specific decay period, which takes advantage of the reduced radionuclide inventory available for release in the event of a fuel-handling accident (FHA). The radiological consequences of the design basis FHA are within the acceptance criteria of Section 15.7.4 of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," and General Design Criterion 19 of 10 CFR Part 50. The longer decay period is calculated to be 2 days. Beyond 2 days, Secondary Containment isolation and SGT actuation are no longer required to mitigate the consequences of the FHA. Irradiated fuel that has not decayed for 2 days or longer is termed "recently irradiated fuel" and EFS features must remain operable when moving "recently irradiated fuel."

Using the "recently irradiated fuel" concept provides a mechanism for applying a cutoff in fission product decay to various TS where the concept applies. The duration of 2 days has been shown by analysis to provide sufficient decay. The licensee's original application attempted to define "recently" as two separate post-irradiation periods: 2 days and 28 days. The licensee's letter of October 30, 2001, withdrew the changes associated with 28-day post-irradiation decay. Hence "recently" in this SE refers exclusively to 2 days.

The licensee included the following guidelines in the assessment of systems removed from service during movement of irradiated fuel:

> During fuel handling/core alterations, ventilation system and radiation monitor availability (as defined in NUMARC 91-06) should be assessed, with respect to filtration and monitoring of releases from the fuel. Following shutdown, radioactivity in the fuel decays away fairly rapidly. The basis of the Technical Specification operability amendment is the reduction in doses due to such decay.

The goal of maintaining ventilation system and radiation monitor availability is to reduce doses even further below that provided by the natural decay, and to avoid unmonitored releases.

A single normal or contingency method to promptly close primary or secondary containment penetrations should be developed. Such prompt methods need not completely block the penetration or be capable of resisting pressure. The purpose of the "prompt methods" mentioned above is to enable ventilation systems to draw the release from a postulated fuel handling accident in the proper direction such that it can be treated and monitored.

In order to meet the TSTF-51 guidelines, the licensee proposed to incorporate the following information into NMP2's Shutdown Safety procedure:

(1) A statement specifying that during fuel handling/core alterations, the ability to filter and monitor any release should be maintained. In particular, the SGT system and its associated radiation monitors should be available but are not required to be operable.

(2) A statement specifying that the ability to restore secondary containment capability during fuel handling/core alterations should be maintained. A contingency method to immediately close any external openings in the secondary containment should be developed.

(3) A statement specifying that, when necessary, the Station Shift Supervisor will ensure that the necessary actions are taken to close all external openings in the secondary containment.

The closing of these openings is not credited in the FHA analysis, and is not required to meet the dose release limits of the Standard Review Plan. However, the licensee stated it will have programmatic controls in place to effectively close the containment (i.e., for additional protection) prior to implementation of this amendment.

The licensee stated that the FHA radiological analysis documented in the NMP2 Updated Safety Analysis Report (USAR) does not assume a release through the SGT system filters and the stack. The current analysis assumes a ground level release in 2 hours of all the activity in the gas gap of damaged fuel rods that have had a decay time of 24 hours. The staff has previously found the FHA analysis acceptable. Through review of the most recent revision of the USAR and information submitted by the licensee, the staff finds that, with the exception of the assumed decay time, the proposed TS changes do not invalidate the assumptions previously made by the licensee in calculating the predicted radiological consequences of a design basis FHA to persons offsite. The current assumption of 24-hour decay time produces a radiological source term (activity per isotope in the fuel rod gas gap) that bounds the source term expected from fuel that has been allowed 2 days of radiological decay. Therefore, the staff finds that the current USAR FHA radiological analysis remains bounding, with reasonable assurance that the offsite radiological consequences meet the Standard Review Plan (SRP) Chapter 15.7.4, "Radiological Consequences of Fuel Handling Accidents," acceptance criteria of well within the dose limits given in 10 CFR Part 100.

The current USAR FHA radiological analysis also assumes that the Control Room Envelope

Filtration (CREF) system is operable and able to initiate control room emergency filtration in 30 seconds as designed. The licensee recalculated the control room doses assuming a source term based on 48 hours of decay time and the same release characteristics and assumptions as for the offsite dose analysis. With the exception of the radiological decay time, the staff finds that the assumptions used in this updated analysis for the control room doses do not differ appreciably from that previously approved and currently documented in the NMP2 USAR. The staff accepts the licensee's assumption for control room unfiltered inleakage because the proposed TS changes are predicated upon a lesser source term than was assumed in the USAR FHA analysis. Additionally, the proposed changes do not affect the operation of the control room emergency filtration system. Therefore, the staff finds the licensee's analysis of the radiological consequences in the control room of an FHA at NMP2 to be acceptable. The staff finds reasonable assurance that the control room radiological consequences of a design basis FHA meet the dose limits given in 10 CFR Part 50, Appendix A, General Design Criterion (GDC) 19, i.e., 5 rem to the whole body or equivalent to any part of the body.

The major revision proposed by the licensee is to eliminate the requirement to suspend the movement of decayed irradiated fuel and core alterations when Secondary Containment isolation and the SGT System are inoperable. TS Sections affected are: (1) Limiting Condition for Operation (LCO) 3.3.6.2, Secondary Containment Isolation Instrumentation; (2) LCO 3.6.4.1, Secondary Containment; (3) LCO 3.6.4.2, Secondary Containment Isolation Valves; and (4) LCO 3.6.4.3, Standby Gas Treatment System. Specifically, the proposed revision eliminates the phrase "During CORE ALTERATIONS" or "Suspend CORE ALTERATIONS," and adds the word "recently" to "irradiated fuel." The revised requirement would restrict the OPERABILITY requirement for these systems to the movement of recently irradiated fuel assemblies within the containment. This operability restriction envelopes the situations that would require these systems to be operable in order to mitigate the consequences of an FHA. There are no associated plant design changes.

In accordance with TS Section 5.5.10, "Technical Specifications (TS) Bases Control Program," the licensee also submitted proposed change pages to the TS Bases document. The word "recently" is quantitatively defined (i.e., 2 days) in the proposed TS Bases change pages. The NRC staff reviewed the proposed changes to the TS and the TS Bases and found them acceptable on the basis that they are consistent with approved generic changes in TSTF-51.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to use of facility components located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (66 FR 29358). The licensee's October 30, 2001, revision withdrew portions of the

original application and did not change the remaining portions. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The NRC staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: P. Hearn
M. Hart

Dated: February 11, 2002

Nine Mile Point Nuclear Station
Unit No. 2

cc:

Regional Administrator, Region I
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Resident Inspector
Nine Mile Point Nuclear Station
P.O. Box 126
Lycoming, NY 13093

Mr. John V. Vinquist, MATS Inc.
P.O. Box 63
Lycoming, NY 13093

Supervisor
Town of Scriba
Route 8, Box 382
Oswego, NY 13126

Mr. Paul D. Eddy
Electric Division
NYS Department of Public Service
Agency Building 3
Empire State Plaza
Albany, NY 12223

Charles Donaldson, Esquire
Assistant Attorney General
New York Department of Law
120 Broadway
New York, NY 10271

C. Adrienne Rhodes
Chairman and Executive Director
State Consumer Protection Board
5 Empire State Plaza, Suite 2101
Albany, NY 12223-1556

Mark J. Wetterhahn, Esquire
Winston & Strawn
1400 L Street, NW.
Washington, DC 20005-3502

Mr. Robert E. Denton
President

Nine Mile Point Nuclear Station, LLC
1997 Annapolis Exchange Parkway
Suite 500
Annapolis, MD 21401

Mr. Raymond L. Wenderlich
Senior Constellation Nuclear Officer
Responsible for Nine Mile Point
Nine Mile Point Nuclear Station, LLC
P.O. Box 63
Lycoming, NY 13093

James M. Petro, Jr., Esquire
Counsel
Constellation Power Source, Inc.
111 Market Place
Suite 500
Baltimore, MD 21202

Mr. William M. Flynn, President
New York State Energy, Research,
and Development Authority
Corporate Plaza West
286 Washington Avenue Extension
Albany, NY 12203-6399