March 1, 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: ELECTRICAL POWER SOURCE OPERABILITY REQUIREMENTS (TAC NO. MB1478)

Dear Mr. Conway:

The Commission has issued the enclosed Amendment No. 103 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 Section 3.8.5, "DC [Direct Current] Sources - Shutdown," restoring the operability requirement to what it was before the TSs document was converted to the Improved Standard Technical Specifications format (i.e., Amendment No. 91).

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. 103 to NPF-69
2. Safety Evaluation

cc w/encls: See next page

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

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cc w/encls: See next page

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NINE MILE POINT NUCLEAR STATION, LLC (NMPNS)

LONG ISLAND LIGHTING COMPANY

DOCKET NO. 50-410

NINE MILE POINT NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 103
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. 103 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: March 1, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 103

TO FACILITY OPERATING LICENSE NO. NPF-69

DOCKET NO. 50-410

Replace the following page of the Appendix A, Technical Specifications, with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Remove Page	Insert Page
3.8.5-1	3.8.5-1

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 application. These pages are:

B 3.8.5-1
B 3.8.5-3

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 103 TO FACILITY OPERATING LICENSE NO. NPF-69

NINE MILE POINT NUCLEAR STATION, LLC (NMPNS)

NINE MILE POINT NUCLEAR STATION, UNIT NO. 2

DOCKET NO. 50-410

1.0 INTRODUCTION

By application dated March 29, 2001, as supplemented on October 30, 2001, Niagara Mohawk Power Corporation (NMPC, the former licensee), requested changes to the Technical Specifications (TSs) for Nine Mile Point Nuclear Station, Unit 2 (NMP2). On November 7, 2001, NMPC's ownership interest and operating license in NMP2 were transferred to Nine Mile Point Nuclear Station, LLC (NMPNS, the licensee), 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 application proposed revisions to the TSs 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-51 were approved in Amendment No. 101, dated February 11, 2002. The changes involving TSTF-204 are being addressed in this safety evaluation.

The licensee's October 30, 2001, letter, provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 NRC STAFF EVALUATION

2.1 Background

Electrical power source and distribution TSs requirements during Mode 4, "Cold Shutdown" (reactor mode switch in "Shutdown" position, and average coolant temperature $\leq$ 200 °F), and Mode 5, "Refueling" (reactor mode switch in "shutdown" or "refuel" position and one or more reactor vessel head closure bolts less than fully tensioned) are less stringent than during higher modes of plant operation. The Bases for the BWR/4 Standard Technical Specifications (STS) (NUREG-1433), Specification 3.8.5, states:

> In general, when the unit is shutdown, the Technical Specifications requirements ensure that the unit has the capability to mitigate the consequences of postulated accidents. However, assuming a single failure and concurrent loss of all offsite or all onsite power is not required. The rationale for this is based on the fact that many Design Basis Accidents (DBAs) that are analyzed in MODES 1, 2, and 3 have no specific analyses in MODES 4 and 5 because the energy contained within the reactor pressure boundary, reactor coolant temperature and pressure, and the corresponding stresses result in the probabilities of occurrence being significantly reduced or eliminated, and in minimal consequences. These deviations from DBA analysis assumptions and design requirements during shutdown conditions are allowed by the LCO [limiting conditions for operation] for required systems.

In addition to the requirements established by the TSs, the licensee should manage shutdown tasks and associated electrical support to maintain risk at an acceptably low level. The industry has adopted NUMARC 91-06, "Guidelines for Industry Actions to Assess Shutdown Management," as an industry initiative to manage shutdown tasks and associated electrical support to maintain risk at an acceptably low level. This may provide for the availability of additional equipment beyond that required by the requirements governing shutdown.

Prior to the development of the improved STS, the NRC's guidance for shutdown electrical power source and distribution requirements was in general to specify the operability of just one alternating current (AC) and direct current (DC) source and distribution subsystem or train (either Division 1 or Division 2), and also Division 3, if required to support high-pressure core spray (HPCS) operability. But in the development of the improved STSs for the shutdown AC and DC sources and inverter specifications, the applicable limiting conditions for operation statements were changed to read:

LCO 3.8.2 The following AC electrical power sources shall be OPERABLE:

a. One qualified circuit between the offsite transmission network and the onsite Class 1E AC electrical power distribution subsystem(s) required by LCO 3.8.10, "Distribution Systems - Shutdown"; and

b. One diesel generator (DG) capable of supplying one division of the onsite Class 1E AC electrical power distribution subsystem(s) required by LCO 3.8.10, "Distribution Systems - Shutdown."

LCO 3.8.5 DC electrical power subsystems shall be OPERABLE to support the DC electrical power distribution subsystem(s) required by LCO 3.8.10, "Distribution Systems - Shutdown."

LCO 3.8.8 Inverters shall be OPERABLE to support the DC electrical power distribution subsystem(s) required by LCO 3.8.10, "Distribution Systems - Shutdown."

LCO 3.8.10 The necessary portions of the AC, DC, [and AC vital bus] electrical power distribution subsystems shall be OPERABLE to support equipment required to be OPERABLE.

The language of these LCO statements clearly connects the AC and DC source and distribution operability requirements to the operability requirements of the TS-required equipment supported by electrical power. Thus, should both divisions of a specified safety system be required, then the TS would require electrical power from both offsite AC sources and both DC sources (battery and associated charger) (and for Vital AC loads, both battery-backed inverters), and an operable DG for one train of the specified safety system. In the case of a BWR/4 or BWR/5 plant, this would also require the Division 3 DC source and emergency AC source, were HPCS required to be operable.

More specifically, STS LCOs 3.8.5 and 3.8.8 would require a battery and associated battery charger, and a battery-backed inverter from both Divisions 1 and 2. This is more restrictive than the previous single division requirement. The industry noted that many plants' TS have not required the full compliment of a dedicated battery and battery charger, and a battery-backed inverter for the second division of DC electrical power sources. As such, the industry owners' groups TS task force proposed TSTF-204 to modify STS LCOs 3.8.5 and 3.8.8 to allow plants adopting the improved STS the option of retaining their pre-STS shutdown LCO requirements for DC sources and inverters. The NRC staff approved TSTF-204, Revision 3, on October 31, 2000, and incorporated it into Revision 2 of the STS. The optional LCO statements in the STS are:

LCO 3.8.5 One DC electrical power subsystem shall be OPERABLE.

LCO 3.8.8 [One] inverter[s] shall be OPERABLE.

Retaining the less restrictive existing requirement, in accordance with TSTF-204, provides additional flexibility in DC and vital AC electrical power lineups while shutdown.

The pre-STS Bases for NMP2 stated, "The operability of the minimum specified AC and DC power sources and associated distribution systems during shutdown and refueling ensures that (1) the facility can be maintained in the shutdown or refueling condition for extended time periods, and (2) sufficient instrumentation and control capability is available for monitoring and maintaining the unit status." Requiring only one DC power source is acceptable provided these conditions can be satisfied, but also provided the safety equipment and instrumentation used for mitigating the consequences of a fuel-handling accident (FHA) (and an inadvertent drain down of the reactor vessel, if analyzed) are assured of having the electrical power needed to function as assumed by the plant's accident analysis.

In addition to the licensee's application, the NRC staff reviewed the proposed changes using other applicable regulatory guidance and docketed information including the following:

- The description of Limiting Condition for Operation in 10 CFR 50.36(c)(2);
- The four criteria used to determine the requirements that must be included in a plant's Technical Specifications in 10 CFR 50.36(c)(2)(ii);

- Updated Safety Analysis Report (USAR) Section 8.3 description of the NMP2 onsite electrical power distribution system;

- USAR Section 15.7.4 description of FHA accident analysis;

- The model requirements contained in the improved STS, NUREG-1433, Revision 2, "Standard Technical Specifications, General Electric Plants, BWR/4," dated October 10, 2001, Specification 3.8.5;

- TS task force item 204, Revision 3 (TSTF-204, Rev. 3), "Revise DC Sources - Shutdown and Inverters - Shutdown to Address Specific Subsystem Requirements;"

- NUREG-0123, Standard Technical Specifications for General Electric Boiling Water Reactors (BWR/5), Revision 3, fall 1980, Specification 3.8.2.4, "D. C. Distribution - Shutdown;"

- NMP2 TS, Section 3.8.2.2, "DC Sources - Shutdown," as of the date of the application for conversion to Improved TS (ITS), October 16, 1998.

- NMP2 application letter for conversion to the ITS, dated October 16, 1998, Discussion of Changes 3.8.5-M.1, M.2, and LA.1.

2.2 Proposed Changes to the TS

The licensee proposed to revise TS Section 3.8.5 to conform with the optional version of STS Section 3.8.5, with certain plant-specific differences to restore the pre-ITS operability requirements. The proposed wording reads:

> LCO 3.8.5 The following DC electrical power subsystems shall be OPERABLE:
>
> a. One Division 1 or Division 2 DC electrical power subsystem; and
>
> b. The Division 3 DC electrical power subsystem, when Division 3 onsite Class 1E DC electrical power distribution subsystem is required by LCO 3.8.9, "Distribution Systems - Shutdown."

The purpose of the proposed change is to recover flexibility lost when NMP2 adopted the ITS (i.e., via Amendment No. 91). This proposal is consistent with the optional version of STS, Section 3.8.5, which was reviewed under TSTF-204, Rev. 3. At the time NMP2 converted to ITS, the STS did not contain this option. However, in its ITS application, NMP2 could have chosen to retain its existing licensing basis, but did not propose to do so. STS Section 3.8.5 contains the following reviewer's note regarding the optional requirements.

> This second option above applies for plants having a pre-ITS licensing basis (CTS [current TS]) for electrical power requirements during shutdown conditions that required only one DC electrical power subsystem to be OPERABLE. Action

> A and the bracketed optional wording in Condition B are also eliminated for this case. The first option above is adopted for plants that have a licensing basis (CTS) requiring the same level of DC electrical power subsystem support as is required for power operating conditions.

Had the STS optional requirements existed when NMP2 applied to convert to the ITS, the NRC staff would likely have approved NMP2 adopting this option consistent with NMP2's existing LCO for DC sources during shutdown. The basis for this is the staff's policy of allowing plants to retain current TS requirements when deemed appropriate as part of converting to the ITS, and the technical reasons for including such an option in the STS, which are set forth above in the "Background" of this SE. However, in this instance, this basis does not apply because NMP2 did adopt the more stringent requirements. Thus, the acceptability of reverting back to the previous LCO statement must also be based upon an assurance that the NMP2 applicable safety analysis assumptions remain valid. The design-basis events that are postulated to occur during shutdown conditions at NMP2 are the FHAs.

The Bases for NMP2 TS, Section 3.6.4.2, "Secondary Containment Isolation Valves (SCIVs)" states that "Maintaining SCIVs OPERABLE with isolation times within limits ensures that fission products will remain trapped inside secondary containment so that they can be treated by the SGT [standby gas treatment] System prior to discharge to the environment." TS Section 3.6.4.3, "Standby Gas Treatment System," requires two SGT subsystems to be operable, even during shutdown conditions, during movement of recently irradiated fuel assemblies in the secondary containment and also during operations with a potential for draining the reactor vessel. The associated Bases state that part of the design basis for the SGT system is to mitigate the consequences of FHAs. For the FHAs analyzed, "the SGT system is shown to be automatically initiated to reduce, via filtration and adsorption, the radioactive material released to the environment." The SCIVs close and the SGT system starts automatically on a secondary containment isolation signal. This is a high radiation signal derived from either of the two reactor building refuel floor (above and below) exhaust radiation monitors, specified by TS Section 3.3.6.2, "Secondary Containment Isolation Instrumentation."

Although the forgoing excerpts from the TS Bases appear to indicate that FHA mitigation systems are assumed to function, USAR Section 15.7.4 analysis, under the heading "Fission Product Transport to the Environment," states,

> Although the reactor building ventilation system would isolate on a high radiation signal, no credit for SGT system filtration/elevated release is taken.

Thus, when NMP2 TS, Section 3.8.8, "Distribution Systems - Shutdown," requires both DC electrical power distribution subsystems be operable (i.e., buses energized), it is not necessary that the second subsystem be supported by both a battery and a battery charger. Therefore, requiring only one DC electrical power subsystem, either Division 1 or 2, and the Division 3 DC electrical power subsystem if HPCS is required to be operable, will not affect the validity of the NMP2 FHA analysis.

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 proposed changes do not affect the capability of the CREF system to perform this specified safety function. This is because in the event of an FHA coincident with

either a single failure of a CREF subsystem or a loss of offsite power, a single AC and DC electrical power subsystem will still be available to support the operability of the remaining CREF subsystem. This will ensure that the previously calculated control room personnel dose consequences remain valid.

The NRC staff has determined that the proposed LCO 3.8.5 will ensure that: (1) the facility can be maintained in the shutdown or refueling condition for extended time periods, (2) sufficient instrumentation and control capability is available for monitoring and maintaining the unit status, and (3) the assumptions and radiological consequences of the FHA analysis will remain valid. Therefore, the NRC staff finds that the proposed changes to LCO 3.8.5 are acceptable. In addition, in its application, the licensee stated its commitment to NUMARC 91-06, "Guidelines for Industry Actions to Assess Shutdown Management," for managing shutdown risk. The proposed changes, including changes to the associated Bases, are also consistent with the approved TSTF-204, Revision 3.

2.3 Proposed Changes to TS Bases

Associated with the changes to LCO 3.8.5, the licensee proposed changes to the associated TS Bases. The NRC staff reviewed the proposed changes to the TS Bases and does not object to them on the basis that they are consistent with the foregoing evaluation of the requested TSs changes.

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 a facility component located within the restricted area as defined in 10 CFR Part 20. 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 29359). 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 Commission 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 Contributor: C. Harbuck

Date: March 1, 2002

Nine Mile Point Nuclear Station
Unit No. 2

cc:

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