



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

December 15, 1993

Docket No. 50-410

Mr. B. Ralph Sylvia
Executive Vice President, Nuclear
Niagara Mohawk Power Corporation
301 Plainfield Road
Syracuse, New York 13212

Dear Mr. Sylvia:

SUBJECT: ISSUANCE OF AMENDMENT FOR NINE MILE POINT NUCLEAR STATION,
UNIT 2 (TAC NO. M86757)

The Commission has issued the enclosed Amendment No. 54 to Facility Operating License No. NPF-69 for the Nine Mile Point Nuclear Station, Unit 2. The amendment consists of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated June 7, 1993.

The amendment revises TS 3/4.8.1, "AC Sources-Operating," and associated Bases to eliminate unnecessary diesel generator testing when a diesel generator or an offsite power source becomes inoperable. The amendment is intended to increase diesel generator reliability and the overall level of plant safety by reducing the stresses on the diesel generators caused by unnecessary testing. The amendment also makes additional changes to TS 3/4.8.1 to further enhance diesel generator reliability and incorporate certain administrative changes.

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,

John E. Menning, Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 54 to NPF-69
- 2. Safety Evaluation

cc w/enclosures:
See next page

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P PDR

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Mr. B. Ralph Sylvia
Niagara Mohawk Power Corporation

Nine Mile Point Nuclear Station
Unit 2

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DATED: December 15, 1993

AMENDMENT NO. 54 TO FACILITY OPERATING LICENSE NO. NPF-69-NINE MILE POINT
UNIT 2

Docket File

NRC & Local PDRs

PDI-1 Reading

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G. Hill (2), P1-22

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cc: Plant Service list

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

NIAGARA MOHAWK POWER CORPORATION

DOCKET NO. 50-410

NINE MILE POINT NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 54
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 licensee) dated June 7, 1993, 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:

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(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. 54 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.

3. This license amendment is effective as of the date of its issuance to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Capra, Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 15, 1993

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 54 TO FACILITY OPERATING LICENSE NO. NPF-69

DOCKET NO. 50-410

Revise Appendix A as follows:

Remove Pages

3/4 8-1
3/4 8-2
3/4 8-3
B3/4 8-1
B3/4 8-2
B3/4 8-3
-

Insert Pages

3/4 8-1
3/4 8-2
3/4 8-3
B3/4 8-1
B3/4 8-2
B3/4 8-3
B3/4 8-4 (added page)

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 AC SOURCES

AC SOURCES-OPERATING

LIMITING CONDITIONS FOR OPERATION

3.8.1.1 As a minimum, the following AC electrical power sources shall be OPERABLE:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and**
- b. Three separate and independent diesel generators, each with:**
 - 1. Separate day fuel tanks containing a minimum of 409 gallons of fuel for EDG*1 (Division I) and EDG*3 (Division II), and 282 gallons for EDG*2 (HPCS-Division III)**
 - 2. A separate fuel storage system containing a minimum of 52,664 gallons of fuel for EDG*1 (Division I) and EDG*3 (Division II), and 36,173 gallons for EDG*2 (HPCS-Division III), and**
 - 3. Two fuel oil transfer pumps.**

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

- a. With one offsite circuit of the above required AC electrical power sources inoperable, demonstrate the OPERABILITY of the remaining AC sources by performing Surveillance Requirements 4.8.1.1.1 within 1 hour and at least once every 8 hours thereafter. Restore the offsite circuit to OPERABLE status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.**
- b. With either diesel generator EDG*1 or EDG*3 inoperable, demonstrate the OPERABILITY of the above required AC offsite sources by performing Surveillance Requirement 4.8.1.1.1 within 1 hour and at least once every 8 hours thereafter. If the diesel generator became inoperable from any cause other than preplanned maintenance or testing, within 24 hours, for each OPERABLE diesel generator separately, either verify that the cause of the diesel generator being inoperable does not impact the OPERABILITY of the OPERABLE diesel generator or perform Surveillance Requirement 4.8.1.1.2.a.4*. Restore the inoperable diesel generator to OPERABLE status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.**

*** This is required to be completed regardless of when the inoperable diesel generator is restored to OPERABLE status. The provisions of Specification 3.0.2 are not applicable.**

ELECTRICAL POWER SYSTEMS

AC SOURCES

AC SOURCES - OPERATING

LIMITING CONDITIONS FOR OPERATION

3.8.1.1 (Continued)

ACTION:

- c. With one offsite circuit of the above required AC sources and diesel generator EDG*1 or EDG*3 of the above required AC electrical power sources inoperable, demonstrate the OPERABILITY of the remaining AC sources by performing Surveillance Requirement 4.8.1.1.1 within 1 hour and at least once every 8 hours thereafter. If a diesel generator became inoperable from any cause other than preplanned maintenance or testing, within 8 hours, for each OPERABLE diesel generator separately, either verify that the cause of the diesel generator being inoperable does not impact the OPERABILITY of the OPERABLE diesel generator or perform Surveillance Requirement 4.8.1.1.2.a.4*. Restore at least one of the inoperable AC sources to OPERABLE status within 12 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. Restore at least two offsite circuits and diesel generators EDG*1 and EDG*3 to OPERABLE status within 72 hours from time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- d. With diesel generator EDG*2 of the above required AC electrical power sources inoperable, demonstrate the OPERABILITY of the offsite AC sources by performing Surveillance Requirement 4.8.1.1.1 within 1 hour and at least once every 8 hours thereafter. If the diesel generator becomes inoperable as a result of any cause other than preplanned maintenance or testing, within 24 hours, for each OPERABLE diesel generator separately, either verify that the cause of the diesel generator being inoperable does not impact the OPERABILITY of the OPERABLE diesel generator or perform Surveillance Requirement 4.8.1.1.2.a.4*. Restore diesel generator EDG*2 to OPERABLE status within 72 hours or declare the HPCS inoperable and take the ACTION required by Specification 3.5.1.

* This is required to be completed regardless of when the inoperable diesel generator is restored to OPERABLE status. The provisions of Specification 3.0.2 are not applicable.

ELECTRICAL POWER SYSTEMS

AC SOURCES

AC SOURCES - OPERATING

LIMITING CONDITIONS FOR OPERATION

3.8.1.1 (Continued)

ACTION:

- e. With diesel generator EDG*1 or EDG*3 of the above required AC electrical power sources inoperable, in addition to taking ACTION b or c, as applicable, verify within 2 hours that all required redundant systems, subsystems, trains, components, and devices that depend on the remaining OPERABLE diesel generator as a source of emergency power are also OPERABLE; otherwise, either declare inoperable the redundant systems, subsystems, trains, components and devices served by the inoperable diesel generator and take the ACTION required by the associated specification(s) for both divisional systems, subsystems, trains, components or devices inoperable or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- f. With both of the above required offsite circuits inoperable, restore at least one of the above required offsite circuits to OPERABLE status within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours. With only one offsite circuit restored to OPERABLE status, restore at least two offsite circuits to OPERABLE status within 72 hours from time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- g. With diesel generators EDG*1 and EDG*3 of the above required AC electrical power sources inoperable, demonstrate the OPERABILITY of the remaining AC sources by performing Surveillance Requirement 4.8.1.1.1 within 1 hour and at least once every 8 hours thereafter and, within 8 hours, either verify that the cause(s) of diesel generators EDG*1 and EDG*3 being inoperable do not impact the OPERABILITY of diesel generator EDG*2 or perform Surveillance Requirement 4.8.1.1.2.a.4* for diesel generator EDG*2. Restore at least one of the inoperable diesel generators EDG*1 and EDG*3 to OPERABLE status within 2 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. Restore both diesel generators EDG*1 and EDG*3 to OPERABLE status within 72 hours from time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

* This is required to be completed regardless of when the inoperable diesel generator is restored to OPERABLE status. The provisions of Specification 3.0.2 are not applicable.

3/4.8 ELECTRICAL POWER SYSTEMS

BASES

3/4.8.1, 3/4.8.2, & 3/4.8.3 AC SOURCES, DC SOURCES, AND ONSITE POWER DISTRIBUTION SYSTEMS

The OPERABILITY of the AC and DC power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety-related equipment required for (1) the safe shutdown of the facility and (2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant AC and DC power sources and distribution systems satisfy the requirements of GDC 17 of Appendix A to 10 CFR 50.

The ACTION requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The OPERABILITY of the power sources consistent with the initial condition assumptions of the safety analyses and are based upon maintaining at least Division I or II of the onsite AC and DC power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite AC or DC source. Division III supplies the high-pressure core spray (HPCS) system only.

The AC and DC source allowable out-of-service times are based on RG 1.93, "Availability of Electrical Power Sources," December 1974. When diesel generator EDG*1 (Division I) or EDG*3 (Division II) is inoperable, there is an additional ACTION requirement to verify that all required redundant systems, subsystems, trains, components, and devices that depend on the remaining OPERABLE diesel generator EDG*1 or EDG*3 as a source of emergency power, are also OPERABLE. This requirement is intended to provide assurance that a loss-of-offsite-power event will not result in a complete loss of safety function of critical systems during the period diesel generator EDG*1 or EDG*3 is inoperable. Critical systems are those systems that require emergency power to safely shut down the plant and maintain it in a safe shutdown condition in conjunction with a loss-of-offsite-power. Equipment which "fails safe" upon a loss of power are not included. The following systems/subsystems are required to be verified OPERABLE per this ACTION requirement:

1. primary containment hydrogen and oxygen concentration analyzer
2. airborne particulate/gaseous leak detection systems per Technical Specification 3.4.3.1
3. two low pressure ECCS subsystems
4. one suppression pool cooling subsystem of RHR
5. one standby gas treatment system
6. one primary containment hydrogen recombiner
7. one loop service water with 2 pumps in the loop operable
8. special filter train and associated HVC/HVK subsystem
9. standby liquid control
10. drywell/suppression chamber spray subsystem
11. one shutdown cooling loop

The above systems/subsystems are required to be capable of being powered by the OPERABLE diesel generator EDG*1 or EDG*3. Systems whose ACTION requirements are 72 hours or longer for a complete loss of its safety function are not included on the above

ELECTRICAL POWER SYSTEMS

BASES

AC SOURCES, DC SOURCES, AND ONSITE POWER DISTRIBUTION SYSTEMS

3/4.8.1-3 (Continued)

list. Continued plant operation is limited to 72 hours with diesel generator EDG*1 or EDG*3 inoperable. The term "verify" as used in this context means to administratively check by examining logs or other information to determine if certain components are out of service for maintenance or other reasons. It does not mean to perform the Surveillance Requirements needed to demonstrate the OPERABILITY of the component.

When a diesel generator becomes inoperable due to any cause other than preplanned maintenance or testing, there is a requirement in the ACTION to, for each OPERABLE diesel generator separately, either verify that the cause of the diesel generator being inoperable does not impact the OPERABILITY of the OPERABLE diesel generator or perform Surveillance Requirement 4.8.1.1.2.a.4. The term verify in this context means to determine by visual inspection, functional test or other means that the subsystem will perform its function. For diesel generators made by different manufacturers, this verification may consist of a determination that the cause cannot exist if the comparable subsystem is of a different design.

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.

The Surveillance Requirements for demonstrating the OPERABILITY of the diesel generators are in accordance with the recommendations of RG 1.9, "Selection of Diesel Generator Set Capacity for Standby Power Supplies," December 1979; RG 1.108, "Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants," Revision 1, August 1977; and RG 1.137, "Fuel-Oil Systems for Standby Diesel Generators," Revision 1, October 1979.

The Surveillance Requirements for demonstrating the OPERABILITY of the unit batteries are in accordance with the recommendations of RG 1.129, "Maintenance Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants," February 1978, and IEEE Standard 450-1980, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations."

Verifying average electrolyte temperature above the minimum for which the battery was sized, total battery terminal voltage on float charge, connection resistance values, and the performance of battery service and discharge tests ensures the effectiveness of the charging system, the ability to handle high discharge rates, and compares the battery capacity at that time with the rated capacity.

Table 4.8.2.1-1 specifies the normal limits for each designated pilot cell and each connected cell for electrolyte level, float voltage, and specific gravity. The limits for the designated pilot cells float voltage and specific gravity, greater than 2.13 volts and 0.015

ELECTRICAL POWER SYSTEMS

BASES

AC SOURCES, DC SOURCES, AND ONSITE POWER DISTRIBUTION SYSTEMS

3/4.8.1-3 (Continued)

below the manufacturer's full-charge specific gravity or a battery charger current that had stabilized at a low value, is characteristic of a charged cell with adequate capacity. The normal limits for each connected cell for float voltage and specific gravity, greater than 2.13 volts and not more than 0.020 below the manufacturer's full-charge specific gravity with an average specific gravity of all the connected cells not more than 0.010 below the manufacturer's full-charge specific gravity, ensures the OPERABILITY and capability of the battery.

Operation with a battery cell's parameter outside the normal limit but within the allowable value specified in Table 4.8.2.1-1 is permitted for up to 7 days. During this 7-day period: (1) the allowable values for electrolyte level ensures no physical damage to the plates with an adequate electron transfer capability; (2) the allowable value for the average specific gravity of all the cells, not more than 0.020 below the manufacturer's recommended full-charge specific gravity ensures that the decrease in rating will be less than the safety margin provided in sizing; (3) the allowable value for an individual cell's specific gravity, ensures that an individual cell's specific gravity will not be more than 0.040 below the manufacturer's full-charge specific gravity and that the overall capability of the battery will be maintained within an acceptable limit; and (4) the allowable value for an individual cell's float voltage, greater than 2.07 volts, ensures the battery's capability to perform its design function.

3/4.8.4 ELECTRICAL EQUIPMENT PROTECTIVE DEVICES

Primary containment electrical penetrations and penetration conductors are protected by either de-energizing circuits not required during reactor operation or demonstrating the OPERABILITY of primary and backup overcurrent protection circuit breakers by periodic surveillance. The list of primary containment AC circuits required to be deenergized is contained in administrative procedure AP-8.8 and revisions will be processed in accordance with Section 6.0, Administrative Controls.

The Surveillance Requirements applicable to lower voltage circuit breakers provides assurance of breaker reliability by testing at least one representative sample of each manufacturer's brand of circuit breaker. Each manufacturer's molded case and metal case circuit breakers are grouped into representative samples which are then tested on a rotating basis to ensure that all breakers are tested. If a wide variety exists within any manufacturer's brand of circuit breakers, it is necessary to divide that manufacturer's breakers into groups and treat each group as a separate type of breaker for surveillance purposes.

The emergency lighting system overcurrent protective devices ensure that a failure of the non-Class 1E portion of the circuit will not affect the operation of the remaining portions of the Class 1E circuits that are necessary for safe shutdown. The list of these overcurrent protective devices is contained in administrative procedure AP-8.8 and revisions will be processed in accordance with Section 6.0, Administrative Controls.

ELECTRICAL POWER SYSTEMS

BASES

ELECTRICAL EQUIPMENT PROTECTIVE DEVICES

3/4.8.4 (Continued)

The EPAs provide Class 1E isolation capabilities for the RPS power supplies and the scram power supplies. This is required because the power supplies are not Class 1E power supplies.



UNITED STATES
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 54 TO FACILITY OPERATING LICENSE NO. NPF-69
NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT NUCLEAR STATION, UNIT 2
DOCKET NO. 50-410

1.0 INTRODUCTION

By letter dated June 7, 1993, Niagara Mohawk Power Corporation (the licensee) submitted a request for changes to the Nine Mile Point Nuclear Station, Unit 2 (NMP-2), Technical Specifications (TSs). The requested changes would revise TS 3/4.8.1, "AC Sources-Operating," and associated Bases to eliminate unnecessary diesel generator (DG) testing when a DG or an offsite power source becomes inoperable. The changes were proposed to increase DG reliability and the overall level of plant safety by reducing the stresses on the DGs caused by unnecessary testing. The proposed amendment would also make additional changes to TS 3/4.8.1 to further enhance DG reliability and incorporate certain administrative changes.

The NMP-2 Emergency AC Power system is divided into three physically separate and electrically independent divisions designated Divisions I, II, and III. Divisions I and II supply power to all of the Emergency Core Cooling systems, with the exception of the High Pressure Core Spray (HPCS) system. The HPCS system and related equipment are solely supplied by Division III power. All three divisions are normally energized from two offsite sources via reserve station service transformers. Each division has a standby AC power system (standby DG) available in the event offsite power is lost.

The reliability of DGs during normal plant operation is demonstrated by routine surveillance testing required by the NMP-2 TSs. The frequency of such testing is based on past performance with increased testing required to demonstrate continued reliability when test failures occur. In addition to these normal surveillance tests, the TSs require DG testing whenever an offsite power source is lost or if a DG is declared inoperable for a reason other than preplanned preventive maintenance. The purpose of the latter testing is to verify that there is no common mode problem that could affect the remaining DGs and to provide additional assurance that the DGs are, in fact, operable during those conditions when they might be called upon.

While the additional testing described above provides assurance that the DGs are operable, the demands of testing cause additional wear on the diesel components. Operational experience has shown that the TSs have required DG testing when there was clearly no reason to believe that common mode failure was a possibility. Such testing does not contribute to improved DG

reliability and is considered excessive. Excessive testing is detrimental to the mechanical components and could contribute to an overall reduction in the reliability of a DG to start and perform its intended function. In view of these considerations, the licensee has proposed changes to the TSs that would eliminate unnecessary DG testing when a DG or an offsite power source becomes inoperable.

2.0 EVALUATION

2.1 Testing of Operable DGs When a DG Becomes Inoperable

TS 3.8.1.1, Actions b, c, d, and g, currently require that the operable DGs be started and loaded to demonstrate operability in the event a DG becomes inoperable due to any cause other than preplanned preventive maintenance or testing. The intent of this additional testing is, in part, to determine if a common mode failure exists and, in part, to provide assurance that the remaining operable DGs are capable of supplying emergency power. This requirement can result in unnecessary testing of otherwise operable DGs when a DG is declared inoperable and the cause does not impact the operable DGs (i.e., no common mode failure exists).

The licensee has proposed to change TS 3.8.1.1, Actions b, c, d, and g, to allow verification that the cause of a DG being inoperable does not impact the operability of the operable DGs. This change would allow plant personnel to determine whether the potential for a common mode failure exists rather than require unnecessary testing of the operable DGs. The licensee has also proposed changes to the associated Bases that would discuss the actions required to verify that the cause of a DG being inoperable does not impact the operable DGs.

The normal TS surveillance testing schedule established in accordance with Generic Letter (GL) 84-15, "Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability," demonstrates acceptable reliability and assures that operable DGs are capable of performing their intended safety functions. A failure of a different DG does not reduce the reliability of the operable AC sources as demonstrated by the previous TS surveillance testing, provided the potential for a common mode failure has been examined and dismissed. The licensee has stated that the Divisions I and II DGs have each incurred only 2 failures in their last 100 valid tests. The Division III DG has had no failures in its last 100 valid tests.

The staff agrees that, once the potential for common mode failure has been examined and dismissed, testing beyond the normal surveillance schedule previously described is excessive and does not contribute to improved DG reliability. Therefore, since the proposed changes will allow for verification that the cause of a DG being inoperable does not impact the operability of the remaining DGs and will result in the elimination of unnecessary testing, the staff finds these proposed changes to be acceptable. In addition, the staff has no objections to the proposed changes to the associated Bases.

2.2 Loading an Operable DG to Offsite Power Source When a DG Becomes Inoperable

TS 3.8.1.1, Actions b, c, d, and g, currently require that the operable DGs be started and loaded to demonstrate their operability in the event any DG becomes inoperable due to any cause other than preplanned maintenance or testing. As discussed in Information Notice (IN) 84-69, "Operation of Emergency Diesel Generators," when a DG is operated connected to offsite or nonvital loads, the emergency power is not independent of disturbances on the nonvital and offsite power systems that can adversely affect emergency power availability. Therefore, DG availability can be adversely affected by a demonstration of operability requiring connection of the operable DGs to offsite power sources and associated nonvital loads. At a time when at least one DG is already inoperable, the current TS Actions could increase the risk of losing the remaining operable DGs.

The licensee has proposed that the requirement in TS 3.8.1.1., Actions b, c, d, and g, to load a DG to an offsite power source be deleted. In those situations where a DG is declared inoperable and a common mode failure cannot be ruled out, the remaining DGs would be started but not loaded. The licensee has stated that their operating procedures do contain limitations on the length of time that a DG can be operated unloaded. The proposed TS change would not preclude loading a DG as necessary but would provide flexibility as to when this loading occurs. The staff agrees that the proposed TS change will reduce the risk of offsite power disturbances affecting DG reliability and, therefore, finds it acceptable.

2.3 Deletion of Word "Preventive"

TS 3.8.1.1., Actions b, c, and d, currently require that the operable DGs be started and loaded to offsite power to demonstrate operability in the event any DG becomes inoperable due to any cause other than preplanned preventive maintenance or testing. The intent of this exclusion is to require additional testing only in those cases where a potential for a common mode failure exists.

This requirement would cause unnecessary testing of the operable DGs in the event of preplanned corrective maintenance. Corrective maintenance is considered work that is not required to be performed to maintain DG operability. Accordingly, the condition requiring corrective maintenance has not prevented the DG from performing its intended function. The current requirements could delay minor corrective maintenance to preclude having to demonstrate the operability of the remaining DGs. The licensee has, therefore, proposed deletion of the word "preventive" from TS 3.8.1.1, Actions b, c, and d.

The staff notes that previously discussed changes to TS 3.8.1.1, Actions b, c, and d, will require that verification be made that the cause of a DG being inoperable does not impact the operability of the remaining DGs. This eliminates staff concerns of corrective maintenance possibly masking any

potential common mode failures. The staff also notes that the licensee has stated that if during the performance of preplanned maintenance it is discovered that one or more DGs are in fact inoperable and require additional maintenance to restore them to operable status, plant personnel will either verify that the cause of the DGs being inoperable does not impact the operability of the other DGs or perform the required surveillance testing. In view of these considerations, the staff finds the proposed change to be acceptable.

2.4 Deletion of Diesel Generator Testing Following Inoperability of an Offsite Power Source

TS 3.8.1.1, Actions a and f, require that the specified DGs be started and loaded to offsite power to demonstrate their operability in the event an offsite source becomes inoperable. The intent of this additional testing is to provide added assurance that the operable DGs are capable of supplying emergency power when the offsite AC sources are degraded.

The normal TS surveillance testing schedule established in accordance with GL 84-15 provides assurance that the operable DGs are capable of performing their intended safety functions. The inoperability of one or both offsite AC sources in no way affects the reliability of the operable diesel generators. In addition, GL 84-15 encouraged licensees to delete testing of DGs as a result of other systems or components becoming inoperable.

The licensee has stated that the most probable cause of an offsite AC power source becoming inoperable is severe weather or an off-normal grid condition. The severe weather or off-normal grid conditions can also cause the loss of a DG if the DG is tied to the offsite source. IN 84-69 advised licensees against loading a DG to a potentially unstable offsite grid. The loss of an offsite AC source will automatically start the associated DG. To require the remaining operable DGs to be started and loaded to offsite power increases the risk of losing all AC power to the safety buses. Diesel generator availability is, therefore, adversely impacted by connecting DGs to offsite sources when the offsite sources are degraded.

The licensee has proposed that TS 3.8.1.1., Actions a and f, be changed to delete the requirement to demonstrate that the DGs are operable when one or both offsite power sources are found to be inoperable. As previously discussed, the staff considers the normal TS surveillance testing sufficient to demonstrate acceptable reliability and provide assurance that the DGs are capable of performing their intended function. Therefore, this testing is considered excessive and should be eliminated. The staff agrees that loss of an offsite AC power supply does not imply any loss of DG reliability or common mode failure. Based on the above, the staff finds the licensee's proposal to eliminate this testing acceptable.

2.5 Verification of Operability of Redundant Equipment

TS 3.8.1.1, Action e, currently requires that, within 2 hours of the Division I or II DG becoming inoperable, all required systems, subsystems, trains, components and devices that depend on the remaining operable Division I or II DG as a source of emergency power be verified as operable. If the condition cannot be met, the plant is required to be placed in HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. This Action requirement is intended to provide assurance that a loss of offsite power, during the period that the Division I or II DG is inoperable, will not result in a complete loss of safety function of critical systems.

There are redundant systems, subsystems, trains, components and devices which depend on DGs as a source of emergency power that do not represent a significant safety function or critical systems. This is indicated by their associated TS Action Statements which allow continued plant operation for a limited time when all redundant components are determined inoperable. As a result, TS 3.8.1.1., Action e, can result in an unnecessary plant shutdown when the current TS Action Statements for the affected equipment allow continued plant operation for a period longer than 2 hours when both pieces of redundant equipment are inoperable.

The licensee has stated that the current Action Statements for the affected equipment should determine if an immediate plant shutdown is required since they have been established to support safe operation based upon the effect of the loss of the equipment's safety function(s). The licensee has, therefore, proposed to change TS 3.8.1.1, Action e, to add the option of declaring inoperable the redundant system, subsystem, train, component, or device served by the inoperable DG and taking the actions required for both divisional systems, subsystems, trains, components, or devices being inoperable versus shutting down the plant.

The licensee has also proposed to add the word "redundant" to TS 3.8.1.1, Action e, to remove the requirement to verify operability of equipment which is served by only one DG. The accident analyses do not take credit for operation of equipment which is not served by both DGs since a single failure during a design basis accident would prevent such equipment from performing its safety function. In addition, there are redundant systems/components that are supplied emergency power by both DGs, but are not required for safe shutdown of the plant. In both cases, loss of function of these components is not a threat to plant safety and verification of operability, in the event of an inoperable DG, is not necessary. The licensee has, therefore, proposed to add the word "redundant" to Action e and revise the Bases for TS 3.8.1.1. to clearly define which redundant equipment is required to be operable per Action e.

The staff noted that the proposed revisions to TS 3.8.1.1, Action e, will provide the same level of safety for significant critical systems while allowing the operational flexibility intended for less critical emergency

powered systems/components. The staff agrees that the current action requirements for the affected equipment should determine if an immediate plant shutdown should be initiated since they have been established to support safe operation based upon the effect of the loss of the equipment's safety function. If the Action requirement for both redundant systems/components being inoperable is less than 72 hours, the Action requirements for both redundant components not being capable of performing their safety function(s) must be followed. The staff finds the proposed actions to be consistent with the intended level of safety, as described in the TSs, for the affected equipment and, therefore, acceptable. The staff has no objections to the related changes to the TS Bases that have been proposed.

2.6 Deletion of Reference to TS 3.7.1.1

TS 3.8.1.1, Action d, currently requires that when the Division III DG is found to be inoperable, the DG must be restored to an operable status within 72 hours or HPCS declared inoperable and the Actions required by TSs 3.5.1 and 3.7.1.1 be taken. TS 3.7.1.1 provides operability requirements for the Plant Service Water (PSW) system. The PSW system consists of two loops, Division I and Division II. The licensee has proposed that the reference to TS 3.7.1.1 in TS 3.8.1.1, Action d, be deleted since inoperability of the Division III DG does not affect the operability of the Division I or II PSW system loops. The staff finds the proposed change acceptable since it is administrative in nature and does not affect the design or performance of the DG.

2.7 Deletion of Word "Test" from the Note in TS 3.8.1.1

TS 3.8.1.1, Actions b, c, d, and g, currently require that a "test" be performed to demonstrate DG operability. This requirement is reflected in a note (indicated by an asterisk) in TS 3.8.1.1. Since "test" will no longer always be required to these Action requirements when the previously discussed TS changes are implemented, the licensee has proposed that the word "test" be deleted from the note. This staff finds this proposed change to be acceptable since it makes the wording in the note consistent with the other changes that have been determined to be acceptable.

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 installation or use of a facility component 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 (58 FR 36440). 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:
John E. Menning

Date: December 15, 1993

December 15, 1993

Docket No. 50-410

Mr. B. Ralph Sylvia
Executive Vice President, Nuclear
Niagara Mohawk Power Corporation
301 Plainfield Road
Syracuse, New York 13212

Dear Mr. Sylvia:

SUBJECT: ISSUANCE OF AMENDMENT FOR NINE MILE POINT NUCLEAR STATION,
UNIT 2 (TAC NO. M86757)

The Commission has issued the enclosed Amendment No. 54 to Facility Operating License No. NPF-69 for the Nine Mile Point Nuclear Station, Unit 2. The amendment consists of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated June 7, 1993.

The amendment revises TS 3/4.8.1, "AC Sources-Operating," and associated Bases to eliminate unnecessary diesel generator testing when a diesel generator or an offsite power source becomes inoperable. The amendment is intended to increase diesel generator reliability and the overall level of plant safety by reducing the stresses on the diesel generators caused by unnecessary testing. The amendment also makes additional changes to TS 3/4.8.1 to further enhance diesel generator reliability and incorporate certain administrative changes.

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,

Original signed by:

John E. Menning, Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 54 to NPF-69
2. Safety Evaluation

cc w/enclosures:

See next page

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|-------------------|----------------------|-----------------|---------------------|--------------------|------------|
| LA:PDI-1 | PM:PDI-1 <i>NAB</i> | EELB <i>CHB</i> | OGC <i>12/14/93</i> | D:PDI-1 | |
| CVogan <i>PCU</i> | JMenning: <i>Smm</i> | CBerlinger | | RACapra <i>ROC</i> | |
| <i>12/8/93</i> | <i>12/2/93</i> | <i>12/18/93</i> | <i>12/14/93</i> | <i>12/15/93</i> | <i>1/1</i> |

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