

February 21, 2003

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

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT NO. 2 - AMENDMENT RE:  
EXIGENT CHANGE TO TECHNICAL SPECIFICATION SURVEILLANCE  
REQUIREMENT 3.6.1.7.2, SUPPRESSION CHAMBER-TO-DRYWELL  
VACUUM BREAKERS (TAC NO. MB7331)

Dear Mr. Conway:

The Commission has issued the enclosed Amendment No. 108 to Facility Operating License No. NPF-69 for the Nine Mile Point Nuclear Station, Unit No. 2 (NMP2). The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated February 3, 2003.

The amendment changes TS Surveillance Requirement 3.6.1.7.2 for suppression chamber-to-drywell vacuum breaker 2ISC\*RV36B to allow an exception to the periodic functional testing requirements for the remainder of Cycle 9.

A copy of the related safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

*/RA/*

Peter S. Tam, Senior Project Manager, Section 1  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-410

Enclosures: 1. Amendment No. 108 to NPF-69  
2. Safety Evaluation

cc w/encls: See next page

February 21, 2003

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

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT NO. 2 - AMENDMENT RE:  
EXIGENT CHANGE TO TECHNICAL SPECIFICATION SURVEILLANCE  
REQUIREMENT 3.6.1.7.2, SUPPRESSION CHAMBER-TO-DRYWELL  
VACUUM BREAKERS (TAC NO. MB7331)

Dear Mr. Conway:

The Commission has issued the enclosed Amendment No. 108 to Facility Operating License No. NPF-69 for the Nine Mile Point Nuclear Station, Unit No. 2 (NMP2). The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated February 3, 2003.

The amendment changes TS Surveillance Requirement 3.6.1.7.2 for suppression chamber-to-drywell vacuum breaker 2ISC\*RV36B to allow an exception to the periodic functional testing requirements for the remainder of Cycle 9.

A copy of the related safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

*/RA/*

Peter S. Tam, Senior Project Manager, Section 1  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-410

Enclosures: 1. Amendment No. 108 to NPF-69  
2. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION:

PUBLIC	ACRS	OGC	PDI-1 SC	PDI-1RF
WBeckner	GHill, (2)	BPlatchek,RI	SRichards	
PTam	SLittle	CHammer	EThrom	

Accession Number: **ML030520542**      **Text Spec:**      **Package:**

OFFICE	PDI-1\PM	PDI-1\LA	SPLB\SC	EMEB\SC	OGC	PDI-1\SC
NAME	PTam	SLittle	SWeerakkody*	DTerao**	SUttal	TColburn for RLaufer
DATE	2/19/03	2/19/03	2/12/03	2/20/03	2/21/03	2/21/03

OFFICIAL RECORD COPY

\*SE transmitted by memo of 2/12/03.      \*\*Concurred by email.

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. 108  
License No. NPF-69

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Nine Mile Point Nuclear Station, LLC (the licensee) dated February 3, 2003, 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. 108 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 within 7 days.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA by TColburn for/*

Richard J. Laufer, 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 21, 2003

ATTACHMENT TO LICENSE AMENDMENT NO. 108

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 marginal lines indicating the areas of change.

Remove Page

3.6.1.7-3

Insert Page

3.6.1.7-3

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 108 TO FACILITY OPERATING LICENSE NO. NPF-69  
NINE MILE POINT NUCLEAR STATION, LLC  
NINE MILE POINT NUCLEAR STATION, UNIT NO. 2  
DOCKET NO. 50-410

## 1.0 INTRODUCTION

By letter dated February 3, 2002, Nine Mile Point Nuclear Station, LLC (the licensee), proposed a license amendment to revise the Technical Specifications (TSs) for the Nine Mile Point Nuclear Station, Unit No. 2 (NMP2). Specifically, the licensee proposed to revise Section 3.6.1.7, "Suppression Chamber-to-Drywell Vacuum Breakers," to allow a one-time exception to Surveillance Requirement (SR) 3.6.1.7.2 to perform a functional test. The exception request is for the remainder of the current operating cycle, Cycle 9, for one suppression chamber-to-drywell vacuum breaker, 2ISC\*RV36B. The functional test, which involves cycling each vacuum breaker, is currently performed monthly and following a discharge of steam to the suppression chamber through a safety/relief valve (SRV).

The licensee stated that on January 15, 2003, during performance of the functional testing required by SR 3.6.1.7.2, vacuum breaker 2ISC\*RV36B failed to fully re-close after test stroking to full open. After exercising it several additional times, the vacuum breaker position switches indicated that the disc was closed and the functional testing for vacuum breaker 2ISC\*RV36B was successfully completed. Troubleshooting performed by the licensee after the initial failure of the vacuum breaker to fully close determined that the proximity switches used for position indication were functioning properly. The licensee determined that the most probable cause of the intermittent closure of the vacuum breaker during the functional testing was due to degraded testing equipment (pneumatic actuator and linkages). The vacuum breaker was visually inspected during the last refueling outage (RFO8) in the spring of 2002.

The licensee proposed this TS change to accommodate degraded testing equipment used to perform SR 3.6.1.7.2 testing on vacuum breaker 2ISC\*RV36B. The testing equipment is located in the drywell and cannot be accessed for repair or replacement while at power. Performance of the required functional test could cause failure of this vacuum breaker to return to the closed position after testing. Approval of the proposed amendment, needed under exigent circumstances, could prevent a potential forced shutdown under TS 3.6.1.7 due to a failure to perform the functional testing SR on 2ISC\*RV36B. TS 3.6.1.7 would require NMP2 to be placed in Mode 3 within 84 hours and Mode 4 within the following 24 hours after failure to perform SR 3.6.1.7.2 on vacuum breaker 2ISC\*RV36B. The proposed change will allow the degraded testing equipment to be repaired or replaced during RFO9. The licensee has further stated that should an outage of sufficient duration occur before RFO9, and which permits drywell entry, the affected equipment will be repaired or replaced and functional testing resumed.

## 2.0 REGULATORY EVALUATION

### 2.1 Vacuum Breaker Design Functions

Analytical methods and assumptions involving the suppression chamber-to-drywell vacuum breakers for the primary containment systems are presented in the NMP2 Updated Safety Analysis Report (USAR) as part of the accident response. The design-basis accident (DBA) analyses assume that the vacuum breakers are initially closed and remain closed and leak tight until the suppression chamber is at a positive pressure of 0.25 psid relative to the drywell.

The suppression chamber-to-drywell vacuum breakers are designed to allow steam and gases to flow from the suppression chamber into the drywell when the suppression chamber pressure exceeds the drywell pressure by the vacuum breakers actuation setpoint of approximately 0.25 psid. By opening on demand following a rapid depressurization of the drywell, the vacuum breakers limit the negative differential pressure across the drywell floor to maintain containment integrity, as required by General Design Criterion (GDC) 4, "Environmental and dynamic effects design bases." Both vacuum breakers in three of the four vacuum breaker lines must open to satisfy the analytical assumptions for a DBA. An additional vacuum breaker line is provided to accommodate the postulated single failure of one vacuum breaker to open. The results of the analyses show that the design pressure for the drywell floor is not exceeded with proper operation of the vacuum breakers in three of the four lines for the full spectrum of breaks.

A negative differential pressure across the drywell floor is caused by rapid depressurization of the drywell. Events that cause this rapid depressurization are inadvertent drywell spray actuation and steam condensation from sprays or subcooled water from a break in the event of a primary system rupture, and a loss-of-coolant accident (LOCA). Cooling cycles that occur slowly result in minor pressure transients in the drywell, and are normally controlled by the heating and ventilation equipment. Spray actuation or the spill of subcooled water out of a break results in more significant pressure transients and becomes important in sizing the vacuum breakers.

During a LOCA, the vacuum breakers must initially be closed to limit the drywell-to-suppression chamber bypass leakage. Vacuum breaker closure is necessary to limit this bypass leakage to less than its design value. Bypass leakage would allow steam released into the drywell during an accident to leak directly to the suppression chamber airspace, thus circumventing condensation of the steam in the suppression chamber pool. Closure of the vacuum breakers, when required, to limiting bypass leakage prevents the overpressurization of the primary containment, as required by GDC 50, "Containment design basis." The assumptions made in the NMP2 accident analysis regarding vacuum breaker closure are satisfied when at least one vacuum breaker in each of the four lines is fully closed and capable of reclosing if cycled open.

The vacuum breakers must also be capable of reclosing after a suppression pool swell event. A suppression pool swell event would raise the water level in the suppression pool and pressurize the suppression chamber airspace sufficiently to momentarily open the vacuum breakers. This occurs after the initial steam release from the drywell to the suppression pool during a LOCA. The accident analysis assumptions for the closed function of the vacuum breakers are satisfied when at least one vacuum breaker in each of the four vacuum breaker lines is fully closed and capable of reclosing following a pool swell event. The additional vacuum breaker in each line satisfies the single failure criterion.

The vacuum breakers also regulate the height of the column of water in the downcomers of the primary containment vent system. The water level in the downcomers is dependent on the differential pressure between the drywell and the suppression chamber. A reduction in the drywell pressure in relation to the suppression chamber pressure would cause the water level in the downcomers to rise. As a result, the inertia of the water cleared from the downcomers due to a DBA would be increased, resulting in an increased peak drywell pressure and increased suppression pool swell dynamic loads. The actuation setpoint for the vacuum breakers has been selected to maintain a drywell-to-suppression chamber differential pressure which is consistent with the assumptions made in the NMP2 accident analysis to demonstrate compliance with GDC 4.

## 2.2 Justification for the Proposed TS Change

The licensee stated that the proposed change is necessary because future performance of SR 3.6.1.7.2 could cause vacuum breaker 2ISC\*RV36B to fail to fully close after testing due to failure of the testing equipment (pneumatic actuator and linkages) to fully retract after use. The inability to perform the functional testing or to confirm the vacuum breaker closed, as required by SR 3.6.1.7.1, would result in declaring the vacuum breaker inoperable. TS 3.6.1.7 would then require placing the reactor in Mode 3 within the next 84 hours and Mode 4 in the following 24 hours. The licensee also concluded that a plant shutdown would unnecessarily challenge plant systems.

The licensee is requesting an exception to the functional testing requirement of SR 3.6.1.7.2 for suppression chamber-to-drywell vacuum breaker 2ISC\*RV3613 for the remainder of Cycle 9 (approximately 14 months). The licensee will continue to verify that the vacuum breaker is closed every 14 days as required by SR 3.6.1.7.1.

## 2.3 Precedence

The NRC previously approved a similar TS change for NMP2 in License Amendment No. 98, dated September 7, 2001 (ADAMS Accession No. ML0124704510 ). This amendment allowed the deferral of functional testing of both vacuum breakers in one vacuum breaker pair (2ISC\*RV35A and 2ISC\*RV35B) for 8 months until the next scheduled refueling outage. The functional testing was deferred due to degraded position indication switches, which could have prevented confirmation that the vacuum breakers were closed after functional testing. The degraded position indication switches were replaced with an improved design during RFO8.

## 3.0 TECHNICAL EVALUATION

### 3.1 Description of Vacuum Breakers and Testing and Indication Circuitry

NMP2 employs a Mark II containment. In this containment design, the drywell is located above the cylindrical suppression chamber, and the two are separated by the drywell floor. Eight vacuum breakers are mounted on four lines which connect the drywell to the suppression chamber. Each vacuum breaker line has two suppression chamber-to-drywell vacuum breakers which are configured in series. A vacuum breaker actuates similarly to a check valve, opening and closing in response to the differential pressure between the drywell and suppression chamber.

Functional testing of the vacuum breakers is performed remotely from the NMP2 control room. The Parker-Hannifin pneumatic test actuator provides for a mechanical lever action to linkages which push the vacuum breaker disc to the full open position. After venting the gas from the test actuator, a return spring allows the test actuator and linkages to retract to their de-energized positions, clear of the vacuum breaker disc. The vacuum breaker disc then falls closed and is maintained closed by a set of permanent magnets. The full open and full closed position indications are displayed in the control room. When the testing equipment is in a de-energized position, it does not affect the capability of the vacuum breaker to function automatically.

### 3.2 Surveillance Requirements for Vacuum Breakers

The NMP2 TSs contain three SRs for demonstrating suppression chamber-to-drywell vacuum breaker operability:

SR 3.6.1.7.1 requires verification that each vacuum breaker is closed every 14 days. The surveillance verification ensures that a potential large bypass leakage path is not present. The surveillance is performed by observing the vacuum breaker position indication in the control room. If this position indication is lost, the surveillance can alternately be completed by verifying a differential pressure is maintained between the drywell and suppression chamber. When the alternate method is used, one vacuum breaker in the line being tested must be opened to permit the position verification of the other in-series vacuum breaker. This SR is not affected by the proposed amendment and the test will continue to be performed.

SR 3.6.1.7.2 requires performance of a functional test (cycling open and closed) of each vacuum breaker every 31 days and within 12 hours of a discharge of steam to the suppression chamber from SRVs. This surveillance demonstrates that each vacuum breaker opens to perform its design function and returns to the fully closed position. The surveillance frequency was chosen to be 31 days to be conservative relative to normal inservice testing requirements for quarterly testing of check valves because the vacuum breakers are located in a harsh environment (the suppression chamber airspace). Performance of the surveillance within 12 hours after a discharge from the SRVs was recommended by the NRC staff in Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements For Testing During Power Operation," however, the discharge of steam to the suppression chamber from the SRVs is not considered to affect vacuum breaker operability. The vacuum breakers are remotely cycled from the control room during power-operation using a pneumatic actuator. The control room position indication is normally used to verify vacuum breaker position. As indicated in the Bases for TS 3.6.1.7, an alternate method for verifying that the vacuum breaker is closed after exercising is available by verifying a differential pressure is maintained between the drywell and the suppression chamber. When the alternate method is used, one vacuum breaker in the line being tested must be opened to permit the position verification of the other in-series vacuum breaker. The proposed change would except suppression chamber-to-drywell vacuum breaker 2ISC\*RV36B from this SR for the remainder of the current operating cycle, approximately 14 months.

SR 3.6.1.7.3 requires the opening setpoint of each vacuum breaker to be verified every 24 months. The setpoints were verified during RFO8. This SR is not affected by the proposed change.

### 3.3 Analysis of Proposed TS Change

As described in Section 2.0, the closed safety functions of the suppression chamber-to-drywell vacuum breakers are to close to limit drywell-to-suppression chamber bypass leakage and to reclose following a suppression pool swell event. The open safety function is to prevent an excessive negative differential pressure across the suppression chamber-to-drywell boundary. The proposed amendment does not lead to physical modification of the vacuum breakers. The proximity switches for all eight vacuum breakers were calibrated and the opening setpoint for each vacuum breaker was confirmed during the last RFO. The vacuum breakers were opened and confirmed closed after the last performance of SR 3.6.1.7.2. Therefore, the NRC staff agrees with that licensee's evaluation that all eight vacuum breakers (four vacuum breaker pairs) are considered operable.

The inability to perform functional testing of suppression chamber-to-drywell vacuum breaker 2ISC\*RV36B will not affect the ability of the vacuum breaker to operate when necessary. A review of NMP2 deviation event reports (DERs) and other plant records related to suppression chamber-to-drywell vacuum breakers by the licensee did not identify any failures to open or close when required due to mechanical problems with the vacuum breakers. Additionally, the licensee review did not identify any past failures to close due to degraded testing equipment. The review of industry failure data for the type of vacuum breaker utilized at NMP2 (GPE, Controls N/A Model LD240-496) found no failures to open on demand due to mechanical causes. The review found two failures to close on demand due to the test actuator failing to properly retract thereby holding the disc partially open. The review also found two instances at other plants in the last 14 years when this type of vacuum breaker failed to close for reasons other than failure of test equipment. These two instances were attributable to inadequate maintenance. The review of NMP2 preventive maintenance procedures showed that the reliability concerns identified at the other units have been addressed by appropriate component replacement intervals. Based on the NMP2 DERs, historical record reviews and available industry failure data, the licensee concluded that the vacuum breakers have high mechanical reliability. The NRC staff agrees with the licensee's evaluation of the mechanical reliability of the vacuum breakers.

The vacuum breakers are located in a normally inert environment, which minimizes corrosion potential. The vacuum breakers utilize a stainless steel body, flapper and hinge pin. This material is corrosion-resistant. The vacuum breakers are also provided with magnetic latching to minimize vibrational wear. The NRC staff agrees with the licensee's determination that the effects of corrosion and vibration are not expected to adversely affect the capability of the vacuum breakers to function automatically.

Inservice testing (IST) of the vacuum breakers is required by the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) OM-1987, Part 1 in accordance with 10 CFR 50.55a. At NMP2, the vacuum breakers are classified as pressure relief valves. Section 1.3.4.1(b) of OM-1987, Part 1 requires testing of each valve once each 10 years with a minimum of 20% of the valves tested within any 48 months. The IST includes verification of open and close capability, set pressure, leakage testing, and performance of position sensing accessories. The licensee performs the IST on all eight vacuum breakers every 24 months (each refueling cycle). The Code-required seat-leakage test is performed every refueling outage. Therefore, a one-time extension of the functional testing SR from 31 days to 14 months for suppression chamber-to-drywell vacuum breaker 2ISC\*RV36B would still

only be a fraction of the surveillance interval required by the ASME Code. Additionally, a 24-month testing frequency is recommended by the vendor in the technical manual for the vacuum breakers.

### 3.4 Vacuum Breaker Operating Experience

The licensee considered the effect on vacuum breaker reliability from an SRV discharging steam to the suppression chamber. The vacuum breakers are designed to function in expected accident conditions, and the licensee does not expect that the discharge of steam from an SRV would affect their functionality. In November 2002, NMP2 experienced a condition where vacuum breaker 2ISC\*RV36B cycled three times in response to a steam discharge from the SRVs. Subsequent functional testing verified that the vacuum breaker remained operable. This provides additional assurance that an inadvertent actuation of an SRV during the proposed 14-month deferral of the functional testing requirement would not adversely affect vacuum breaker operability or performance. The NRC staff further notes that the closure of each vacuum breaker must be verified every 14 days in accordance with SR 3.6.1.7.1. An inability to verify the closure of each vacuum breaker in accordance with SR 3.6.1.7.1, for any reason, would necessitate a unit shutdown.

The NRC staff reviewed NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," published in December 1992. In Section 8.4 of this document, industry-wide vacuum breaker functional testing is discussed. NUREG-1366 does not contain details about specific models of vacuum breakers, and its data set was largely gathered in the 10 years before NMP2 began operation. However, the NRC staff believes the following two findings from this document are relevant: (1) many cases of vacuum breaker inoperability were caused by faulty closure-sensing accessories, and (2) only a few plants accounted for a significant number of the vacuum breaker failures experienced. Based on these previous findings from NUREG-1366, the NRC staff has additional confidence that the past mechanical reliability of the vacuum breakers at NMP2 is indicative of future reliability.

### 3.5 Additional Considerations

The licensee performed a review to identify any operational and maintenance activities that could affect the reliability of the vacuum breakers during the remainder of the current operating cycle. Based on this review, the licensee concluded that only the required quarterly surveillance on the reactor core isolation cooling (RCIC) pump (SR 3.5.3.3) would discharge steam to the suppression chamber during testing. However, the licensee has stated that previous testing has not resulted in significant increases in the suppression chamber pressure, temperature, or humidity. Furthermore, as this surveillance is required to be performed during power operation, appropriate precautions are taken to minimize its impact on safety-related equipment. Therefore, the NRC staff concludes that the required RCIC pump surveillance test is not expected to adversely affect the operability of the vacuum breakers.

A risk analysis was performed by the licensee for the potential extension of the surveillance interval for vacuum breaker 2ISC\*RV36B from 31 days to 14 months. Fourteen months is the time remaining until RFO9. The risk analysis included the potential impact of an inadvertent SRV lift. The licensee's risk analysis concluded that extension of the surveillance frequency would not be risk-significant. The increase in core damage frequency and large early release frequency were found to both be less than  $10^{-8}$ /yr. These changes correspond to Region III of

the acceptance guidelines presented in Regulatory Guide 1. 174, "An Approach to Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis."

The licensee stated that it will repair or replace suppression chamber-to-drywell vacuum breaker 2ISC\*RV36B functional testing equipment during the upcoming RFO9. The licensee has additionally made a commitment that should an outage of sufficient duration, and which permits drywell entry, occur prior to RFO9, the degraded testing equipment would be repaired or replaced and functional testing of vacuum breaker 2ISC\*RV36B would be resumed.

#### 4.0 SUMMARY

Based on the findings documented in Section 3.0 above, the NRC staff concludes that the most recent 24-month IST, the prior successful completions of SR 3.6.1.7.2 during the current operating cycle, the prior visual inspection, and the review of industry-wide operational and test data provide sufficient assurance of the functionality of suppression chamber-to-drywell vacuum breaker 2ISC\*RV36B for the remainder of the current cycle. Therefore, the NRC staff finds the proposed TS change to except vacuum breaker 2ISC\*RV36B from SR 3.6.1.7.2 for the remainder of the current operating cycle to be acceptable.

#### 5.0 EXIGENT CIRCUMSTANCES

The NRC staff has made a determination that exigent circumstances exist with regard to issuance of this license amendment, in response to the licensee's application dated February 3, 2003, as defined in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.91(a)(6). In this regard, the licensee only became aware of the degrading testing equipment associated with suppression chamber-to-drywell vacuum breaker 2ISC\*RV36B during the last functional test on January 15, 2003, and promptly submitted an amendment application. Future performance of the functional tests on this vacuum breaker could cause failure of the vacuum breaker to return to the closed position after testing. Loss of the ability to verify that the vacuum breakers are closed would require NMP2 to be placed in Mode 3 within 84 hours and Mode 4 within the following 24 hours. The functional testing equipment cannot be repaired or replaced while at power. Based on the current TSs, the next required functional test must be performed by February 21, 2003 (i.e., 31 days plus 25% from January 15, 2003). Therefore, an exigent review is needed to avoid a potential unnecessary plant shutdown.

#### 6.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission's regulations in 10 CFR 50.92 state that the Commission may make a final determination that a license amendment involves no significant hazards consideration if operation of the facility, in accordance with the amendment, would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, or (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety. As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

Proper functioning of the suppression chamber-to-drywell vacuum breakers is required for accident mitigation. Failure of the vacuum breakers is not assumed as an accident initiator for any accident previously evaluated. Therefore, any potential failure of a vacuum breaker to perform when necessary will not affect the probability of an accident previously evaluated.

During a loss of coolant accident (LOCA), the vacuum breakers are assumed to initially be closed to limit drywell-to-suppression chamber bypass leakage and must be capable of reclosing following a suppression pool swell event. The vacuum breakers open to prevent an excessive negative differential pressure across the suppression chamber-to-drywell boundary. The proposed change will not affect the capability of the vacuum breakers to perform their open and closed safety functions. Therefore, all four vacuum breaker pairs will remain operable and available to mitigate the consequences of a LOCA. Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The suppression chamber-to-drywell vacuum breakers are used to mitigate the potential consequences of an accident. The proposed change does not affect the capability of the vacuum breakers to perform their open and closed safety functions. Thus, the initial conditions assumed in the accident analysis are not affected. Since the vacuum breakers have demonstrated high reliability, proper functioning of the four vacuum breaker pairs is assured in order to satisfy the current accident analysis. The proposed amendment does not involve a change to plant design and does not involve any new modes of operation or testing methods. Accordingly, the vacuum breakers will continue to perform their accident mitigation safety functions as previously evaluated. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The deferral of functional testing for one vacuum breaker for the remainder of Cycle 9 is not risk significant, in that the increase in core damage frequency and large early release frequency were found to be less than  $10^{-8}/\text{yr}$ . The vacuum breakers are not modified by the proposed amendment. Reviews of vacuum breaker failure history show that the vacuum breakers have a high reliability to open or close when necessary. Thus, both vacuum breakers in each of the four vacuum breaker lines are expected to remain available to perform their accident mitigation safety functions. Furthermore, the 14-day surveillance that verifies the vacuum breakers are closed will continue to be performed to ensure a potential bypass leakage path is not present. Accordingly, all four vacuum

breaker pairs are considered operable. The accident analysis assumptions for the closed safety functions of the vacuum breakers are satisfied when at least one vacuum breaker in each of the four vacuum breaker lines is fully closed and capable of reclosing following a suppression pool swell event. The additional vacuum breaker in each line satisfies the single failure criterion. The open safety function of the vacuum breakers is satisfied when three of the four vacuum breaker pairs open during a design basis accident. The fourth vacuum breaker pair satisfies the single failure criterion. Since all of the vacuum breakers are considered operable and available to perform their open and closed safety functions, the proposed change will not involve a significant reduction in a margin of safety.

Based on the above considerations, the NRC staff concludes that the amendment meets the three criteria of 10 CFR 50.92. Therefore, the NRC staff has made a final determination that the proposed amendment does not involve a significant hazards consideration.

#### 7.0 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.

#### 8.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a surveillance requirement. 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 made a final finding that the amendment involves no significant hazards consideration. 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.

#### 9.0 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 Contributors: E. Throm  
C. Hammer  
P. Tam

Date: February 21, 2003

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

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

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

Gary D. Wilson, Esquire  
Niagara Mohawk Power Corporation  
300 Erie Boulevard West  
Syracuse, NY 13202

Mr. Jim Rettberg  
NY State Electric & Gas Corporation  
Corporate Drive  
Kirkwood Industrial Park  
P.O. Box 5224  
Binghamton, NY 13902-5224

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

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