



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 41 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 December 7, 1992, as supplemented March 4, 1993, and April 2, 1993, Niagara Mohawk Power Corporation (the licensee or NMPC) submitted a request for changes to the Nine Mile Point Nuclear Station, Unit 2 (NMP2), Technical Specifications (TS). The requested changes would revise TS Sections 3/4.3, "Instrumentation," and 4.4.2.1, "Safety/Relief Valves - Surveillance Requirements," and associated Bases to increase the surveillance test intervals and allowable out-of-service times for various instruments. The licensee stated in its request that the proposed changes are consistent with the NRC staff's previous approvals of several General Electric Company (GE) Licensing Topical Reports (LTRs). The licensee's submittal also stated that the proposed out-of-service times are consistent with the guidance provided in NUREG-1434, "Standard Technical Specifications, General Electric Plants, BWR/6." The proposed changes would permit specified instrument channel functional tests to be performed quarterly rather than once per week or once per month. The March 4, 1993, letter clarified the actions to be taken in the event of a loss of more than one instrument channel in a trip system so that a loss of function will not occur. The March 4, 1993, letter also withdrew the original plant-specific proprietary reports and affidavits requesting withholding of proprietary information. This letter also resubmitted the plant-specific proprietary reports and affidavits to more specifically delineate GE's proprietary information. The April 2, 1993, letter clarified and provided bases for operator actions during surveillance and repair of instrument channels. The March 4, 1993, and April 2, 1993, letters did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

The licensee has proposed changes to TS Sections 3/4.3 and 4.4.2.1. The proposed changes are based on the NRC staff's previous approvals of the following GE LTRs:

1. NEDC-30851P-A, "Technical Specification Improvement Analyses for BWR Reactor Protection System," dated March 1988. This LTR was approved by letter and enclosed safety evaluation dated July 15, 1987, from A. C. Thadani (NRC) to T. A. Pickens (BWR Owners Group).

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

2. NEDC-30851P-A (Supplement 2), "Technical Specification Improvement Analysis for BWR Isolation Instrumentation Common to RPS and ECCS Instrumentation," dated March 1989. This LTR was approved by letter and enclosed safety evaluation dated January 6, 1989, from C. E. Rossi (NRC) to D. N. Grace (BWR Owners Group).
3. NEDC-31677P-A, "Technical Specification Improvement Analysis for BWR Isolation Actuation Instrumentation," dated July 1990. This LTR was approved by letter and enclosed safety evaluation dated June 18, 1990, from C. E. Rossi (NRC) to S. D. Floyd (BWR Owners Group).
4. NEDC-30936P-A, "BWR Owner's Group Technical Specification Improvement Methodology (With Demonstration for BWR ECCS Actuation Instrumentation) Part 1," dated December 1988. This LTR was approved by letter and enclosed safety evaluation dated December 9, 1988, from A. C. Thadani (NRC) to D. N. Grace (BWR Owners Group).
5. NEDC-30936P-A, "BWR Owner's Group Technical Specification Improvement Methodology (With Demonstration for BWR ECCS Actuation Instrumentation) Part 2," dated December 1988. This LTR was approved by letter and enclosed safety evaluation dated December 9, 1988, from C. E. Rossi (NRC) to D. N. Grace (BWR Owners Group).
6. GENE-770-06-2, "Addendum to Bases for Changes to Surveillance Test Intervals and Allowed Out-of-Service Times for Selected Instrumentation Technical Specifications," dated February 1991. This LTR was approved by letter and enclosed safety evaluation dated September 13, 1991, from C. E. Rossi (NRC) to G. J. Beck (BWR Owners Group).
7. NEDC-30851P-A (Supplement 1), "Technical Specification Improvement Analysis for BWR Control Rod Block Instrumentation," dated October 1988. This LTR was approved by letter and enclosed safety evaluation dated September 22, 1988, from C. E. Rossi (NRC) to D. N. Grace (BWR Owners Group).
8. GENE-770-06-1, "Bases for Changes to Surveillance Test Intervals and Allowed Out-of-Service Times for Selected Instrumentation Technical Specifications," dated February 1991. This LTR was approved by letter and enclosed safety evaluation dated July 21, 1992, from C. E. Rossi (NRC) to R. D. Bing IV (BWR Owners Group).

Each of the above LTRs was prepared and approved on a generic basis with requirements for individual licensees to perform plant-specific evaluations to demonstrate that the LTRs are applicable to plant-specific license amendment requests. NMP2 has performed the required plant-specific evaluations for NMP2. These evaluations are discussed below:

1. Appendix L of NEDC-30851P-A identifies NMP2, a GE BWR-5 product line reactor with a Mark II containment, as a participating utility in the development of this LTR. Section 7.4, "Conclusions of Plant Specific



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Applications," of NEDC-30851P-A concluded that the generic results of this LTR can be applied to NMP2. Furthermore, NMPC's December 7, 1992, submittal included a copy of GE Report MDE-78-0485 DRF A00-02119-D, April 1985 (Proprietary), "Technical Specification Improvement Analysis for the Reactor Protection System for Nine Mile Point, Unit 2," which concludes in Section 4, "Summary and Conclusions," that the generic analysis in NEDC-30851P-A is applicable to NMP2. Therefore, we have concluded that NEDC-30851P-A is applicable to NMP2.

2. Appendix A of NEDC-30851P-A (Supplement 2) identifies NMP2 as a participating utility in the development of this LTR. Section 3.2 of the LTR specifically analyzes BWR 5/6 plants. Therefore, we have concluded that NEDC-30851P-A (Supplement 2) is applicable to NMP2.
3. Appendix E of NEDC-31677P-A identifies NMP2 as a participating utility in the development of this LTR. Section 5.2 and Appendix C2 of the LTR specifically analyze BWR 5/6 plants. Therefore, we have concluded that NEDC-31677P-A is applicable to NMP2.
4. Appendix N of Part 1 of NEDC-30936P-A identifies NMP2 as a participating utility in the development of this LTR. NMPC's December 7, 1992, submittal included a copy of GE Report RE-026 DRF A00-02558E, February 1987 (Proprietary), "Technical Specification Improvement Analysis for the Emergency Core Cooling System Actuation Instrumentation for Nine Mile Point Nuclear Station, Unit 2," which concludes in Section 4, "Summary and Conclusions," that the generic analyses in NEDC-30936P-A, Parts 1 and 2, are applicable to NMP2. Therefore, we have concluded that NEDC-30936P-A, Part 1, is applicable to NMP2.
5. Appendix B of Part 2 of NEDC-30936P-A identifies NMP2 as a participating utility in the development of this LTR. Section 5.5 of the LTR specifically analyzes BWR 5/6 plants. Furthermore, as noted above, GE Report RE-026 also concludes that the generic analyses in NEDC-30936P-A are applicable to NMP2. Therefore, we have concluded that NEDC-30936P-A, Part 2, is applicable to NMP2.
6. GENE-770-06-1 identifies application of changes to surveillance test intervals and allowed out-of-service times for selected instrumentation for all BWR plants. Therefore, we have concluded that GENE-770-06-1 is applicable to NMP2.
7. Section 3.2 of GENE-770-06-2 concludes that changes justified by that LTR apply to BWR 5/6 plants. Therefore, we have concluded that GENE-770-06-2 is applicable to NMP2.
8. Appendix B of NEDC-30851P-A (Supplement 1) identifies NMP2 as a participating utility in the development of this LTR. Section 4 of the LTR specifically addresses BWR-5 plants. Therefore, we have concluded that NEDC-30851P-A (Supplement 1) is applicable to NMP2.



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Each of the above LTRs also contains requirements for licensees to demonstrate that the drift characteristics for the applicable instrumentation are bounded by the assumptions used in the LTRs when the functional test interval is extended from monthly to quarterly. The licensee has reviewed current drift information provided by the equipment vendors and the applicable setpoint calculations for NMP2 instruments in response to these requirements. The NMP2 setpoint calculation methodology assumed 18-month trip unit calibration intervals and therefore is not affected by the changes proposed in the licensee's amendment request. In addition, sensor calibration intervals for the NMP2 instrumentation addressed by the LTRs were verified by NMPC to be equal to or longer than once per quarter and are therefore unaffected by the proposed changes. The licensee has concluded that the drift characteristics of the involved instrumentation are bounded by the assumptions used in the LTRs when the functional test interval is extended from monthly to quarterly. The NRC staff agrees with this NMPC conclusion since it is consistent with the clarification regarding instrument drift allowances provided in a letter dated April 27, 1988, from C. E. Rossi (NRC) to R. F. Janecek (BWR Owners Group).

NEDC-30851P-A requires NMPC to confirm that the differences between the parts of the Reactor Protection System (RPS) that perform trip functions in NMP2 and those of the base case plant were evaluated in a plant-specific analysis using the procedures of Appendix K of the LTR. The plant-specific analysis was documented in GE Report MDE-78-0485. This report utilized the procedures of Appendix K of NEDC-30851P-A to identify and evaluate the RPS differences. The results of this analysis indicated that while the NMP2 and base case RPS configurations have several differences, the differences do not have a significant impact on the generic conclusions. The NRC staff concludes that the licensee has satisfied the requirement of NEDC-30851P-A to evaluate the RPS configuration differences.

NRC staff evaluations of specific proposed changes are as follows:

TS 3/4.3.1 - Reactor Protection System (RPS) Instrumentation

Actions a. and b. for TS 3.3.1 specify actions to be taken in the event that the number of operable RPS instrumentation channels is less than required by TS Table 3.3.1-1. The proposed changes would revise Actions a. and b. to read:

- a. With one channel required by Table 3.3.1-1 inoperable in one or more Functional Units, place the inoperable channel and/or that trip system in the tripped condition\* within 12 hours. The provisions of Specification 3.0.4 are not applicable.
- b. With two or more channels required by Table 3.3.1-1 inoperable in one or more Functional Units:
  1. Within one hour, verify sufficient channels remain OPERABLE or tripped\* to maintain trip capability in the Functional Unit, and



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2. Within 6 hours, place the inoperable channel(s) in one trip system and/or that trip system\*\* in the tripped condition\*, and
3. Within 12 hours, restore the inoperable channels in the other trip system to an OPERABLE status or tripped\*.

Otherwise, take the ACTION required by Table 3.3.1-1 for the Functional Unit.

- \* An inoperable channel or trip system need not be placed in the tripped condition where this would cause the Trip Function to occur. In these cases, if the inoperable channel is not restored to OPERABLE status within the required time, the ACTION required by Table 3.3.1-1 for the Functional Unit shall be taken.
- \*\* This ACTION applies to that trip system with the most inoperable channels; if both trip systems have the same number of inoperable channels, the ACTION can be applied to either trip system.

The proposed changes to Actions a. and b. for TS 3.3.1 would increase and clarify the time permitted to place an inoperable RPS instrumentation channel in the tripped condition when the number of operable channels is less than required. These changes are acceptable since they are consistent with NEDC-30851P-A and with current NRC staff positions and related guidance provided in NUREG-1434 to ensure that a loss of function will not exist if two or more channels are inoperable.

The proposed change to Table Notation (a) on TS Table 3.3.1-1 would revise the notation to read:

- (a) When a channel is placed in an inoperable status solely for performance of required surveillances, entry into associated Conditions and required ACTIONS may be delayed for up to 6 hours provided the associated function or the redundant function maintains ECCS initiation capability.

The change to Table Notation (a) on TS Table 3.3.1-1 would increase the time permitted for an operable RPS instrumentation channel to be declared inoperable for surveillance purposes without placing the channel in the tripped condition from 2 hours to 6 hours. This proposed change is consistent with the provisions of NEDC-30851P-A and is, therefore, acceptable.

The proposed changes to TS Table 4.3.1.1-1 would decrease the channel functional test interval requirement for Functional Unit 12, Manual Scram, from monthly to weekly and would increase the channel functional test interval requirement for the following Functional Units from weekly or monthly to quarterly:

- a. Average Power Range Monitor Flow Biased Simulated Thermal Power - Upscale (Functional Unit 2.b.)



- b. Average Power Range Monitor Fixed Neutron Flux - Upscale (Functional Unit 2.c.)
- c. Average Power Range Monitor Inoperative (Functional Unit 2.d.)
- d. Reactor Vessel Steam Dome Pressure - High (Functional Unit 3.)
- e. Reactor Vessel Water Level - Low, Level 3 (Functional Unit 4.)
- f. Main Steam Line Isolation Valve - Closure (Functional Unit 5.)
- g. Main Steam Line Radiation - High (Functional Unit 6.)
- h. Drywell Pressure - High (Functional Unit 7.)
- i. Scram Discharge Volume Water Level - High, Transmitter Trip Unit (Functional Unit 8.a.)
- j. Scram Discharge Volume Water Level - High, Float Switches (Functional Unit 8.b.)
- k. Turbine Stop Valve - Closure (Functional Unit 9.)
- l. Turbine Control Valve Fast Closure, Valve Trip System Oil Pressure - Low (Functional Unit 10.)

The proposed change to Table Notation (k) on TS Table 4.3.1.1-1 would revise the frequency of certain trip unit setpoint calibrations from at least once per 31 days to at least once per 92 days. This table notation is applicable to the following Functional Units:

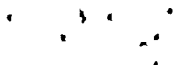
- a. Reactor Vessel Steam Dome Pressure - High (Functional Unit 3.)
- b. Reactor Vessel Water Level - Low, Level 3 (Functional Unit 4.)
- c. Drywell Pressure - High (Functional Unit 7.)
- d. Scram Discharge Volume Water Level - High, Transmitter Trip Unit (Functional Unit 8.a.)

The proposed changes to Table Notation (k) and to TS Table 4.3.1.1-1 are consistent with NEDC-30851P-A and MDE-78-0485 and are, therefore, acceptable.

#### TS 3/4.3.2 - Isolation Actuation Instrumentation

Actions b. and c. for TS 3.3.2 specify actions to be taken in the event that the number of operable isolation actuation instrumentation channels is less than the minimum required by Table 3.3.2-1. The proposed changes would revise Actions b. and c. to read:

- b. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for one trip system, either
  - 1. Place the inoperable channel(s) in the tripped condition within
    - a) 1 hour for trip functions without an OPERABLE channel



- b) 12 hours for trip functions common to RPS Instrumentation,  
and
- c) 24 hours for trip functions not common to RPS Instrumentation

or

2. Take the ACTION required by Table 3.3.2-1.

- c. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for both trip systems,
  - 1. Place the inoperable channel(s) in one trip system in the tripped condition within one hour, and
  - 2. a) Place the inoperable channel(s) in the remaining trip system in the tripped condition within
    - 1) 1 hour for trip functions without an OPERABLE channel
    - 2) 12 hours for trip functions common to RPS Instrumentation, and
    - 3) 24 hours for trip functions not common to RPS Instrumentation.

or

- b) Take the ACTION required by Table 3.3.2-1.

The provisions of Specification 3.0.4 are not applicable.

The proposed changes to Actions b. and c. for TS 3.3.2 would increase and clarify the time permitted to place an inoperable channel in the tripped condition when the number of operable channels is less than required. These changes are acceptable since they are consistent with NEDC-30851P-A (Supplement 2) and NEDC-31677P-A and with current NRC staff positions and related guidance provided in NUREG-1434 to ensure that a loss of function will not exist if two or more channels are inoperable.

The proposed change to Table Notation (b) on TS Table 3.3.2-1 would revise the notation to read:

- (b) A channel may be placed in an inoperable status for up to 6 hours for required surveillance without placing the Trip System in the tripped condition provided at least one other OPERABLE channel in the same Trip System is monitoring that parameter.

The proposed change to Table Notation (b) would increase the time permitted for an isolation actuation instrumentation channel to be placed in an inoperable status for surveillance purposes without placing the trip system in the tripped condition from 2 to 6 hours. This proposed change is consistent



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with the provisions of NEDC-30851P-A (Supplement 2) and NEDC-31677P-A and is, therefore, acceptable.

The proposed changes to TS Table 4.3.2.1-1 would increase the channel functional test interval requirement for the following Trip Functions from monthly to quarterly:

- a. Primary Containment Isolation Signals (Trip Function 1.)
- b. Reactor Core Isolation Cooling (RCIC) Isolation Signals (Trip Function 2.)
- c. Secondary Containment Isolation Signals (Trip Function 3.)

The proposed change to Table Notation (a) on TS Table 4.3.2.1-1 would revise the frequency of certain trip unit setpoint calibrations from at least once per 31 days to at least once per 92 days. This table notation is applicable to the following isolation signals:

1. Primary Containment Isolation Signals
  - a. Reactor Vessel Water Level
    - 1) Low, Low, Low, Level 1
    - 2) Low, Low, Level 2
    - 3) Low, Level 3
  - b. Drywell Pressure - High
  - c. Main Steam Line
    - 1) Pressure - Low
    - 2) Flow - High
  - d. Condenser Vacuum - Low
  - e. Reactor Vessel Pressure High (RHR Cut-in Permissive)
2. RCIC Isolation Signals
  - a. RCIC Steam Supply Pressure - Low
  - b. RCIC Steam Line Flow - High
  - c. RCIC Turbine Exhaust Diaphragm Pressure - High
  - d. Drywell Pressure - High
  - e. RHR/RCIC Steam Flow - High

The proposed change to Table Notation (c) on TS Table 4.3.2.1-1 would revise the frequency of channel functional testing on circuitry associated with the primary containment and RCIC manual isolation pushbuttons from at least once per 31 days to at least once per 92 days.

The proposed changes to TS Table 4.3.2.1-1 and Table Notations (a) and (c) are consistent with NEDC-30851P-A (Supplement 2) and NEDC-31677P-A and are, therefore, acceptable.

#### TS 3/4.3.3 - Emergency Core Cooling System Actuation Instrumentation

The current Table Notation (a) on TS Table 3.3.3-1 specifies that an emergency core cooling system (ECCS) actuation instrumentation channel may be placed in an inoperable status for up to 2 hours during periods of required surveillance



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without placing the trip system in the tripped condition provided at least one other operable channel in the same trip system is monitoring that parameter. The proposed change to Table Notation (a) would revise the 2 hours to 6 hours.

ACTION 30 on TS Table 3.3.3-1 applies to Reactor Vessel Water Level - Low, Low, Low, Level 1 and Drywell Pressure - High instrument channels. The current ACTION 30 requires that if one channel is inoperable and the number of operable channels is less than required by the minimum operable channels per trip function requirement, the inoperable channel must be placed in the tripped condition within 1 hour or the associated system must be declared inoperable. The proposed change to ACTION 30 would extend the 1 hour to 24 hours.

ACTION 31 on TS Table 3.3.3-1 applies to Low Pressure Core Spray (LPCS) Pump Discharge Flow - Low (Bypass), Low Pressure Coolant Injection (LPCI) Pump Discharge Flow - Low (Bypass), High Pressure Core Spray (HPCS) System Flow Rate - Low (Bypass), and HPCS Pump Discharge Pressure - High (Bypass) channels. The current ACTION 31 requires that if the number of operable channels is less than required by the minimum operable channels per trip function requirement, the inoperable channel must be placed in the tripped condition within 1 hour and restored to operable status within 7 days or the associated system must be declared inoperable. The proposed change to ACTION 31 would extend the 1 hour to 24 hours.

ACTION 32 on TS Table 3.3.3-1 applies to LPCS Injection Valve Permissive, LPCI Injection Valve Permissive, LPCI Pump Start Time Delay Relay Normal Power, LPCI Pump Start Time Delay Relay Emergency Power, LPCS Pump Start Time Delay Normal Power, LPCS Pump Start Time Delay Emergency Power, ADS (Automatic Depressurization System) Timer, Reactor Vessel Water Level - Low, Level 3 (Permissive), LPCS Pump Discharge Pressure - High (Permissive), LPCI Pump Discharge Pressure - High (Permissive), ADS Manual Inhibit, and Reactor Vessel Water Level - High Level 8 channels. The current ACTION 32 requires that if the number of operable channels is less than required by the minimum operable channels per trip function requirement, the associated ADS trip system or ECCS must be declared inoperable. The proposed change to ACTION 32 would provide a period of 24 hours before the associated ADS trip system or ECCS must be declared inoperable.

ACTION 33 on TS Table 3.3.3-1 applies to LPCS Injection Valve Permissive and LPCI Injection Valve Permissive channels. The current ACTION 33 requires that if the number of operable channels is less than required by the minimum operable channels per trip function requirement, the inoperable channel must be placed in the tripped condition with 1 hour. The proposed change to ACTION 33 would extend the 1 hour to 24 hours.

ACTION 35 on TS Table 3.3.3-1 applies to the ECCS Manual Initiation channels. The current ACTION 35 requires that if the number of operable channels is less than required by the minimum operable channels per trip function requirement, the inoperable channel must be restored to operable status within 8 hours or the associated ADS valve or ECCS must be declared inoperable. The proposed



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change to ACTION 35 would extend the 8 hours to restore an inoperable channel to 24 hours.

ACTION 36 on TS Table 3.3.3-1 applies to the Reactor Vessel Water Level - Low, Low, Level 2 and Drywell Pressure - High channels that actuate HPCS. The current ACTION 36 requires that if the number of operable channels is less than required by the minimum operable channels per trip function requirement for one trip system, that trip system must be placed in the tripped condition within 1 hour or the HPCS system must be declared inoperable. The proposed change to ACTION 36 would extend the 1 hour to 24 hours.

ACTION 37 on TS Table 3.3.3-1 applies to the HPCS Pump Suction Pressure - Low (Transfer) and Suppression Pool Water Level - High channels. The current ACTION 37 requires that if the number of operable channels is less than required by the minimum operable channels per trip function requirement, at least one inoperable channel must be placed in the tripped condition within 1 hour or the HPCS system must be declared inoperable. The proposed change to ACTION 37 would extend the 1 hour to 24 hours.

The proposed changes to TS Table 3.3.3-1 are acceptable since they are consistent with NEDC-30936P-A (Part 2), RE-026, and with current NRC staff positions and related guidance provided in NUREG-1434 to ensure that a loss of function will not exist if two or more channels are inoperable.

The proposed changes to TS Table 4.3.3.1-1 would extend the channel functional test interval requirement from monthly to quarterly for the following trip functions:

- a. Division I Trip System - (Trip Function A.)
- b. Division II Trip System - (Trip Function B.)
- c. Division III Trip System - (Trip Function C.)

Table Notation (a) on TS Table 4.3.3.1-1 applies to ECCS manual initiation switches and currently requires that all circuitry associated with manual initiation other than the actual manual initiation switches receive a channel functional test at least once per 31 days as part of the circuitry required to be tested for automatic system actuation. The proposed change to Table Notation (a) would change the 31 days to 92 days.

The proposed change to Table Notation (c) on Table 4.3.3.1-1 would revise the frequency of certain trip unit setpoint calibrations from at least once per 31 days to at least once per 92 days. This notation is applicable to the following ECCS actuation instrumentation as listed on Table 4.3.3.1-1:

A.1. RHR-A (LPCI Mode) and LPCS System

- a. Reactor Vessel Water Level - Low, Low, Low, Level 1
- b. Drywell Pressure - High
- c. LPCS Pump Discharge Flow - Low (Bypass)
- d. LPCS Injection Valve Permissive



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- e. LPCI Injection Valve Permissive
- j. LPCI Pump A Discharge Flow - Low (Bypass)

A.2. Automatic Depressurization System Trip System "A"

- a. Reactor Vessel Water Level - Low, Low, Low, Level 1
- c. Reactor Vessel Water Level - Low, Level 3 (Permissive)
- d. LPCS Pump Discharge Pressure - High (Permissive)
- e. LPCI Pump A Discharge Pressure - High (Permissive)

B.1. RHR-B and C (LPCI Mode)

- a. Reactor Vessel Water Level - Low, Low, Low, Level 1
- b. Drywell Pressure - High
- c. LPCI Injection Valve Permissive
- h. LPCI Pump Discharge Flow - Low, Level 3 (Permissive)

B.2. Automatic Depressurization System Trip System "B"

- a. Reactor Vessel Water Level - Low, Low, Low, Level 1
- c. Reactor Vessel Water Level - Low, Level 3 (Permissive)
- d. LPCI Pump (B and C) Discharge Pressure - High (Permissive)

C.1. HPCS System

- a. Reactor Vessel Water Level - Low, Low, Level 2
- b. Drywell Pressure - High
- c. Reactor Vessel Water Level - High, Level 8
- d. Pump Suction Pressure - Low (Transfer)
- e. Suppression Pool Water Level - High
- f. HPCS System Flow Rate - Low (Bypass)
- g. Pump Discharge Pressure - High (Bypass)

The proposed changes to TS Table 4.3.3.1-1 are consistent with NEDC-30936P-A (Parts 1 and 2) and RE-026 and are, therefore, acceptable.

TS 3/4.3.4 Recirculation Pump Trip Actuation Instrumentation

Action b. for TS 3.3.4.1 currently requires that the inoperable channel(s) be placed in the tripped condition within 1 hour if the number of operable anticipated transient without scram recirculation pump trip (ATWS-RPT) system channels is one less than required by the minimum operable channels per trip system requirement for one or both trip systems. The proposed change to Action b. would extend the 1 hour period to 24 hours.

Action c.1. for TS 3.3.4.1 currently requires that both inoperable channels be placed in the tripped condition within 1 hour if the minimum number of operable ATWS-RPT system channels is two or more less than required by the minimum operable channels per trip system requirement for one trip system and the inoperable channels consist of one reactor vessel water level channel and



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one reactor vessel pressure channel. The proposed change to Action c.1. would extend the 1 hour period to 24 hours. The footnote for Action c.1. currently states that the inoperable channels need not be placed in the tripped condition if this would cause the trip function to occur. In this case the inoperable channel must be restored to operable status within 2 hours, or the trip system must be declared inoperable. The proposed change to the footnote for Action c.1. would revise the period of time to restore the inoperable channel to operable status from 2 hours to 6 hours.

The footnote on Table 3.3.4.1-1 currently states that one ATWS-RPT trip system may be placed in an inoperable status for up to 2 hours for required surveillance provided the other trip system is operable. The proposed change to this footnote would increase the allowable time for surveillance from 2 hours to 6 hours.

The proposed changes to TS 3.3.4.1 and TS Table 3.3.4.1-1 are consistent with GENE-770-06-1 and are, therefore, acceptable.

The proposed revisions to TS Table 4.3.4.1-1 would change the channel functional test interval requirement from monthly to quarterly for the following trip functions:

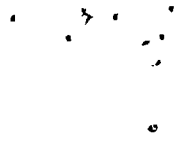
1. Reactor Vessel Water Level - Low, Low, Level 2 (Trip Function 1.)
2. Reactor Vessel Pressure - High (Trip Function 2.)

The footnote on Table 4.3.4.1-1 applies to all trip functions on the table and currently requires that trip unit setpoint calibrations be performed at least once per 31 days. The proposed change to this footnote would revise the calibration interval from at least once per 31 days to at least once per 92 days.

The proposed changes to TS Table 4.3.4.1-1 are consistent with GENE-770-06-1 and are, therefore, acceptable.

Action b. for TS 3.3.4.2 currently requires that the inoperable end-of-cycle recirculation pump trip (EOC-RPT) instrumentation channel(s) be placed in the tripped condition within 1 hour if the number of operable channels is one less than required by the minimum operable channels per trip system requirement for one or both trip systems. The proposed change to Action b. would extend the 1 hour for placing the inoperable channel(s) in the tripped condition to 12 hours.

Action c.1. for TS 3.3.4.2 currently requires that both inoperable channels be placed in the tripped condition within 1 hour if the number of operable EOC-RPT channels is two or more less than required by the minimum operable channels per trip system requirement for one trip system and if the inoperable channels consist of one turbine control valve channel and one turbine stop valve channel. The proposed change to Action c.1. would extend the 1 hour period to 12 hours.





The proposed change to the first footnote on Table 3.3.4.2-1 would extend the amount of time that an EOC-RPT trip system may be placed in an inoperable status for required surveillance from 2 hours to 6 hours.

The proposed changes to TS 3.3.4.2 and TS Table 3.3.4.2-1 are consistent with GENE-770-06-1 and are, therefore, acceptable.

The proposed changes to TS Table 4.3.4.2-1 would revise the channel functional test interval requirement for the following trip functions from monthly to quarterly:

- a. Turbine Stop Valve - Closure (Trip Function 1.)
- b. Turbine Control Valve - Fast Closure (Trip Function 2.)

The proposed changes to TS Table 4.3.4.2-1 are consistent with GENE-770-06-1 and are, therefore, acceptable.

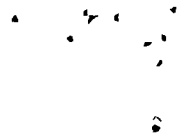
#### TS 3/4.3.5 Reactor Core Isolation Cooling System Actuation Instrumentation

Table Notation (a) on TS Table 3.3.5-1 currently permits a Reactor Core Isolation Cooling (RCIC) system actuation instrument channel to be placed in an inoperable status for up to 2 hours for required surveillance. The proposed change to Notation (a) would extend the 2 hours to 6 hours.

Action 50 on TS Table 3.3.5-1 applies to the Reactor Vessel Water Level - Low, Low, Level 2 and Reactor Vessel Water Level - High, Level 8 RCIC instrumentation functional units. Action 50 currently specifies that the inoperable channel(s) and/or that trip system must be placed in the tripped condition within 1 hour or the RCIC system must be declared inoperable if the number of operable channels for one trip system is less than required by the minimum operable channels per trip system requirement. The proposed change to Action 50 would extend the 1 hour to 24 hours.

Action 51 on TS Table 3.3.5-1 applies to the Pump Suction Pressure - Low (Transfer) RCIC instrumentation functional unit. Action 51 currently specifies that at least one inoperable channel must be placed in the tripped condition within 1 hour or the RCIC system must be declared inoperable if the number of operable channels is less than required by the minimum operable channels per trip system requirement. The proposed change to Action 51 would extend the 1 hour to 24 hours.

Action 52 on TS Table 3.3.5-1 applies to the Manual Initiation RCIC instrumentation functional unit. Action 52 currently specifies that the inoperable channel must be restored to operable status within 8 hours or the RCIC system must be declared inoperable if the number of operable channels is one less than required by the minimum operable channels per trip system requirement. The proposed change to Action 52 would extend the 8 hours to 24 hours.



The proposed changes to TS Table 3.3.5-1 are consistent with GENE-770-06-2 and are, therefore, acceptable.

The proposed changes to TS Table 4.3.5.1-1 would revise the channel functional test interval requirement for the following RCIC trip functions from monthly to quarterly:

- a. Reactor Vessel Water Level - Low, Low, Level 2 (Trip Function 1.)
- b. Reactor Vessel Water Level - High, Level 8 (Trip Function 2.)
- c. Pump Suction Pressure - Low (Transfer) (Trip Function 3.)
- d. Manual Initiation (Trip Function 4.)

The licensee has also proposed to revise the first and third footnotes on TS Table 4.3.5.1-1. The first footnote applies to Trip Functions 1, 2, and 3 and currently requires that trip unit setpoint calibrations be performed at least once per 31 days. The proposed revision to the first footnote would change the required calibration frequency to at least once per 92 days. The third footnote applies to the manual initiation trip function and currently requires that all circuitry associated with manual initiation except the actual manual initiation switches receive a channel functional test at least once per 31 days as part of the circuitry required to be tested for automatic system actuation. The proposed revision to the third footnote would change the 31 days to 92 days.

The proposed changes to TS Table 4.3.5.1-1 are consistent with GENE-770-06-2 and are, therefore, acceptable.

#### TS 3/4.3.5 Control Rod Block Instrumentation

The licensee has proposed to add a footnote to TS 4.3.6 that would allow a control rod block instrumentation channel to be placed in an inoperable status for up to 6 hours for required surveillance without placing the trip system in the tripped condition, provided at least one other operable channel in the same trip system is monitoring that trip function.

Action 62 on TS Table 3.3.6-1 currently specifies that an inoperable channel must be placed in the tripped condition within 1 hour if the minimum number of operable channels is less than required by the minimum operable channels per trip system requirement. The proposed revision to Action 62 would change the 1 hour to 12 hours. Action 62 applies to the following control rod block trip functions:

- a. Scram Discharge Volume (Trip Function 5.)
- b. Reactor Coolant System Recirculation Flow (Trip Function 6.)
- c. Reactor Mode Switch (Trip Function 7.)

The proposed changes to TS 4.3.6 and TS Table 3.3.6-1 are consistent with GENE-770-06-1 and, therefore, acceptable.



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v

The proposed changes to TS Table 4.3.6-1 would modify the channel functional test interval requirement for the following control rod block trip functions from monthly to quarterly:

- a. Rod Block Monitor (Trip Function 1.)
- b. Average Power Range Monitor (Trip Function 2.)
- c. Scram Discharge Volume (Trip Function 5.)
- d. Reactor Coolant System Recirculation Flow (Trip Function 6.)

The proposed changes to TS Table 4.3.6-1 are consistent with NEDC-30851P-A (Supplement 1) and are, therefore, acceptable.

#### TS 3/4.3.7 Monitoring Instrumentation

The licensee has proposed to add a Table Notation (e) to TS Table 3.3.7.1-1. This table notation would apply to the Main Control Room Ventilation Radiation Monitor channels and permit a single channel to be placed in an inoperable status for up to 6 hours for required surveillance without placing the trip system in the tripped condition, provided at least one other operable channel in the same trip system is monitoring the trip function.

Action 74 on TS Table 3.3.7.1-1 applies to the Main Control Room Ventilation Radiation Monitor channels and currently specifies, in part, that the inoperable channel must be placed in the tripped condition within 8 hours if the number of operable channels in one or both trip systems is one less than the required minimum number of operable channels. The proposed change to Action 74 would extend the 8 hours to 24 hours.

The proposed revision to TS Table 4.3.7.1-1 would change the channel functional test interval requirement for the Main Control Room Ventilation Radiation Monitors from monthly to quarterly.

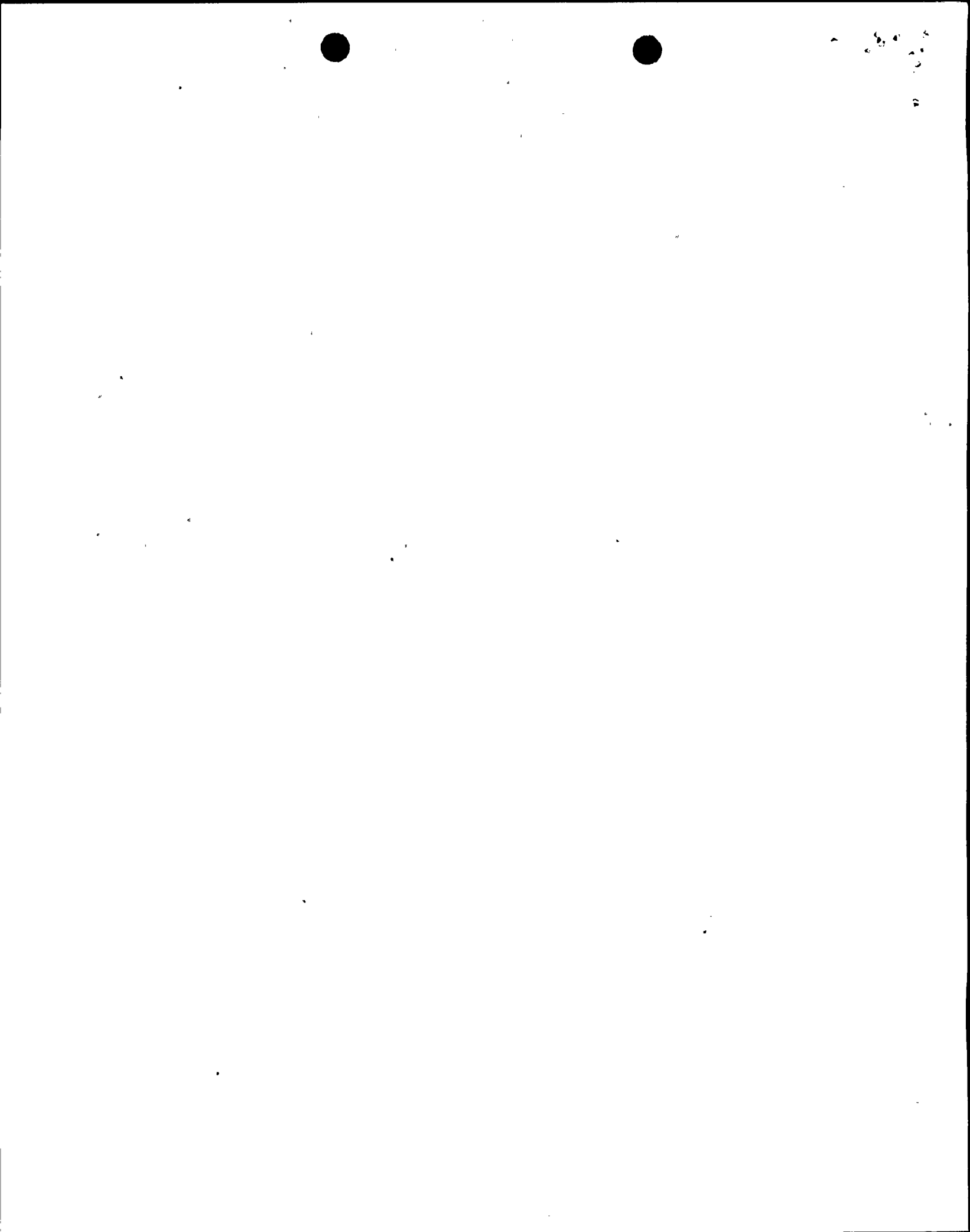
The proposed changes to TS Tables 3.3.7.1-1 and 4.3.7.1-1 are consistent with GENE-770-06-1 and are, therefore, acceptable.

#### TS 3/4.3.9 Plant Systems Actuation Instrumentation

Table Notation (a) on TS Table 3.3.9-1 currently allows a Reactor Vessel Water - High, Level 8 instrument channel to be placed in an inoperable status for up to 2 hours for required surveillance without placing the trip system in the tripped condition. The proposed change to this table notation would extend the 2-hour period to 6 hours.

The proposed change to TS Table 4.3.9.1-1 would revise the channel functional test interval requirement for the Feedwater System/Main Turbine Trip system (Trip Function 1.) from monthly to quarterly.

The proposed changes to TS Tables 3.3.9-1 and 4.3.9.1-1 are consistent with GENE-770-06-1 and are, therefore, acceptable.



### TS 3/4.4.2 Safety/Relief Valves

TS 4.4.2.1 currently requires, in part, that the acoustic monitor for each safety/relief valve be demonstrated operable by performance of a channel functional test at least once per 31 days. The proposed changes to TS 4.4.2.1 would require channel functional testing at least once per 92 days. The proposed changes would also add a third footnote to TS 4.4.2.1 that would permit an acoustic monitor channel to be placed in an inoperable status for up to 6 hours for required surveillance without placing the trip system in the tripped condition.

The proposed changes to TS 4.4.2.1 are consistent with GENE-770-06-1 and are, therefore, acceptable.

The proposed changes would also modify the Bases for TS 3/4.3.1, 3/4.3.2, 3/4.3.3, 3/4.3.4, 3/4.3.5, 3/4.3.6, 3/4.3.7, 3/4.3.9, and 3/4.4.2 to reference the GE LTRs which justify the above proposed changes and provide bases for operator actions during surveillance and repair of instrument channels. The NRC staff offers no objection to the proposed Bases changes.

The proposed changes would also modify TS Index pages xvi and xvii to reflect the changes to the Bases. The conforming, administrative changes to the TS Index pages are 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 5433). 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.



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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: J. Menning

Date: May 11, 1993



10-1-10

Docket No. 50-410

May 11, 1993

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. M85168)

The Commission has issued the enclosed Amendment No. 41 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 (TS) in response to your application transmitted by letter dated December 7, 1992, as supplemented March 4, 1993, and April 2, 1993.

The amendment revises TS 3/4.3 and 4.4.2.1 and associated Bases to increase the surveillance test intervals and allowable out-of-service times for various instruments. The changes are in accordance with General Electric Company Licensing Topical Reports which have been previously reviewed and approved by the NRC staff. The allowable out-of service times are consistent with the provisions of NUREG-1434, "Standard Technical Specifications, General Electric Plants, BWR/6." The changes permit specified instrument channel functional tests to be performed quarterly rather than weekly or monthly.

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. 41 to NPF-69
- 2. Safety Evaluation

cc w/enclosures:

See next page

Distribution: See attached sheet

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