Sam Belcher
Vice President-Nine Mile Point

P.O. Box 63
Lycoming, New York 13093
315.349.5200
315.349.1321 Fax

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NINE MILE POINT
NUCLEAR STATION

November 2, 2010

U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

ATTENTION: Document Control Desk

SUBJECT: Nine Mile Point Nuclear Station
Unit No. 1, Docket No. 50-220

License Amendment Request Pursuant to 10 CFR 50.90: Revisions to Average Power Range Monitor Instrumentation System Operability Requirements – Technical Specification 3.6.2, Protective Instrumentation

Pursuant to 10 CFR 50.90, Nine Mile Point Nuclear Station, LLC (NMPNS) hereby requests an amendment to the Nine Mile Point Unit 1 (NMP1) Renewed Facility Operating License DPR-63. The proposed amendment would revise Technical Specification (TS) Section 3.6.2, "Protective Instrumentation," by modifying the operability requirements for the average power range monitoring (APRM) instrumentation system. The proposed amendment would eliminate the requirements that the APRM "Upscale" and "Inoperative" scram and control rod withdrawal block functions be operable when the reactor mode switch is in the Refuel position, and would clarify the operability requirements for the APRM "Downscale" control rod withdrawal block function when the reactor mode switch is in the Startup and Refuel positions.

The Enclosure provides a description and technical bases for the proposed changes, and existing TS pages marked up to show the proposed changes. NMPNS has concluded that the activities associated with the proposed amendment represent no significant hazards consideration under the standards set forth in 10 CFR 50.92. There are no regulatory commitments identified in this submittal.

Approval of the proposed license amendment is requested by November 2, 2011, with implementation within 90 days of receipt of the approved amendment.

A001
NRR

Pursuant to 10 CFR 50.91(b)(1), NMPNS has provided a copy of this license amendment request, with Enclosure, to the appropriate state representative.

Should you have any questions regarding the information in this submittal, please contact J. J. Dosa, Director Licensing, at (315) 349-5219.

Very truly yours,

STATE OF NEW YORK :
: **TO WIT:**
COUNTY OF OSWEGO :

I, Sam Belcher, being duly sworn, state that I am Vice President-Nine Mile Point, and that I am duly authorized to execute and file this license amendment request on behalf of Nine Mile Point Nuclear Station, LLC. To the best of my knowledge and belief, the statements contained in this document are true and correct. To the extent that these statements are not based on my personal knowledge, they are based upon information provided by other Nine Mile Point employees and/or consultants. Such information has been reviewed in accordance with company practice and I believe it to be reliable.

Subscribed and sworn before me, a Notary Public in and for the State of New York and County of Oswego, this 2nd day of November, 2010.

WITNESS my Hand and Notarial Seal: Lisa M. Doran
Notary Public

My Commission Expires:

9/12/2013
Date

Lisa M. Doran
Notary Public in the State of New York
Oswego County Reg. No. 01DO6029220
My Commission Expires 9/12/2013

SB/DEV

Enclosure: Evaluation of the Proposed Change

cc: Regional Administrator, Region I, NRC
Project Manager, NRC
Resident Inspector, NRC
A. L. Peterson, NYSERDA

ENCLOSURE

EVALUATION OF THE PROPOSED CHANGE

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1.0 SUMMARY DESCRIPTION

This evaluation supports a request to amend Renewed Facility Operating License DPR-63 for Nine Mile Point Unit 1 (NMP1).

The proposed amendment would revise Technical Specification (TS) Section 3.6.2, "Protective Instrumentation," by modifying the operability requirements for the Average Power Range Monitoring (APRM) instrumentation system. The proposed changes would revise TS Table 3.6.2a, "Instrumentation that Initiates Scram," and TS Table 3.6.2g, "Instrumentation that Initiates Control Rod Withdrawal Block," by eliminating the requirements that the APRM "Upscale" and "Inoperative" scram and control rod withdrawal block functions be operable when the reactor mode switch is in the Refuel position. In the Refuel operating condition, these APRM reactor scram and control rod withdrawal block functions do not provide any meaningful core protection. Other neutron monitoring instrumentation provides adequate monitoring and protection for reactivity events occurring during the Refuel operating condition. In addition, TS Table 3.6.2g would be revised to delete the reference to Note (d) regarding operability of the APRM "Downscale" control rod withdrawal block function with the reactor mode switch in the Startup and Refuel positions. The APRM "Downscale" control rod withdrawal block function is automatically bypassed when the reactor mode switch is in the Startup or Refuel positions; thus, by design, this function is not required when operating with the reactor mode switch in these positions. These proposed TS changes will simplify application of the TS during refueling and startup operations and will facilitate performance of maintenance on Local Power Range Monitoring (LPRM) and APRM equipment.

2.0 DETAILED DESCRIPTION

2.1 Description of the Proposed Change

The proposed TS changes are described below and are indicated on the marked up pages provided in Attachment 1.

<u>Table 3.6.2a, Instrumentation that Initiates Scram</u>

- For Parameter (9)(b), "APRM," TS Table 3.6.2a currently requires that the "Upscale" and "Inoperative" scram functions be operable with the reactor mode switch in the Refuel position. The proposed amendment would eliminate the requirement that these two APRM scram functions be operable with the reactor mode switch in the Refuel position.

<u>Table 3.6.2g, Instrumentation that Initiates Control Rod Withdrawal Block</u>

- For Parameter (3), "APRM," TS Table 3.6.2g currently requires that the "Inoperative" and "Upscale (Biased by Recirculation Flow)" control rod withdrawal block functions be operable with the reactor mode switch in the Refuel position. The proposed amendment would eliminate the requirement that these two APRM control rod withdrawal block functions be operable with the reactor mode switch in the Refuel position.

- For Parameter (3), "APRM," TS Table 3.6.2g currently refers to Note (d) regarding operability of the "Downscale" control rod withdrawal block function with the reactor mode switch in the Startup and Refuel positions. Note (d) states that this function may be bypassed in the startup and refuel positions of the reactor mode switch when the intermediate range monitors (IRMs) are onscale. The proposed amendment would delete these references to Note (d) and would delete Note (d) from the table.

There are no TS Bases changes associated with this proposed license amendment.

2.2 Background

The Neutron Monitoring System monitors the neutron flux level in the reactor in three separate, overlapping ranges, all using in-core instrumentation systems. These include source range monitoring, intermediate range monitoring, and power range monitoring. The power range monitoring is accomplished by the LPRM and APRM systems. These systems are described below. Additional information on the Neutron Monitoring System is provided in Section VIII-C.1 of the NMP1 Updated Final Safety Analysis Report (UFSAR).

SRM System

The source range monitoring (SRM) system monitors the reactor neutron flux level during refueling, plant startup, and low power operations over the neutron flux level range from the source level (approximately 3×10^4 neutron volts (nv)) up to 3×10^{12} nv (approximately 8 percent of rated thermal power). The SRM system utilizes 4 instrumentation channels to monitor reactor neutron flux level. Count rate and reactor period for each SRM monitor are indicated in the main control room. Each SRM channel generates a control rod withdrawal block signal for the following conditions when in the Refuel and Startup modes of operation:

1. Upscale high count rate, which provides mitigation of unexpected reactivity excursions.

2. Monitor inoperative (due to low detector voltage, an electronics drawer internal module unplugged, or channel mode switch not in operate position), which provides assurance that a minimum number of SRMs are operable.

3. Downscale intermediate-count-rate level interlock to bypass a position switch on the detector retraction mechanism, which blocks control rod withdrawal in the Startup mode unless the SRM detectors are inserted to the startup position. This function provides assurance that the SRMs are inserted into the core to properly monitor neutron flux when required.

As shown in Table VIII-5 of the NMP1 UFSAR, the SRM system control rod withdrawal block functions described above are required to be functional when the reactor mode switch is in the Refuel and Startup positions.

Each SRM channel also generates an upscale high count rate scram (with key lock switches in the non-coincident logic position), which is used during fuel loading and shutdown margin demonstrations. Operability requirements for this function are contained in TS Section 3/4.7.1, "Special Test Exception – Shutdown Margin Demonstrations." Compliance with this special test exception is optional and applies only if the shutdown margin demonstration will be performed prior to the reactor coolant system pressure test and control rod scram time tests following a refueling outage.

Operability requirements for SRM system neutron flux monitoring functions during shutdown, startup, and refueling operating conditions are contained in TS Section 3/4.5.1, "Source Range Monitors," TS Section 3/4.5.3, "Extended Core and Control Rod Drive Maintenance," and NMP1 UFSAR Table VIII-5.

IRM System

The IRM system monitors reactor neutron flux level during plant startup and the initial phase of power operation (to approximately 40 percent of rated thermal power), over the neutron flux level range from approximately 1.2×10^8 nv to 3.6×10^{12} nv. The IRM system initiates appropriate scram and control rod withdrawal block signals to prevent damage to the fuel from certain abnormal operational transients or operator errors while operating within the intermediate range of power. There are 8 IRM instrument channels. The 8 channels are divided into two trip systems, with 4 channels inputting to each trip system. The trip of any of the 4 IRM channels will actuate its associated trip system, producing a half-scram signal, and the simultaneous trip any of both trip systems will cause a full reactor scram signal for the following conditions:

1. Upscale neutron flux level, which provides mitigation of unexpected reactivity excursions, such as control rod withdrawal events.

2. Monitor inoperative (due to low detector voltage, an electronics drawer internal module unplugged, or channel mode switch not in operate position), which provides assurance that a minimum number of IRMs are operable (when in the Startup mode of operation).

The IRM scram functions described above are required to be operable when the reactor mode switch is in the Refuel and Startup positions, as specified in TS Table 3.6.2a.

The trip of any of the 8 IRM channels generates a control rod withdrawal block signal for the following conditions when in the Refuel and Startup modes of operation:

1. Upscale neutron flux level, which provides mitigation of unexpected reactivity excursions resulting from control rod withdrawal events.

2. Monitor inoperative, which provides assurance that a minimum number of IRMs are operable.

3. Monitor downscale (indicative of failed instrumentation or decrease in sensitivity), which also provides assurance that a minimum number of IRMs are operable. This interlock is bypassed when the IRMs are set to the lowest range, to permit plant startup.

4. Detector not inserted to the startup position, which provides assurance that the IRMs are inserted into the core to properly monitor neutron flux when required.

The IRM control rod withdrawal block functions described above are required to be operable when the reactor mode switch is in the Refuel and Startup positions, as specified in TS Table 3.6.2g.

LPRM System

The LPRM system monitors the local neutron flux level in the power operating range from a few percent to greater than rated thermal power, over the neutron flux level range from approximately 10^{11} to 10^{13} nv. The LPRM system consists of 30 detector strings installed at separate fixed locations in the reactor core. Each LPRM detector string consists of four miniature fission chamber detectors that are spaced at 3-foot elevation intervals. The LPRM detectors are arranged to provide a representative sample of neutron flux levels throughout the entire core. The amplified output of selected LPRM detectors is supplied to the APRM system for determination of core thermal power. The LPRM detectors also provide inputs to the plant process computer and the full core display in the main control room. The LPRM system does not directly produce any reactor protective system trips or control rod withdrawal blocks.

APRM System

The APRM system receives the amplified output from 64 of the LPRM detectors, which provide an indication of the power distribution and local power changes. The APRM system automatically initiates reactor scram signals and control rod withdrawal block signals when power limits are exceeded or malfunctions occur, thereby protecting the reactor core from high power levels that could cause fuel damage. There are 8 APRM channels, with two APRM channels monitoring each core quadrant. Each APRM channel averages 8 LPRM output signals to provide a continuous indication of average reactor power from a few percent to greater than rated thermal power. Because the reactor core is operated symmetrically, each APRM channel provides power indication that is representative of the power throughout the core. The 8 APRM channels are divided into two trip systems, with 4 channels inputting to each trip system. The simultaneous trip any of the 4 channels in each trip system generates a scram signal for the following conditions:

1. Upscale neutron flux level, which provides mitigation of unexpected core-wide or localized reactivity excursions. The scram setpoint is varied as a function of reactor recirculation flow, in accordance with TS Section 2.1.2.a.

2. Monitor inoperative (due to less than 4 operable LPRM inputs, a module unplugged, or mode switch not in operate position), which provides assurance that a minimum number of APRMs are operable.

The trip of any of the 8 APRM channels generates a control rod withdrawal block signal for the following conditions:

1. Upscale neutron flux level, which provides mitigation of unexpected core-wide or localized reactivity excursions resulting from control rod withdrawal events. The setpoint is varied as a function of reactor recirculation flow, in accordance with TS Section 2.1.2.a.

2. Monitor inoperative, which provides assurance that a minimum number of APRMs are operable.

3. Monitor downscale (indicative of failed instrumentation or decrease in sensitivity), which also provides assurance that a minimum number of APRMs are operable. By design, this control rod withdrawal block function is automatically bypassed when the reactor mode switch is in the Refuel or Startup positions and the IRM in the same core quadrant and logic channel is not upscale or bypassed.

The proposed TS changes will simplify application of the TS during refueling and startup operations and will facilitate performance of maintenance on local power range monitoring (LPRM) and APRM equipment.

3.0 TECHNICAL EVALUATION

The APRM system monitors the reactor neutron flux level in the power operating range from a few percent to greater than rated thermal power. The system generates a scram signal at or below 122 percent of the rated value during bulk neutron flux level transients. The system also is capable of generating a control rod withdrawal block signal to mitigate postulated single control rod withdrawal error events. Both the scram and rod block setpoints are varied as a function of reactor recirculation flow. These

APRM automatic protective functions prevent damage to the fuel for postulated reactivity insertion events occurring during power operating conditions (including both the Startup and Run positions of the reactor mode switch), such as the Control Rod Withdrawal Error event and the Control Rod Drop Accident. The proposed amendment does not have any effect on the UFSAR analyses for these postulated at-power reactivity insertion events since the TS will continue to require that the APRM system "Upscale" and "Inoperative" scram and control rod withdrawal block functions remain operable when the reactor mode switch is in the Startup and Run positions.

In the refueling operating condition (defined in TS Definition 1.1.d), the reactor mode switch is in the Refuel position, the reactor coolant system temperature is less than 212°F, and all control rods are inserted in cells containing fuel. Since reactor neutron flux levels during refueling are below the APRM indicating range, the APRM system does not provide any meaningful core monitoring or protection in the Refueling operating condition. The SRM system and the IRM system provide adequate neutron flux monitoring during refueling and automatically initiate protective actions (scram or control rod withdrawal block) when required during refueling. Operability of the SRM and IRM systems is required when the reactor mode switch is in the Refuel position, in accordance with the TS and UFSAR requirements identified in Section 2.2 of this license amendment request.

The NMP1 UFSAR does not provide analyses of reactivity insertion events occurring during the refueling operating condition. However, the possibility of inadvertent criticality due to a control rod withdrawal error during refueling is minimized by the following design features and procedural controls:

1. With the reactor mode switch in the Refuel position, control rod withdrawal is restricted to only one control rod at a time. This mode switch interlock is required to be operable as indicated in TS Table 3.6.2g. Adequate shutdown margin is maintained, in accordance with TS Section 3.1.1.a(1), such that the reactor will be subcritical, with margin, with the highest worth control rod fully withdrawn. An evaluation of each in-vessel fuel movement during fuel loading (including shuffling fuel within the core) is performed to ensure adequate shutdown margin is maintained during refueling, in accordance with TS Section 4.1.1.a(1).

2. Procedures prohibit control rod withdrawal during movement of fuel into the reactor core. These procedural requirements are backed up by refueling platform interlocks that: (1) prevent control rod withdrawal when the platform is carrying a fuel assembly over the reactor core; and (2) prevent the refueling platform from carrying a fuel assembly over the core if a control rod is withdrawn from the core. Operability of these interlocks is required by TS Section 3.5.2 and TS Table 3.6.2g.

3. Multiple control rod withdrawals are only allowed for fuel cells that have all fuel assemblies removed. Procedures strictly regulate bypassing of single-rod-out interlocks to allow withdrawal of more than one control rod.

Based on the above, it is concluded that the APRM "Upscale" and "Inoperative" reactor scram and control rod withdrawal block functions need not be operable when the reactor mode switch is in the Refuel position. Existing design features and procedural controls minimize the possibility of inadvertent criticality due to a control rod withdrawal error during refueling, and the SRM and IRM systems provide adequate monitoring and core protection if such an event were to occur.

TS Table 3.6.2g currently refers to Note (d) regarding operability of the APRM "Downscale" control rod withdrawal block function with the reactor mode switch in the Startup and Refuel positions. Note (d) states that this function may be bypassed in the startup and refuel positions of the reactor mode switch when the IRMs are onscale. This statement does not accurately reflect the actual plant design, as it incorrectly implies an optional or selective bypass feature. As described in UFSAR Section VIII-C.1.1.4, the actual design is such that this bypass occurs automatically; thus, by design, the APRM "Downscale" control rod withdrawal block function is not required to be operable with the reactor mode switch in the Startup and Refuel positions. To more simply and clearly present these requirements, Note (d) and the references to this Note are deleted from TS Table 3.6.2g. This change is considered administrative in nature since the actual operability requirements have not changed. The APRM "Downscale" control rod withdrawal block function is not credited in the plant safety analyses.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

In 10 CFR 50.36, requirements related to the content of TSs are established. Pursuant to 10 CFR 50.36, TSs are required to include items in the following five specific categories: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements; (4) design features; and (5) administrative controls. Criterion 3 of 10 CFR 50.36(c)(2)(ii) requires an LCO to be established for a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. The proposed changes to the APRM system operability requirements are consistent with 10 CFR 50.36 since the APRM system "Upscale" and "Inoperative" scram and control rod withdrawal block functions are not part of the primary success path to mitigate a design basis accident or transient when the plant is in the Refuel operating mode, and the APRM "Downscale" control rod withdrawal block function is not part of the primary success path to mitigate a design basis accident or transient when the reactor mode switch is in the Startup and Refuel positions.

4.2 Significant Hazards Consideration

Nine Mile Point Nuclear Station, LLC (NMPNS) is requesting an amendment to Renewed Facility Operating License DPR-63 for Nine Mile Point Unit 1 (NMP1). The proposed amendment would revise Technical Specification (TS) Section 3.6.2, "Protective Instrumentation," by modifying the operability requirements for the Average Power Range Monitoring (APRM) instrumentation system. The proposed amendment would eliminate the requirements that the APRM "Upscale" and "Inoperative" scram and control rod withdrawal block functions be operable when the reactor mode switch is in the Refuel position, and would clarify the operability requirements for the APRM "Downscale" control rod withdrawal block function when the reactor mode switch is in the Startup and Refuel positions.

NMPNS has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of Amendment," as discussed below:

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

   Response: No.

   The APRM system is not an initiator of or a precursor to any accident or transient. The APRM system monitors the neutron flux level in the power operating range from a few percent to greater than rated thermal power and provides automatic protective signals for postulated at-power reactivity insertion events. Thus, the proposed changes to the TS operability requirements for the APRM system will not significantly impact the probability of any previously evaluated accident.

The design of plant equipment is not being modified by the proposed amendment. The TSs will continue to require operability of the APRM system "Upscale" and "Inoperative" scram and control rod withdrawal block functions when the reactor mode switch is in the Startup and Run positions to provide core protection for postulated reactivity insertion events occurring during power operating conditions. Thus, the consequences of previously evaluated at-power reactivity insertion events are not affected by the proposed amendment.

The proposed elimination of the TS requirements that the APRM system "Upscale" and "Inoperative" scram and control rod withdrawal block functions be operable when the reactor mode switch is in the Refuel position does not increase the consequences of an accident previously evaluated. The NMP1 Updated Final Safety Analysis Report (UFSAR) does not provide analyses of reactivity insertion events occurring during the refueling operating condition. The possibility of inadvertent criticality due to a control rod withdrawal error during refueling is minimized by design features and procedural controls that are not affected by the proposed amendment. In addition, since reactor neutron flux levels during refueling are below the APRM indicating range, the APRM system does not provide any meaningful core monitoring or protection in the refueling operating condition. The source range and intermediate range neutron monitoring systems provide adequate neutron flux monitoring during refueling and automatically initiate protective actions (scram or control rod withdrawal block) when required during refueling.

The change to the TS operability requirements for the APRM "Downscale" control rod withdrawal block function is a clarification to more simply and clearly indicate that this function is not required when the reactor mode switch is in the Startup and Refuel positions. This change is consistent with plant design and does not change the actual TS operability requirements; thus, previously evaluated accidents are not affected by this proposed change.

Based on the above discussion, it is concluded that the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

Response: No.

The proposed changes to the TS operability requirements for the APRM system do not introduce any new accident precursors and do not involve any physical plant alterations or changes in the methods governing normal plant operation that could initiate a new or different kind of accident. The proposed amendment does not alter the intended function of the APRM system and does not adversely affect the ability of the system to provide core protection for at-power reactivity insertion events.

Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

Response: No.

Margin of safety is related to confidence in the ability of the fission product barriers (fuel cladding, reactor coolant system, and primary containment) to perform their design functions during and following postulated accidents. The proposed amendment does not alter setpoints or limits established or assumed by the accident analyses. The proposed TS changes to eliminate the requirements that the APRM system "Upscale" and "Inoperative" scram and control rod withdrawal block functions be operable when the reactor mode switch is in the Refuel position have no impact on the performance of the fission product barriers since these APRM functions do not provide any meaningful core monitoring or protection in the Refueling operating condition. The TSs will continue to require operability of these APRM functions when the reactor mode switch is in the Startup and Run positions to provide core protection for postulated reactivity insertion events occurring during power operating conditions, consistent with the plant safety analyses.

The change to the TS operability requirements for the APRM "Downscale" control rod withdrawal block function is a clarification to more simply and clearly indicate that this function is not required when the reactor mode switch is in the Startup and Refuel positions. This change is consistent with plant design and does not change the actual TS operability requirements; thus, previously evaluated accidents are not affected by this proposed change.

Based on the above discussion, it is concluded that the proposed amendment does not involve a significant reduction in a margin of safety.

Based on the above, NMPNS concludes that the proposed amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

4.3 Conclusions

In conclusion, based on the considerations discussed above, (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.

5.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve: (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION CHANGES (MARK-UP)

The current versions of the following NMP1 Technical Specification (TS) pages have been marked-up by hand to reflect the proposed changes:

200
227
232

TABLE 3.6.2a (cont'd)

INSTRUMENTATION THAT INITIATES SCRAM

Limiting Condition for Operation

Parameter	Minimum No. of Tripped or Operable Trip Systems	Minimum No. of Operable Instrument Channels per Operable Trip System	Set Point	Reactor Mode Switch Position in Which Function Must Be Operable: Shutdown	Refuel	Startup	Run
(ii) Inoperative	2	3(d)(o)	---		x	x	
(b) APRM							
(i) Upscale	2	3(e)(o)	Specification 2.1.2a		~~x~~	x	x
(ii) Inoperative	2	3(e)(o)	---		~~x~~	x	x
(10) Turbine Stop Valve Closure	2	4(o)	≤ 10% valve closure				(i)
(11) Generator Load Rejection	2	2(o)	(j)				(i)

TABLE 3.6.2g (cont'd)

INSTRUMENTATION THAT INITIATES CONTROL ROD WITHDRAWAL BLOCK

Limiting Condition for Operation

	Parameter	Minimum No. of Tripped or Operable Trip Systems	Minimum No. of Operable Instrument Channels per Operable Trip System (i)	Set Point	Reactor Mode Switch Position in Which Function Must Be Operable			
					Shutdown	Refuel	Startup	Run
c.	Downscale	2	3(b)	≥5 percent of full scale for each scale		x	x	
d.	Upscale	2	3(b)	≤88 percent of full scale for each scale		x	x	
(3)	APRM							
a.	Inoperative	2(h)	3(c)	---		~~x~~	x	x
b.	Upscale (Biased by Recirculation Flow)	2(h)	3(c)	Specification 2.1.2a(h)		~~x~~	x	x
c.	Downscale	2(h)	3(c)	≥[5.28/125] divisions of full scale		~~(d)~~	~~(d)~~	x

NOTES FOR TABLES 3.6.2g and 4.6.2g

(a) Deleted

(b) No more than one of the four IRM inputs to each instrument channel shall be bypassed. These signals may be bypassed when the APRMs are onscale.

(c) No more than one of the four APRM inputs to each instrument channel shall be bypassed provided that the APRM in the other instrument channel in the same core quadrant is not bypassed. No more than two C or D level LPRM inputs to an APRM shall be bypassed and only four LPRM inputs to only one APRM shall be bypassed in order for the APRM to be considered operable. In the Run mode of operation, bypass of two chambers from one radial core location in any one APRM shall cause that APRM to be considered inoperative. A Travelling In-Core Probe (TIP) chamber may be used as a substitute APRM input if the TIP is positioned in close proximity to the failed LPRM it is replacing. If one APRM in a quadrant is bypassed and meets all requirements for operability with the exception of the requirement of at least one operable chamber at each radial location, it may be returned to service and the other APRM in that quadrant may be removed from service for test and/or calibration only if no control rod is withdrawn during the calibration and/or test.

(d) ~~May be bypassed in the startup and refuel positions of the reactor mode switch when the IRMs are onscale.~~ Deleted

(e) Deleted

(f) One sensor provides input to each of two instrument channels. Each instrument channel is in a separate trip system.

(g) Within 24 hours before startup, if not performed within the previous 7 days. Not required to be performed during shutdown until 12 hours after entering startup from run.

(h) The actuation of either or both trip systems will result in a rod block.

(i) 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.

(j) Neutron detectors are excluded.