

ATTACHMENT A

NIAGARA MOHAWK POWER CORPORATION

LICENSE NO. NPF-69

DOCKET NO. 50-410

Proposed Changes to the Technical Specifications

Replace existing pages 3/4 3-98, 99, 100, 101, and 102 with the attached revised pages. These pages have marginal markings to indicate the change to the text.

000449GG5

9101240308 910121
PDR ADOCK 05000410
PDR

TABLE 3.3.7.10-1

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICA- BILITY</u>	<u>ACTION</u>
1. Offgas System			
a. Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release	2	*	135
b. System Flow-Rate Measuring Device	1	*	136
c. Sample Flow-Rate Measuring Device	2	*	136
2. Offgas System Explosive Gas Monitoring System**			
a. Hydrogen Monitor Train A (Instrument 20FG-AT-16A or 20FG-AT-115)	1	*	137
b. Hydrogen Monitor Train B (Instrument 20FG-AT-16B or 20FG-AT-115)	1	*	137
3. Radwaste/Reactor Building Vent Effluent System			
a. Noble Gas Activity Monitor†	1	++	139
b. Iodine Sampler	1	++	138
c. Particulate Sampler	1	++	138
d. Flow-Rate Monitor	1	++	136
e. Sample Flow-Rate Monitor	1	++	136
4. Main Stack Effluent			
a. Noble Gas Activity Monitor†	1	++	139
b. Iodine Sampler	1	++	138
c. Particulate Sampler	1	++	138
d. Flow-Rate Monitor	1	++	136
e. Sample Flow-Rate Monitor	1	++	136

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATIONTABLE NOTATIONS

- * During offgas system commissioning.
- ** Only one train required to be in operation.
- + Includes high range noble gas monitoring capability.
- ++ At all times.

ACTIONS

- ACTION 135 - a. With the number of OPERABLE channels one less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided the inoperable channel is placed in the tripped condition within 12 hours.
- b. With the number of OPERABLE channels two less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided grab samples are taken at least once per 12 hours and these samples are analyzed for gross activity within 24 hours.
- ACTION 136 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided the flow rate for the inoperable channel(s) is estimated at least once per 4 hours.
- ACTION 137 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, operation of the offgas system may continue provided grab samples are collected at least once per 4 hours and analyzed within the following 4 hours.
- ACTION 138 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided samples are continuously collected starting within 8 hours of discovery, using auxiliary sampling equipment as required in Table 4.11.2-1.
- ACTION 139 - a. With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided grab samples are taken at least once per 12 hours and these samples are analyzed for gross activity within 24 hours for a radioactivity limit of detection of at least 1×10^{-4} microcuries/ml.
- b. Restore the inoperable channel(s) to OPERABLE status within 72 hours or in lieu of another repair required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the schedule for restoring the system to OPERABLE status.

TABLE 4.3.7.10-1

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
1. Offgas System					
a. Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release	D	NA	R(a,e)	M(b,c)	**
b. System Flow-Rate Measuring Device	D	NA	R	Q	**
c. Sample Flow-Rate Measuring Device		NA	R	Q	**
2. Offgas System Explosive Gas Monitoring System					
a. Hydrogen Monitor Train A	D	NA	Q(d)	M	**
b. Hydrogen Monitor Train B	D	NA	Q(d)	M	**
3. Radwaste/Reactor Building Vent Effluent System					
a. Noble Gas Activity Monitor +	D	M	R(a)	Q(c)	*
b. Iodine Sampler	W	NA	NA	NA	*
c. Particulate Sampler	W	NA	NA	NA	*
d. Flow-Rate Monitor	D	NA	R	Q	*
e. Sample Flow-Rate Monitor	D	NA	R	Q	*

TABLE 4.3.7.10-1 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
14. Main Stack Effluent					
a. Noble Gas Activity Monitor †	D	M	R(a)	Q(c)	*
b. Iodine Sampler	W	NA	NA	NA	*
c. Particulate Sampler	W	NA	NA	NA	*
d. Flow-Rate Monitor	D	NA	R	Q	*
e. Sample Flow-Rate Monitor	D	NA	R	Q	*

TABLE 4.3.7.10-1 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING
INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TABLE NOTATIONS

- * At all times.
- ** During offgas system operation.
- + Includes high range noble gas monitoring capability.
- (a) The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards (NBS) or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS, or using actual samples of gaseous effluents that have been analyzed on a system that has been calibrated with NBS traceable sources. These standards shall permit calibrating the system over its intended range of energy and measurement. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration may be used.
- (b) The CHANNEL FUNCTIONAL TEST shall also demonstrate the automatic isolation capability of this pathway and that control room alarm annunciation occurs if the instrument indicates measured levels above the Alarm/Trip Setpoint (Each channel will be tested independently so as to not initiate isolation during operation).
- (c) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:
 - (1) Instrument indicates measured levels above the alarm setpoint.
 - (2) Circuit failure.
 - (3) Instrument indicates a downscale failure.
 - (4) Instrument controls not set in operate mode.
- (d) The CHANNEL CALIBRATION shall include the use of standard gas samples containing a nominal:
 - (1) One volume percent hydrogen, balance nitrogen, and
 - (2) Four volume percent hydrogen, balance nitrogen.
- (e) The CHANNEL CALIBRATION shall also demonstrate that automatic isolation of this pathway occurs when the instrument channels indicate measured levels above the Trip Setpoint.

ATTACHMENT B

NIAGARA MOHAWK POWER CORPORATION

LICENSE NO. NPF-69

DOCKET NO. 50-410

Supporting Information and No Significant Hazards

References

- 1) "Technical Specifications - Enhancing the Safety Impact,"
NUREG-1024, November 1983

Introduction

The Nine Mile Point Unit 2 Technical Specifications, specifically Item 1.a on Table 4.3.7.10-1, require isolation of the offgas system as part of the monthly functional test of the offgas system noble gas activity monitors. Isolation of the offgas system while the plant is operating creates the possibility of loss of condenser vacuum and an associated turbine trip. Testing of the isolation function in this manner can result in undesirable challenges to plant shutdown systems. The proposed changes replace the requirement to isolate the offgas system with a requirement to verify the isolation capability of the individual noble gas monitor channels. In addition, Table 3.3.7.10-1 is being proposed for revision to more accurately reflect the design of the noble gas monitor instrumentation.

Discussion

The offgas system noble gas activity monitoring instrumentation is part of the Radioactive Gaseous Effluent Monitoring Instrumentation system. The noble gas activity monitoring system consists of two off-line gaseous monitors, 2OFG-CAB-13A and 13B, arranged in two-out-of-two logic. The monitors isolate the offgas system upon sensing high radiation in the offgas pretreatment inlet line by closing 2OFG-AOV-103. Both monitors must detect radiation levels above the trip setpoint in order for the offgas system to isolate. The setpoint for the monitors corresponds to a predetermined release rate determined in accordance with 10 CFR 20 and is documented in the Offsite Dose Calculation Manual (ODCM). The two-out-of-two logic is utilized

000449GG6

to preclude spurious isolations and resultant turbine trips. The monitors are discussed in Sections 11.3.2.1 and 11.5.2.1.3, on Pages 11.3-6 and 11.5-10 respectively, of the Unit 2 Updated Safety Analysis Report (USAR). The monitors are depicted schematically in USAR Figure 11.5-2 and their location in the offgas system is shown on USAR Figure 11.3-1b. Valve 20FG-AOV-103 is shown on USAR Figure 11.3-1c. Technical Specification Table 4.3.7.10-1 currently requires a monthly functional test of the offgas monitors (See Item 1.a of the table). Note (b) of Table 4.3.7.10-1 states the functional test shall also demonstrate that automatic isolation of the effluent pathway occurs. Isolation of the offgas system, if it is not restored to operation within a matter of minutes, will result in a turbine trip and associated reactor scram due to a loss of vacuum. The proposed change would add note (e) to Table 4.3.7.10-1 to require verification of actual valve closure as part of the refueling frequency channel calibration. Note (b) has been revised to require that the monthly functional test verify that each individual channel trips upon sensing a high radiation condition.

Nuclear Regulatory Commission findings related to identified problems in testing intervals in Technical Specifications (Reference 1) concluded that frequent testing of certain components can potentially lead to undesirable challenges to plant shutdown systems. There is a strong incentive to minimize instrumentation testing in order to reduce the total time the plant is vulnerable to unnecessary challenges to plant shutdown systems. As stated above, isolating the offgas system on a monthly basis incurs the risk of a reactor scram. Plant scrams, or the potential for plant scrams, have a detrimental effect on plant safety in terms of core damage frequency. Revising the requirements such that the isolation capability of the system is verified when the plant is shutdown for refueling results in a net increase in plant safety since it eliminates the challenges to shutdown systems associated with the potential reactor scrams.

While the decrease in the testing frequency of the isolation valve may result in an incremental decrease in the overall reliability of the isolation system, the isolation function of the offgas monitors is not directly related to plant safety. The offgas monitors provide monitoring capability in accordance with 10 CFR 20 and terminate releases to prevent exceeding release limits determined in the ODCM. The indirect impact on plant safety is further illustrated by the fact that the Technical Specifications permit alternate grab sampling upon loss of the monitors and not a plant shutdown. Therefore, the decrease in the reliability of the isolation system is more than offset by the increase in plant safety due to the elimination of challenges to shutdown systems.

000449GG7

As stated above, there are two gaseous monitors in a two-out-of-two configuration. Each monitor has a separate flow meter that monitors the flow-rate of the sample stream. These sample flow-rate measuring devices alarm at a central control panel upon sensing sample flow outside the required range. The sample flow-rate measuring devices are identified as Item 1.c on Technical Specification Tables 3.3.7.10-1 and 4.3.7.10-1. Table 3.3.7.10-1 specifies 1 as the Minimum Channels Operable requirement for both the Noble Gas Activity Monitors (Item 1.a) and their associated Sample Flow-Rate Measuring Devices (Item 1.c). Since there are two of each, and the Noble Gas Activity Monitors are arranged in a two-out-of-two logic, the correct number of Minimum Required Operable Channels for both Item 1.a and 1.c is 2. Table 3.3.7.10-1 is being proposed for revision to reflect this.

The Actions associated with inoperable channels require revision as a result of changes to the number of Required Operable Channels. In addition, the numbering of Actions 135 and 136 has been reversed to maintain numerical sequence. This numbering change was also made elsewhere on Table 3.3.7.10-1 to assure consistency. Proposed Action 135 (formerly Action 136) has been revised to allow continued effluent release, without grab sampling, with one noble gas activity monitor channel inoperable and in the tripped condition. Placing one channel in a two-out-of-two logic system in the tripped condition increases the overall reliability of the logic system. Action 135 has also been revised to allow continued effluent release with two inoperable noble gas activity monitors provided grab sampling is performed every 12 hours. This is consistent with the previous requirement for a one channel system.

Proposed Action 136 (formerly 135) has been revised to allow continued effluent release with an inoperable sample flow-rate measuring device provided the flow rate for the inoperable channel(s) is estimated at least once per four hours. This is consistent with the previous requirement for a one channel system. The change to Action 136 does not alter the required actions for the other monitors in the Specification. It is understood that the requirements of Action 136 are only applicable for noble gas activity monitors which are operable in accordance with the requirements of Table 3.3.7.10-1. Finally, an editorial change is proposed to Tables 3.3.7.10-1 and 4.3.7.10-1. "Sampler Flow-Rate" in Items 1.c, 3.e, and 4.e should read as "Sample Flow-Rate" to provide consistency with design documentation.

Conclusion

The proposed changes result in a net overall increase in plant safety due to the reduction in potential challenges to plant shutdown systems. The capability of the Radioactive Gaseous Effluent Monitoring System remains intact and provides adequate assurance that the limits of 10 CFR 20 will be maintained.

10 CFR 50.91 requires that at the time a licensee requests an amendment, it must provide to the Commission its analysis using the standards in 10 CFR 50.92 concerning the issue of no significant hazards consideration. Therefore, in accordance with 10 CFR 50.91, the following analysis has been performed:

The operation of Nine Mile Point Unit 2, in accordance with the proposed amendment, will not involve a significant increase in the probability or consequences of an accident previously evaluated.

The design of the offgas system and the associated process gaseous monitors has not changed. The existing operability requirements for the noble gas monitors will remain intact. The capability of the monitors themselves and their associated instrumentation will still be verified on a monthly basis. Verifying automatic isolation on a refueling cycle frequency provides adequate assurance of the operability of the isolation valve and assures that overall system performance remains at an acceptable level. With one monitor in the trip condition, the remaining operable monitor provides a level of protection equivalent to or greater than that provided with both monitors operable. With both monitors inoperable, grab sampling on a twelve-hour interval provides assurance that noble gas releases in excess of predetermined levels will not go undetected.

Also, revising the operability and surveillance requirements has no effect on the probability of an accident since a gaseous monitor does not initiate an accident. In addition, the editorial changes provide consistency and do not alter the intent or interpretation of the Specification. Therefore, operation of Nine Mile Point Unit 2, in accordance with the proposed amendment, will not involve a significant increase in the probability or consequences of an accident previously evaluated.

The operation of Nine Mile Point Unit 2, in accordance with the proposed amendment, will not create the possibility of a new or different kind of accident from any accident previously evaluated.

000449GG9

The design of the offgas system and the associated process gaseous monitors has not changed. The existing operability requirements for the noble gas monitors will remain intact. The editorial changes do not alter the intent of the Specification. Thus, the proposed change will not alter the plant configuration or any mode of operation. Therefore, operation of Nine Mile Point Unit 2, in accordance with the proposed amendment, will not create the possibility of a new or different kind of accident from any accident previously evaluated.

The operation of Nine Mile Point Unit 2, in accordance with the proposed amendment, will not involve a significant reduction in a margin of safety.

The proposed change revises the surveillance requirements for the offgas process gaseous monitors to minimize challenges to plant shutdown systems and corrects the prescribed number of Minimum Channels Operable for the gaseous monitors and their associated sample flow-rate device. The change will not affect the reliability or performance of the gaseous monitors. The changes involve only the surveillance requirements and do not alter the current Limiting Condition for Operation or the intent of accompanying Action Statements for the Gaseous Effluent Monitoring System. The proposed surveillance requirements provide adequate assurance that the Gaseous Effluent Monitoring System will maintain radioactive releases within the prescribed limits of 10 CFR 20. Finally, the proposed editorial changes provide consistency and do not alter the intent or interpretation of the Specifications. Therefore, operation of Nine Mile Point Unit 2, in accordance with the proposed amendment, will not involve a significant reduction in a margin of safety.