Niagara Mohawk®

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November 30, 1999
NMP1L 1485

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

RE: Nine Mile Point Unit 1
Docket No. 50-220
DPR-63

Gentlemen:

Niagara Mohawk Power Corporation (NMPC) hereby transmits an Application for Amendment to Nine Mile Point Unit 1 (NMP1) Operating License DPR-63. Also enclosed are proposed changes to the Technical Specifications (TS) set forth in Appendix A to the above mentioned license. These changes are included as Attachment A. Supporting information and analyses demonstrating that the proposed changes involve no significant hazards consideration pursuant to 10CFR50.92 are included as Attachment B. Attachment C provides a "marked-up" copy of the affected TS pages. NMPC's determination that the proposed changes meet the criteria for categorical exclusion from performing an environmental assessment is included as Attachment D.

On June 3, 1999, the NRC issued Generic Letter (GL) 99-02, Laboratory Testing of Nuclear-Grade Activated Charcoal. GL 99-02 was issued to alert addressees that testing nuclear-grade activated charcoal to standards other than American Society for Testing and Materials (ASTM) D3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon," does not provide assurance for complying with the current licensing basis as it relates to the dose limits of General Design Criterion 19 of Appendix A to 10CFR Part 50 and Subpart A of 10 CFR Part 100. The GL also requested that all addressees determine whether their TS reference ASTM D3803-1989 for charcoal filter laboratory testing. Addressees whose TS do not reference ASTM D3803-1989 should either amend their TS to reference ASTM D3803-1989 or propose an alternative test protocol.

The purpose of this Amendment Application is to submit changes to the NMP1 TS consistent with those proposed in GL 99-02. Specifically, changes are proposed to TS 3.4.4, Emergency Ventilation System, and TS 3.4.5, Control Room Air Treatment System, to require testing consistent with ASTM D3803-1989. The associated Bases changes are also included.

A001

Pursuant to 10CFR50.91(b)(1), NMPC has provided a copy of this license amendment request and the associated analysis regarding no significant hazards consideration to the appropriate state representative.

Very truly yours,

John H. Mueller
Senior Vice President and
Chief Nuclear Officer

JHM/JMT/kap
Attachments

xc: Mr. H. J. Miller, Regional Administrator, Region I
Mr. S. S. Bajwa, Section Chief PD-I, Section 1, NRR
Mr. G. K. Hunegs, Senior Resident Inspector
Mr. D. S. Hood, Senior Project Manager, NRR
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Records Management

UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
Niagara Mohawk Power Corporation	)	**Docket No. 50-220**
	)	
Nine Mile Point Unit 1	)	

APPLICATION FOR AMENDMENT TO OPERATING LICENSE

Pursuant to Section 50.90 of the Regulations of the Nuclear Regulatory Commission, Niagara Mohawk Power Corporation, holder of Facility Operating License No. DPR-63, hereby requests that Sections 3.4.4 and 3.4.5 set forth in Appendix A to that license be amended. The proposed changes have been reviewed in accordance with Section 6.5 of the Technical Specifications (TS).

On June 3, 1999, the NRC issued Generic Letter (GL) 99-02, Laboratory Testing of Nuclear-Grade Activated Charcoal. GL 99-02 was issued to alert addressees that testing nuclear-grade activated charcoal to standards other than American Society for Testing and Materials (ASTM) D3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon," does not provide assurance for complying with the current licensing basis as it relates to the dose limits of General Design Criterion 19 of Appendix A to 10 CFR Part 50 and Subpart A of 10 CFR Part 100. The GL also requested that all addressees determine whether their TS reference ASTM D3803-1989 for charcoal filter laboratory testing. Addressees whose TS do not reference ASTM D3803-1989 should either amend their TS to reference ASTM D3803-1989 or propose an alternative test protocol.

The purpose of this Amendment Application is to submit changes to the Nine Mile Point Unit 1 TS consistent with those proposed in GL 99-02. Specifically, changes are proposed to TS 3.4.4, Emergency Ventilation System, and TS 3.4.5, Control Room Air Treatment System, to require testing consistent with ASTM D3803-1989. The associated Bases changes are also included.

The proposed changes will not authorize any change in the type of effluents or in the authorized power level of the facility. Supporting information and analyses which demonstrate that the proposed changes involve no significant hazards consideration pursuant to 10CFR50.92 are included as Attachment B.

WHEREFORE, Applicant respectfully requests that Appendix A to Facility Operating License No. DPR-63 be amended in the form attached hereto as Attachment A.

NIAGARA MOHAWK POWER CORPORATION

By

John H. Mueller
Senior Vice President and
Chief Nuclear Officer

Subscribed and Sworn to before me
on this 30th day of Nov. 1999.

NOTARY PUBLIC
01056032276

ATTACHMENT A

NIAGARA MOHAWK POWER CORPORATION

LICENSE NO. DPR-63

DOCKET NO. 50-220

Proposed Changes to Technical Specifications and Bases

Replace the existing pages 174, 176, 179, and 180. These pages have been retyped in their entirety with marginal markings to indicate changes to the text.

LIMITING CONDITION FOR OPERATION

c. The results of laboratory carbon sample analysis shall show ≥95% radioactive methyl iodide removal when tested in accordance with ASTM D3803-1989 at 30°C and 95% R.H.

d. Fans shall be shown to operate within ±10% design flow.

e. During reactor operation, from and after the date that one circuit of the emergency ventilation system is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such circuit is sooner made operable, provided that during such seven days all active components of the other emergency ventilation circuit shall be operable.

   During refueling, from and after the date that one circuit of the emergency ventilation system is made or found to be inoperable for any reason, fuel handling is permissible during the succeeding seven days unless such circuit is sooner made operable, provided that during such seven days all active components of the other emergency ventilation circuit shall be operable. Fuel handling may continue beyond seven days provided the operable emergency ventilation circuit is in operation.

f. If these conditions cannot be met, within 36 hours, the reactor shall be placed in a condition for which the emergency ventilation system is not required.

SURVEILLANCE REQUIREMENT

b. The tests and sample analysis of Specification 3.4.4b, c and d shall be performed at least once per operating cycle or once every 24 months, or after 720 hours of system operation, whichever occurs first or following significant painting, fire or chemical release in any ventilation zone communicating with the system.

c. Cold DOP testing shall be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing.

d. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of the charcoal adsorber bank or after any structural maintenance on the system housing.

e. Each circuit shall be operated with the inlet heater on at least 10 hours every month.

f. Test sealing of gaskets for housing doors downstream of the HEPA filters and charcoal adsorbers shall be performed at and in conformance with each test performed for compliance with Specification 4.4.4b and Specification 3.4.4b.

BASES FOR 3.4.4 AND 4.4.4 EMERGENCY VENTILATION SYSTEM

The emergency ventilation system is designed to filter and exhaust the reactor building atmosphere to the stack during secondary containment isolation conditions. Both emergency ventilation system fans are designed to automatically start upon high radiation in the reactor building ventilation duct or at the refueling platform and to maintain the reactor building pressure to the design negative pressure so as to minimize in-leakage. Should one system fail to start, the redundant system is designed to start automatically. Each of the two fans has 100 percent capacity.

High efficiency particulate absolute (HEPA) filters are installed before and after the charcoal adsorbers to minimize potential release of particulates to the environment and to prevent clogging of the iodine adsorbers. The charcoal adsorbers are installed to reduce the potential release of radioiodine to the environment. The in-place test results should indicate a system leak tightness of less than 1 percent bypass leakage for the charcoal adsorbers and a HEPA efficiency of at least 99 percent removal of DOP particulates. The laboratory carbon sample test results should indicate a radioactive methyl iodide removal efficiency of at least 95 percent for expected accident conditions. If the efficiencies of the HEPA filters and charcoal adsorbers are as specified, the resulting doses will be less than the 10CFR100 guidelines for the accidents analyzed. Operation of the fans significantly different from the design flow will change the removal efficiency of the HEPA filters and charcoal adsorbers.

Only one of the two emergency ventilation systems is needed to cleanup the reactor building atmosphere upon containment isolation. If one system is found to be inoperable, there is no immediate threat to the containment system performance and reactor operation or refueling operation may continue while repairs are being made. If neither circuit is operable, the plant is brought to a condition where the emergency ventilation system is not required.

Pressure drop across the combined HEPA filters and charcoal adsorbers of less than 6 inches of water at the system design flow rate will indicate that the filters and adsorbers are not clogged by excessive amounts of foreign matter. Heater capability and pressure drop should be determined at least once per operating cycle to show system performance capability.

The frequency of tests and sample analysis are necessary to show that the HEPA filters and charcoal adsorbers can perform as evaluated. The charcoal adsorber efficiency test should allow for charcoal sampling to be conducted using an ASTM D3803-1989 approved method. If test results are unacceptable, all adsorbent in the system shall be replaced with an adsorbent that has been tested using an ASTM D3803-1989 approved method.

LIMITING CONDITION FOR OPERATION

c. The results of laboratory carbon sample analysis shall show ≥95% radioactive methyl iodide removal when tested in accordance with ASTM D3803-1989 at 30°C and 95% R.H.

d. Fans shall be shown to operate within ±10% design flow.

e. From and after the date that the control room air treatment system is made or found to be inoperable for any reason, reactor operation or refueling operations is permissible only during the succeeding seven days unless the system is sooner made operable.

f. If these conditions cannot be met, reactor shutdown shall be initiated and the reactor shall be in cold shutdown within 36 hours for reactor operations and refueling operations shall be terminated within 2 hours.

SURVEILLANCE REQUIREMENT

c. Cold DOP testing shall be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing.

d. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of the charcoal absorber bank or after any structural maintenance on the system housing.

e. The system shall be operated at least 10 hours every month.

f. At least once per operating cycle, not to exceed 24 months, automatic initiation of the control room air treatment system shall be demonstrated.

g. At least once per operating cycle, not to exceed 24 months, the control room air treatment system shall be shown to maintain a positive pressure within the control room of greater than one sixteenth of an inch (water) relative to areas adjacent to the control room.

BASES FOR 3.4.5 AND 4.4.5 CONTROL ROOM AIR TREATMENT SYSTEM

The control room air treatment system is designed to filter the control room atmosphere for intake air. A roughing filter is used for recirculation flow during normal control room air treatment operation. The control room air treatment system is designed to maintain the control room pressure to the design positive pressure (one-sixteenth inch water) so that all leakage should be out leakage. The control room air treatment system starts automatically upon receipt of a LOCA (high drywell pressure or low-low reactor water level) or Main Steam Line Break (MSLB) (high steam flow main-steam line or high temperature main-steam line tunnel) signal. The system can also be manually initiated.

High efficiency particulate absolute (HEPA) filters are installed before the charcoal adsorbers to prevent clogging of the iodine adsorber. The charcoal adsorbers are installed to reduce the potential intake of radioiodine to the control room. The in-place test results should indicate a system leak tightness of less than 1 percent bypass leakage for the charcoal adsorbers and a HEPA efficiency of at least 99 percent removal of DOP particulates. The laboratory carbon sample test results should indicate a radioactive methyl iodide removal efficiency of at least 95 percent for expected accident conditions. If the efficiencies of the HEPA filter and charcoal adsorbers are as specified, adequate radiation protection will be provided such that resulting doses will be less than the allowable levels stated in Criterion 19 of the General Design Criteria for Nuclear Power Plants, Appendix A to 10CFR Part 50. Operation of the fans significantly different from the design flow will change the removal efficiency of the HEPA filters and charcoal adsorbers.

If the system is found to be inoperable, there is no immediate threat to the control room and reactor operation or refueling operation may continue for a limited period of time while repairs are being made. If the makeup system cannot be repaired within seven days, the reactor is shutdown and brought to cold shutdown within 36 hours or refueling operations are terminated.

Pressure drop across the combined HEPA filters and charcoal adsorbers of less than six inches of water at the system design flow rate will indicate that the filters and adsorbers are not clogged by excessive amounts of foreign matter. Pressure drop should be determined at least once per operating cycle to show system performance capability.

The frequency of tests and sample analysis are necessary to show the HEPA filters and charcoal adsorbers can perform as evaluated. The charcoal adsorber efficiency test should allow for charcoal sampling to be conducted using an ASTM D3803-1989 approved method. If test results are unacceptable, all adsorbent in the system shall be replaced with an adsorbent that has been tested using an ASTM D3803-1989 approved method. The replacement charcoal for the adsorber tray removed for the test should meet the same adsorbent quality. Any HEPA filters found defective shall be replaced with filters qualified pursuant to ANSI 509-1980.

ATTACHMENT B

NIAGARA MOHAWK POWER CORPORATION

LICENSE NO. DPR-63

DOCKET NO. 50-220

Supporting Information and No Significant Hazards Consideration Analysis

INTRODUCTION

The Nine Mile Point Unit 1 (NMP1) Emergency Ventilation System (EVS) consists of a common supply header taking suction from the normal reactor building ventilation discharge, an electric heater (10 kW) located on a common supply duct, a dual bank of filters for removal of particulates and halogens, a 1,000-W heater and motor-driven fan in each filter bank, and isolation valves at the supply and exhaust of each bank. Each filter bank includes a charcoal filter, with activated and specially impregnated carbon, capable of removing 99.0 percent of radioactive methyl iodide and other iodine forms. The EVS is designed to limit the release of radioactive gases to the environment within the guidelines of 10CFR100 for analyzed accidents.

Technical Specification (TS) Surveillance Requirement (SR) 4.4.4 provides the testing requirements for the EVS system, including the charcoal filters. SR 4.4.4b requires that laboratory carbon sample analysis (as indicated in TS 3.4,4c) be performed at least once per operating cycle or once every 24 months, or after 720 hours of system operation, whichever occurs first, or following significant painting, fire or chemical release in any ventilation zone communicating with the system. TS 3.4.4c references ANSI N510-1980 testing criteria.

The NMP1 Control Room Air Treatment System consists of a 15kW duct heater, two full-capacity ventilation fans, a high efficiency particulate filter and an activated charcoal filter unit. Operability of the Control Room Air Treatment System ensures that the control room will remain habitable for operations personnel during and following accident conditions. Specifically, adequate radiation protection will be provided such that resulting doses will be less than the allowable levels stated in General Design Criteria (GDC) 19 of Appendix A to 10CFR Part 50.

SR 4.4.5 provides the testing requirements for the Control Room Air Treatment System, including the charcoal filters. SR 4.4.5b requires that laboratory carbon sample analysis (as indicated in TS 3.4.5c) be performed at least once per operating cycle or once every 24 months, or after 720 hours of system operation, whichever occurs first or following significant painting, fire or chemical release in any ventilation zone communicating with the system. TS 3.4.5c references the testing criteria provided in ANSI N510-1980.

On June 3, 1999, the NRC issued Generic Letter (GL) 99-02, Laboratory Testing of Nuclear-Grade Activated Charcoal. GL 99-02 was issued to alert addressees that testing nuclear-grade activated charcoal to standards other than American Society for Testing and

Materials (ASTM) D3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon," does not provide assurance for complying with the current licensing basis as it relates to the dose limits of GDC 19 of Appendix A to 10CFR Part 50 and Subpart A of 10 CFR Part 100. The GL also requested that all addressees determine whether their TS reference ASTM D3803-1989 for charcoal filter laboratory testing. Addressees whose TS do not reference ASTM D3803-1989 should either amend their TS to reference ASTM D3803-1989 or propose an alternative test protocol.

The purpose of this Amendment Application is to submit changes to the NMP1 TS consistent with those proposed in GL 99-02. The associated Bases changes are also included.

EVALUATION

The testing requirements of the activated charcoal in the EVS and Control Room Air Treatment System is delineated in SR 4.4.4b and 4.4.5b, respectively. Both surveillances, by reference to TSs 3.4.4c and 3.4.5c, require laboratory analysis of a representative carbon sample in accordance with ANSI N510-1980. NMPC proposes to revise these TSs to require testing in accordance with ASTM D3803-1989 to be consistent with the guidance provided in GL 99-02.

Analyses of design-basis accidents assume a particular charcoal filter adsorption efficiency when calculating offsite and control room operator doses. Charcoal filter samples are then tested to determine whether the filter adsorber efficiency is greater than that assumed in the design-basis accident analysis. The laboratory test acceptance criteria contain a safety factor to ensure that the efficiency assumed in the accident analysis is still valid at the end of the operating cycle.

Various industry guidance exists for determining the frequency of, and the test method for, the laboratory testing of charcoal. NMP1 SRs 3.4.4c and 3.4.5c reference ANSI N510-1980, "Testing of Nuclear Air-Cleaning Systems." As indicated in GL 99-02, industry standards, including ANSI N510, describe a pre-equilibration period, a challenge period, and an elution period during charcoal testing. During the pre-equilibration (pre-sweep) period, the charcoal is exposed to a flow of air controlled at the test temperature and relative humidity (RH) before the challenge gas is fed through the charcoal. The pre-equilibration period ensures that the charcoal has stabilized at the specified test temperature and RH for a period of time, which results in the charcoal becoming saturated with moisture before it is challenged with methyl iodide. During the challenge period, air at the test temperature and RH with a radio-labeled methyl iodide is injected through the charcoal beds to challenge the capability of the charcoal. During the elution (post-sweep) period, air at the test temperature and RH is passed through the charcoal beds to evaluate the ability of the charcoal to hold the methyl iodide once it is captured.

GL 99-02 also indicates that the latest acceptable methodology for the laboratory testing of the charcoal is ASTM Standard D3803-1989. ASTM D3803-1989 is updated guidance based on an NRC verification and validation effort regarding ASTM D3803-1979. ASTM D3803-1989 has two additional testing periods that are not required by other standards: the stabilization period and the equilibration period. During the stabilization period, the charcoal bed is brought to thermal equilibrium with the test temperature before the start of pre-equilibration. During the equilibration period, air at the test temperature and RH is

passed through the charcoal beds to ensure the charcoal adsorbs all the available moisture before the feed period. During this period, the system is more closely monitored than in the pre-equilibration period to ensure that all parameters are maintained within their limits. The essential elements of the ASTM D3803-1989 test are as follows:

- 70 percent or 95 percent RH
- 2-hour minimum thermal stabilization, at 30°C [86°F]
- 16-hour pre-equilibration (pre-sweep) time, with air at 30°C [86°F] and plant-specific RH
- 2-hour equilibration time, with air at 30°C [86°F] and plant-specific RH
- 1-hour challenge, with gas at 30°C [86°F] and plant-specific RH
- 1-hour elution (post-sweep) time, with air at 30°C [86°F] and plant-specific RH

The following discussion provides a comparison between the testing methods delineated in ANSI N510-1980 and ASTM D3803-1989. Concerning the challenge temperature used, ASTM D3803-1989 challenges the representative charcoal samples at 30°C [86°F] rather than the 80°C [176°F] required by ANSI N510-1980. The quantity of water retained by charcoal is dependent on temperature, and less water is retained as the temperature rises. The water retained by the charcoal decreases its efficiency in adsorbing other contaminants. Because NMP1 charcoal can be challenged at a temperature closer to 30°C [86°F] rather than 80°C [176°F], the lower temperature test condition of ASTM D3803-1989 (i.e., the proposed testing methodology) will yield more realistic results than would a test performed in accordance with ANSI N510 at 80°C [176°F]. Concerning test temperatures, ASTM D3803-1989 specifies a test temperature of 30°C [86°F] for both the pre- and post-test sweep. This is also conservative compared to the pre- and post-sweep temperatures currently used during NMP1 charcoal laboratory testing (i.e., 80°C).

In addition, ASTM D3803-1989, as discussed in GL 99-02, provides results that are reproducible compared to current testing practices because it has smaller tolerances on various test parameters, and it requires that the charcoal sample be pre-equilibrated for a much longer period. The longer pre-equilibration time is more conservative because it will completely saturate the representative charcoal sample, which ensures reproducibility of the results by having every charcoal sample begin the test at the same initial conditions. In addition, existing TSs require that results of laboratory carbon sample analysis be less than or equal to 90 percent radioactive methyl iodide removal. This 90 percent criteria will be changed to 95 percent consistent with the new testing methodology and calculation provided in GL 99-02.

Based on the above discussion, Niagara Mohawk Power Corporation (NMPC) has proposed changes to TS 3.4.4c and 3.4.5c to test the EVS and Control Room Air Treatment System in accordance with ASTM D3803-1989 versus ANSI N510-1980. Testing in accordance with ASTM D3803-1989 (versus ANSI N510) is a conservative change which will result in a more realistic prediction of the capability of the charcoal. The bases associated with TS 3.4.4 and 3.4.5 have been revised to reflect the new testing requirements.

CONCLUSION

Charcoal filter samples are tested to determine whether the filter adsorber efficiency is greater than that assumed in the design-basis accident analysis. The proposed changes to the testing method provide a more realistic prediction of the capability of the charcoal and are consistent with the changes proposed in GL 99-02. Consequently, the proposed TS changes will not adversely affect the health and safety of the public and will not be inimical to the common defense and security.

NO SIGNIFICANT HAZARDS CONSIDERATION ANALYSIS

10CFR50.91 requires that at the time a licensee requests an amendment, it must provide to the Commission its analysis using the standards in 10CFR50.92 concerning the issue of no significant hazards consideration. Therefore, in accordance with 10CFR50.91 and 10CFR50.92, the following analyses has been performed:

The operation of Nine Mile Point Unit 1, in accordance with the proposed amendment, will not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed TS change will require testing the EVS and Control Room Air Treatment System charcoal filters in accordance with ASTM D3803-1989 versus ANSI N510-1980. Neither the EVS or Control Room Air Treatment System involve initiators or precursors to an accident previously evaluated as both systems perform mitigative functions in response to an accident. Failure of either system would result in the inability to perform its mitigative function but no failure would increase the probability of an accident. Accordingly, changing the test methodology of the charcoal filters will not affect any accident precursors. Therefore, the probability of an accident previously evaluated is not increased.

The NMP1 EVS is designed to limit the release of radioactive gases to the environment within the guidelines of 10CFR100 for analyzed accidents. The Control Room Air Treatment System is designed to limit doses to control room operators to less than the values allowed by GDC 19. Both systems contain charcoal filters which require laboratory carbon sample analysis be performed in accordance ANSI N510-1980 as required by TS. Charcoal filter samples are tested to determine whether the filter adsorber efficiency is greater than that assumed in the design basis accident analysis. The proposed TS changes to test the charcoal material in accordance with ASTM D3803-1989 (versus ANSI N510) will assure the ability of the subject systems to perform their intended function by providing a more realistic prediction of the capability of the charcoal filters. Therefore, the proposed changes will not involve a significant increase in the consequences of an accident previously evaluated.

The operation of Nine Mile Point Unit 1, 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 proposed TS change will require testing the EVS and Control Room Air Treatment System charcoal filters in accordance with ASTM D3803-1989 versus ANSI N510-1980.

This change will not involve placing these systems in new configurations or operating the systems in a different manner that could result in a new or different kind of accident. Testing in accordance with the ASTM D3803-1989 standard will assure the ability of the subject systems to perform their intended function by providing a more realistic prediction of the capability of the charcoal filters. Therefore, the proposed change will not create the possibility of a new or different kind of accident from any previously evaluated.

The operation of Nine Mile Point Unit 1, in accordance with the proposed amendment, will not involve a significant reduction in a margin of safety.

The proposed TS changes will not adversely affect the performance characteristics of the EVS or Control Room Air Treatment System nor will it affect the ability of these systems to perform their intended functions. Charcoal filter samples are tested to determine whether the filter adsorber efficiency is greater than that assumed in the design basis accident analysis. The proposed TS changes to test the charcoal material in accordance with ASTM D3803-1989 (versus ANSI N510-1980) will assure the ability of the subject systems to perform their intended function by providing a more realistic prediction of the capability of the charcoal filters. Also, the proposed changes are consistent with the changes recommended in NRC GL 99-02. Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

ATTACHMENT C

NIAGARA MOHAWK POWER CORPORATION

LICENSE NO. DPR-63

DOCKET NO. 50-220

"Marked-Up" Copy of Current Technical Specifications

LIMITING CONDITION FOR OPERATION

c. The results of laboratory carbon sample analysis shall show ≥90% radioactive methyl iodide removal when tested in accordance with ~~ANSI N.510-1980~~ ASTM D3803-1989 at ~~80°C~~ 30°C and 95% R.H.

d. Fans shall be shown to operate within ±10% design flow.

e. During reactor operation, from and after the date that one circuit of the emergency ventilation system is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such circuit is sooner made operable, provided that during such seven days all active components of the other emergency ventilation circuit shall be operable.

During refueling, from and after the date that one circuit of the emergency ventilation system is made or found to be inoperable for any reason, fuel handling is permissible during the succeeding seven days unless such circuit is sooner made operable, provided that during such seven days all active components of the other emergency ventilation circuit shall be operable. Fuel handling may continue beyond seven days provided the operable emergency ventilation circuit is in operation.

f. If these conditions cannot be met, within 36 hours, the reactor shall be placed in a condition for which the emergency ventilation system is not required.

SURVEILLANCE REQUIREMENT

b. The tests and sample analysis of Specification 3.4.4b, c and d shall be performed at least once per operating cycle or once every 24 months, or after 720 hours of system operation, whichever occurs first or following significant painting, fire or chemical release in any ventilation zone communicating with the system.

c. Cold DOP testing shall be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing.

d. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of the charcoal adsorber bank or after any structural maintenance on the system housing.

e. Each circuit shall be operated with the inlet heater on at least 10 hours every month.

f. Test sealing of gaskets for housing doors downstream of the HEPA filters and charcoal adsorbers shall be performed at and in conformance with each test performed for compliance with Specification 4.4.4b and Specification 3.4.4b.

BASES FOR 3.4.4 AND 4.4.4 EMERGENCY VENTILATION SYSTEM

The emergency ventilation system is designed to filter and exhaust the reactor building atmosphere to the stack during secondary containment isolation conditions. Both emergency ventilation system fans are designed to automatically start upon high radiation in the reactor building ventilation duct or at the refueling platform and to maintain the reactor building pressure to the design negative pressure so as to minimize in-leakage. Should one system fail to start, the redundant system is designed to start automatically. Each of the two fans has 100 percent capacity.

High efficiency particulate absolute (HEPA) filters are installed before and after the charcoal adsorbers to minimize potential release of particulates to the environment and to prevent clogging of the iodine adsorbers. The charcoal adsorbers are installed to reduce the potential release of radioiodine to the environment. The in-place test results should indicate a system leak tightness of less than 1 percent bypass leakage for the charcoal adsorbers and a HEPA efficiency of at least 99 percent removal of DOP particulates. The laboratory carbon sample test results should indicate a radioactive methyl iodide removal efficiency of at least ~~90~~ 95 percent for expected accident conditions. If the efficiencies of the HEPA filters and charcoal adsorbers are as specified, the resulting doses will be less than the 10CFR100 guidelines for the accidents analyzed. Operation of the fans significantly different from the design flow will change the removal efficiency of the HEPA filters and charcoal adsorbers.

Only one of the two emergency ventilation systems is needed to cleanup the reactor building atmosphere upon containment isolation. If one system is found to be inoperable, there is no immediate threat to the containment system performance and reactor operation or refueling operation may continue while repairs are being made. If neither circuit is operable, the plant is brought to a condition where the emergency ventilation system is not required.

Pressure drop across the combined HEPA filters and charcoal adsorbers of less than 6 inches of water at the system design flow rate will indicate that the filters and adsorbers are not clogged by excessive amounts of foreign matter. Heater capability and pressure drop should be determined at least once per operating cycle to show system performance capability.

The frequency of tests and sample analysis are necessary to show that the HEPA filters and charcoal adsorbers can perform as evaluated. The charcoal adsorber efficiency test should allow for charcoal sampling to be conducted using an ~~ANSI/ASME N510-1980~~ ASTM D3803-1989 approved method. If test results are unacceptable, all adsorbent in the system shall be replaced with an adsorbent ~~qualified in Table 5-1 of ANSI 509-1980~~ that has been tested using an ASTM D3803-1989 approved method.

LIMITING CONDITION FOR OPERATION

c. The results of laboratory carbon sample analysis shall show ≥90% radioactive methyl iodide removal when tested in accordance with ~~ANSI N.510-1980~~ ASTM D3803-1989 at ~~80~~ 30°C and 95% R.H.

d. Fans shall be shown to operate within ±10% design flow.

e. From and after the date that the control room air treatment system is made or found to be inoperable for any reason, reactor operation or refueling operations is permissible only during the succeeding seven days unless the system is sooner made operable.

f. If these conditions cannot be met, reactor shutdown shall be initiated and the reactor shall be in cold shutdown within 36 hours for reactor operations and refueling operations shall be terminated within 2 hours.

SURVEILLANCE REQUIREMENT

c. Cold DOP testing shall be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing.

d. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of the charcoal absorber bank or after any structural maintenance on the system housing.

e. The system shall be operated at least 10 hours every month.

f. At least once per operating cycle, not to exceed 24 months, automatic initiation of the control room air treatment system shall be demonstrated.

g. At least once per operating cycle, not to exceed 24 months, the control room air treatment system shall be shown to maintain a positive pressure within the control room of greater than one sixteenth of an inch (water) relative to areas adjacent to the control room.

BASES FOR 3.4.5 AND 4.4.5 CONTROL ROOM AIR TREATMENT SYSTEM

The control room air treatment system is designed to filter the control room atmosphere for intake air. A roughing filter is used for recirculation flow during normal control room air treatment operation. The control room air treatment system is designed to maintain the control room pressure to the design positive pressure (one-sixteenth inch water) so that all leakage should be out leakage. The control room air treatment system starts automatically upon receipt of a LOCA (high drywell pressure or low-low reactor water level) or Main Steam Line Break (MSLB) (high steam flow main-steam line or high temperature main-steam line tunnel) signal. The system can also be manually initiated.

High efficiency particulate absolute (HEPA) filters are installed before the charcoal adsorbers to prevent clogging of the iodine adsorber. The charcoal adsorbers are installed to reduce the potential intake of radioiodine to the control room. The in-place test results should indicate a system leak tightness of less than 1 percent bypass leakage for the charcoal adsorbers and a HEPA efficiency of at least 99 percent removal of DOP particulates. The laboratory carbon sample test results should indicate a radioactive methyl iodide removal efficiency of at least 90 percent for expected accident conditions. If the efficiencies of the HEPA filter and charcoal adsorbers are as specified, adequate radiation protection will be provided such that resulting doses will be less than the allowable levels stated in Criterion 19 of the General Design Criteria for Nuclear Power Plants, Appendix A to 10CFR Part 50. Operation of the fans significantly different from the design flow will change the removal efficiency of the HEPA filters and charcoal adsorbers.

If the system is found to be inoperable, there is no immediate threat to the control room and reactor operation or refueling operation may continue for a limited period of time while repairs are being made. If the makeup system cannot be repaired within seven days, the reactor is shutdown and brought to cold shutdown within 36 hours or refueling operations are terminated.

Pressure drop across the combined HEPA filters and charcoal adsorbers of less than six inches of water at the system design flow rate will indicate that the filters and adsorbers are not clogged by excessive amounts of foreign matter. Pressure drop should be determined at least once per operating cycle to show system performance capability.

The frequency of tests and sample analysis are necessary to show the HEPA filters and charcoal adsorbers can perform as evaluated. The charcoal adsorber efficiency test should allow for charcoal sampling to be conducted using an ~~ANSI/ASME N510-1980~~ approved method. If test results are unacceptable, all adsorbent in the system shall be replaced with an adsorbent ~~qualified according to Table 5-1 of ANSI 509-1980~~. The replacement charcoal for the adsorber tray removed for the test should meet the same adsorbent quality. Any HEPA filters found defective shall be replaced with filters qualified pursuant to ANSI 509-1980.

that has been tested using an ASTM D3803-1989 approved method

ATTACHMENT D

NIAGARA MOHAWK POWER CORPORATION

LICENSE NO. DPR-63

DOCKET NO. 50-220

Eligibility for Categorical Exclusion from Performing an Environmental Assessment

10CFR51.22 provides criteria for, and identification of, licensing and regulatory actions eligible for exclusion from performing an environmental assessment. Niagara Mohawk power Corporation has reviewed the proposed amendment and determined that it does not involve a significant hazards consideration, and there will be no significant change in the types or a significant increase in the amounts of any effluents that may be released offsite; nor will there by any significant increase in individual or cumulative occupational radiation exposure. Therefore, the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10CFR51.22(c)(9) and, pursuant to 10CFR51.22(b), no environmental impact statement or environmental assessment is required to be prepared in connection with this license amendment application.