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 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 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.

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 automatically start upon receipt of a high radiation signal from one of the two radiation monitors located on the ventilation intake and to maintain the control room pressure to the design positive pressure (one-sixteenth inch water) so that all leakage should be out leakage.

High efficiency particulate absolute (HEPA) filters are installed before the charcoal adsorbers to prevent clogging of the iodine absorber. 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. In addition, air intake radiation monitors will be calibrated and functionally tested each operating cycle, not to exceed 24 months, to verify system performance.

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 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 absorber 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 for Technical Specification Bases Change

The Control Room Air Treatment System is normally operating to provide clean fresh air for personnel habitability and instrument protection, and it is designed to automatically transfer to the emergency mode configuration upon receipt of a high radiation signal. The Reactor Building Emergency Ventilation System (EVS) is designed to filter particulates and iodine from the Reactor Building atmosphere prior to exhausting to the stack during secondary containment conditions. The EVS is normally a standby system which must perform only in the event of an accident. To assure that the EVS and Control Room Air Treatment System filters have not deteriorated, periodic testing is required.

The recommended method for testing the ventilation filters charcoal absorber efficiency, as currently described in the Technical Specification 3.4.4/4.4.4 and 3.4.5/4.4.5 Bases, is to remove one absorber tray, empty one bed from the tray, mix the adsorbent thoroughly, and obtain a minimum of two samples. This method is no longer practical on the Control Room Air Treatment System due to a system modification. A more efficient technique has been employed to obtain charcoal samples from the Reactor Building Emergency Ventilation System filters.

The changes to the NMP1 Technical Specification Bases describe acceptable alternative sampling methods for collection of charcoal samples for both the EVS and Control Room Air Treatment System. NMP1 Modification N1-82-90-3, Control Room Ventilation Upgrade, changed the design of the adsorbent trays such that collection of samples as described in the Technical Specification Bases cannot be performed without disassembly of the filters. The modification installed three individual charcoal sample canisters. These individual charcoal sample canisters are designed to experience the same airflow conditions as the adsorbent trays, and are filled with the same charcoal. The use of sample canisters is consistent with current industry sampling methods and provides a sample that is representative of the actual condition of the filter beds.

The slotted-tube collection method utilizing the Multi-Slot Tube Thief is a more efficient technique for collecting EVS filter charcoal samples than the method currently described in NMP1 Technical Specification Bases 3.4.4/4.4.4. NMP1 Technical Specifications describe testing per ANSI/ASME N510-1980. Section 13 of ANSI/ASME N510-1980, "Laboratory Testing of Adsorbent," states that the adsorbent samples shall be tested in accordance with the procedures of ASTM D3803, "Standard Test Method for Nuclear-Grade Activated Carbon." ASTM D3803 refers to ASTM E300 for the methodology for taking samples. ASTM E300, "Practice for Sampling Industrial Chemicals," Section 30.4.2.2, allows the use of the Multi-Slot Tube Thief as an acceptable sampling method.

The modifications to the Control Room Air Treatment System were evaluated according to 10CFR50.59 and found not to present a significant safety hazard. Niagara Mohawk has evaluated these methods of sampling and has determined that they meet the requirements

of and are equivalent to ANSI/ASME N509-1980 and ANSI/ASME N510-1980. ANSI/ASME N509-1980, "Nuclear Power Plant Air Cleaning Units and Components," is the standard for design, construction, and testing of high efficiency air and gas cleaning systems used in Nuclear Power Plants. ANSI/ASME N509-1980 and ANSI/ASME N510-1980 are referenced throughout the Unit 1 Technical Specifications and Technical Specification Bases as the testing standard for the Unit 1 ventilation systems. In addition, NMP1 sampling procedures require that the associated systems be removed from service while taking the samples. Therefore, no NMP1 accident initiator or precursor will be affected. No margin of safety will be adversely affected. Normal or emergency operation of the Control Room Air Treatment and Reactor Building Emergency Ventilation Systems will not be adversely affected by the changes. No change to NMP1 system operating procedures is required. Therefore, the changes do not create a safety issue and do not affect the public health and safety.