2. The requirements of 3.3.H.1 may be modified as follows:

   a. The control room ventilation system may be inoperable for a period not to exceed seventy-two hours. At the end of this period if the mal-condition in the control room ventilation system has not been corrected, the reactor shall be placed in the hot shutdown condition utilizing normal operating procedures. If after an additional 48 hours the mal-condition still exists, the reactor shall be placed in the cold shutdown condition utilizing normal operating procedures.

3. Two independent toxic gas monitoring systems, with separate channels for detecting chlorine, anhydrous ammonia, and either carbon dioxide or oxygen shall be operable in accordance with 3.3.H.1 except as specified in 3.a, 3.b or 3.c below. The alarm set-point for the installed toxic gas system shall be adjusted to actuate at a toxic gas concentration of less than or equal to threshold limit values.

   a. With any channel for a monitored toxic gas inoperable, restore the inoperable channel to operable status within 7 days.

   b. If 3.a above cannot be satisfied within the specified time, then within the next 8 hours initiate and maintain operation in the control room of alternate monitoring capability for the inoperable channel.

   c. With both channels for a monitored toxic gas inoperable, within 8 hours initiate and maintain operation in the control room of an alternate monitoring system capable of detecting the gas monitored by the inoperable channel.

AND

1. Within 72 hours after identification of the inoperability of both installed monitoring channels, restore one monitoring channel to operable status.

OR

2. Submit a Special Report to the NRC pursuant to Technical Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the monitoring systems.

Basis

The normal procedure for starting the reactor is, first, to heat the reactor coolant to near operating temperature, by running the reactor coolant pumps. The reactor is then made critical by withdrawing control rods and/or diluting boron in the coolant.[1] With this mode of startup, the energy stored in the reactor coolant during the approach to criticality is substantially equal to that during power operation, and, therefore, the minimum required engineered safeguards and auxiliary cooling systems are required to be operable.

The probability of sustaining both a major accident and a simultaneous failure of a safeguards component to operate as designed is necessarily very small. Thus, operation with the reactor above the cold shutdown condition with minimum safeguards operable for a limited period does not significantly increase the probability of an accident having consequences which are more severe than the Design Basis Accident.

The operable status of the various systems and components is demonstrated by periodic tests defined by Specification 4.5. A large fraction of these tests will be performed while the reactor is operating in the power range. If a component is found to be inoperable, it will be possible in most cases to effect repairs and restore the system to full operability within a relatively short time. For a single component to be inoperable does not negate the ability of the system to perform its function, (2) but it reduces the redundancy provided in the reactor design and thereby limits the ability to tolerate additional equipment failures. To provide maximum assurance that the redundant component(s) will operate if required to do so, the redundant component(s) are to be tested prior to initiating repair of the inoperable component. If it develops that (a) the inoperable component is not repaired within the specified allowable time period, or (b) a second component in the same or related system is found to be inoperable, the reactor, if critical, will initially be brought to the hot shutdown condition utilizing normal operating procedures to provide for reduction of the decay heat from the fuel, and consequent reduction of cooling requirements after a postulated loss-of-coolant accident. This will also permit improved access for repairs in some cases. If the reactor was already subcritical, the reactor coolant system temperature and pressure will be maintained within the stated values in order to limit the amount of stored energy in the reactor coolant system. The stated tolerances provide a band for operator control. After a limited time in hot shutdown, if the malfunction(s) are not corrected, the reactor will be placed in the cold shutdown condition, utilizing normal shutdown and cooldown procedures. In the cold shutdown condition there is no possibility of an accident that would release fission products or damage the fuel elements.

The plant operating procedures require immediate action to effect repairs of an inoperable component, and, therefore, in most cases repairs will be completed in less than the specified allowable repair times. The limiting times to repair are based on two considerations:

1) Assuring with high reliability that the safeguard system will function properly if required to do so.

2) Allowances of sufficient time to effect repairs using safe and proper procedures.

Assuming the reactor has been operating at full rated power, the magnitude of the decay heat decreases after initiating hot shutdown. Thus, the requirement for core cooling in case of a postulated loss-of-coolant accident while in the hot shutdown condition is significantly reduced below the requirements for a postulated loss-of-coolant accident during power operation. Putting the reactor in the hot shutdown condition significantly reduces the potential consequences of a loss-of-coolant accident, and also allows more free access to some of the engineered safeguards components in order to effect repairs.

Failure to complete repairs within 1 hour of going to the hot shutdown condition is considered indicative of a requirement for major maintenance and, therefore, in such a case the reactor is to be put into the cold shutdown condition.

The limits for the Boron Injection Tank, Refueling Water Storage Tank, and the accumulators insure the required amount of water with the proper boron concentration for injection into the reactor coolant system following a loss-of-coolant accident is available. These limits are based on values used in the accident analysis. (9) (13)

The specified quantities of water for the RWST include unavailable water (4687 gals) in the tank bottom, inaccuracies (1406 gals) in the alarm setpoints, and minimum quantities required during injection (246,000 gals) (3) and recirculation phases (80,000 gals). (4) The minimum RWST (e.g., 346,870 gals) provides approximately 13,370 gallons margin.

The four accumulator isolation valves (894 A,B,C,D) are maintained in the open position when the reactor coolant pressure is above 1000 psig to assure flow passage from the accumulators will be available during the injection phases of a loss-of-coolant accident. Indication is also provided on the monitor light panel, should any of these valves not be in the full open position even with the valve operator de-energized. The 1000 psig limit is derived from the minimum pressure requirements of the accumulators combined with instrument error and an operational band and is based upon avoiding inadvertent injection into the reactor coolant system. The accumulator isolation valve motor operators are de-energized to prevent an extremely unlikely spurious closure of these valves from occurring when accumulator core cooling flow is required. Valves 856 B and G are maintained in the closed position to prevent hot leg injection during the injection phase of a loss-of-coolant accident. As an additional assurance of preventing hot leg injection, these valve motor operators are de-energized to prevent spurious opening of these valves during the injection phase of a loss-of-coolant accident. Power will be restored to these valves at an appropriate time in accordance with plant operating procedures after a loss-of-coolant accident in order to establish hot leg recirculation.

Valves 1810, 882, and 744 are maintained in the open position to assure that flow passage from the refueling water storage tank will be available during the injection phase of a loss-of-coolant accident. As additional assurance of flow passage availability, these valve motor operators are de-energized to prevent an extremely unlikely spurious closure. This additional precaution is acceptable, since failure to manually re-establish power to close these valves following the injection phase is tolerable as a single failure.

Valves 842 and 843 in the mini-flow return line from the discharge of the safety injection pumps to the refueling water storage tank are de-energized in the open position to prevent an extremely unlikely spurious closure which would cause the safety injection pumps to overheat if the reactor coolant system pressure is above the shutoff head of the pumps.

With respect to the core cooling function, there is some functional redundancy for certain ranges of break sizes. (3) The measure of effectiveness of the Safety Injection System is the ability of the pumps and accumulators to keep the core flooded or to reflood the core rapidly where the core has been uncovered for postulated large area ruptures. The result of their performance is to sufficiently limit any increase in clad temperature below a value where emergency core cooling objectives are met. (13)

During operating modes in the temperature range between 200°F and 350°F, a sufficient decay heat removal capability is provided by a reactor coolant pump with a steam generator heat sink or a residual heat removal loop. This redundancy ensures that a single failure will not result in a complete loss of decay heat removal.

During operating modes when the reactor coolant T_{avg} is less than 200°F, but not in the refueling operation condition, a sufficient decay heat removal capability is provided by a residual heat removal loop.

The containment cooling and iodine removal functions are provided by two independent systems: (a) fan-coolers plus charcoal filters and (b) containment spray with sodium hydroxide addition. During normal power operation, the five fan-coolers are required to remove heat lost from equipment and piping within containment at design conditions (with a cooling water temperature of 85°F). (4) In the event of a Design Basis Accident, any one of the following combinations will provide sufficient cooling to reduce containment pressure at a rate consistent with limiting off-site doses to acceptable values: (1) five fan-cooler units, (2) two containment spray pumps, (3) three fan-cooler units and one spray pump. Also in the event of a Design Basis Accident, three charcoal filters (and their associated recirculation fans) in operation, along with one containment spray pump and sodium hydroxide addition, will reduce airborne organic and molecular iodine activities sufficiently to limit off-site doses to acceptable values. (5) These constitute the minimum safeguards for iodine removal, and are capable of being operated on emergency power with one diesel generator inoperable.

If off-site power is available or all diesel generators are operating to provide emergency power, the remaining installed iodine removal equipment (two charcoal filters and their associated fans, and one containment spray pump and sodium hydroxide addition) can be operated to provide iodine removal in excess of the minimum requirements. Adequate power for operation of the redundant containment heat removal systems (i.e., five fan-cooler units or two containment spray pumps) is assured by the availability of off-site power or operation of all emergency diesel generators.

Due to the distribution of the five fan cooler units and two containment spray pumps on the 480 volt buses, the closeness to which the combined equipment approaches minimum safeguards varies with which particular component is out of service. Accordingly, the allowable out of service periods vary according to which component is out of service. Under no conditions do the combined equipment degrade below minimum safeguards.

The four day out of service period for the Weld Channel and Penetration Pressurization System and the Isolation Valve Seal Water System is allowed because no credit has been taken for operation of these systems in the calculation of off-site accident doses should an accident occur. No other safeguards systems are dependent on operation of these systems. (11) The minimum pressure settings for the IVSWS and WC & PPS during operation assures effective performance of these systems for the maximum containment calculated peak accident pressure of 40.6 psig. (12)

The Component Cooling System is not required during the injection phase of a loss-of-coolant accident. The component cooling pumps are located in the Primary Auxiliary Building and are accessible for repair after a loss-of-coolant accident. (6) During the recirculation phase following a loss-of-coolant accident, only one of the three component cooling pumps is required for minimum safeguards. (7)

A total of six service water pumps are installed, only two of the set of three service water pumps on the header designated the essential header are required immediately following a postulated loss-of-coolant accident. (8) During the recirculation phases of the accident, two service water pumps on the non-essential header will be manually started to supply cooling water for one component cooling system heat exchanger, one control room air conditioner, and one diesel generator; the other component cooling system heat exchanger, the other control room air conditioner, the two other diesel generators and remaining safety related equipment are cooled by the essential service water header.[14]

Two full rated recombination systems are provided in order to control the hydrogen evolved in the containment following a loss-of-coolant accident. Either system is capable of preventing the hydrogen concentration from exceeding 2% by volume within the containment. Each of the systems is separate from the other and is provided with redundant features. Power supplies for the blowers and ignitors are separate, so that loss of one power supply will not affect the remaining system. Hydrogen gas is used as the externally supplied fuel. Oxygen gas is added to the containment atmosphere through a separate containment feed to prevent depletion of oxygen in the air below the concentration required for stable operation of the combustor (12%). The containment hydrogen monitoring system consists of two safety related hydrogen concentration measurement cabinets with sample lines which pass through the containment penetrations to each containment fan cooler unit plenum. Two of the five sampling lines (from containment fan cooler units nos. 32 and 35) are routed to a common source line and then to a hydrogen monitor. The other three sample lines (from containment fan cooler units nos. 31, 33 and 34) are likewise headered and routed to the other hydrogen monitor. Each monitor has a separate return line. The design hydrogen concentration for operating the recombiner is established at 2% by volume. Conservative calculations indicate that the hydrogen content within the containment will not reach 2% by volume until 12 days after a loss-of-coolant accident.[10] There is, therefore, no need for immediate operation of the recombiner following an accident, and the quantity of hydrogen fuel stored at the site will be only for periodic testing of the recombiners.

Auxiliary Component Cooling Pumps are provided to deliver cooling water for the two Recirculation Pumps located inside the containment. Each recirculation pump is fed by two Auxiliary Component Cooling Pumps. A single Auxiliary Component Cooling Pump is capable of supplying the necessary cooling water required for a recirculation pump during the recirculation phase following a loss-of-coolant accident.

The control room ventilation is designed to filter the control room atmosphere for intake air and/or for recirculation during control room isolation conditions. The control room system is designed to automatically start upon control room isolation and to maintain the control room pressure to the design positive pressure so that all leakage should be out leakage.

The control room is equipped with two independent toxic gas monitoring systems. One system in the control room consists of redundant channels for oxygen and a channel each for anhydrous ammonia and chlorine. The second system in the control room ventilation intake consists of one channel each for carbon dioxide, anhydrous ammonia and chlorine. Oxygen detectors are used in the control room monitoring system to indirectly monitor changes in carbon dioxide levels. These toxic gas monitoring systems are designed to alarm in the control room upon detection of the threshold limit value (TLV) for an 8-hour day, 40-hour week, 52 weeks per year environment of the monitored gases. The operability of the toxic gas monitoring systems provides assurance that the control room operators will have adequate time to take protective action in the event of an accidental toxic gas release. Selection of the gases to be monitored are based on the results described in the Indian Point Unit 3 Habitability Study for the Control Room, dated July, 1981. Threshold limits will be in accordance with industrial ventilation standards as defined by the American Conference of Governmental Industrial Hygienists.(15)

The OPS has been designed to withstand the effects of the postulated worse case Mass Input (i.e., single safety injection pump) without exceeding the 10 CFR 50, Appendix G curve. Curve III on Figure 3.1.A-3 provides the setpoint curve of the OPS PORVs which is sufficiently below the Appendix G curve such that PORVs overshoots would not exceed the allowable Appendix G pressures. Therefore, only one safety injection pump can be available to feed water into the RCS when the OPS is operable. The other pumps must be prevented from injecting water into the RCS. This may be accomplished, for example, by placing the SI pump switches in the trip pull-out position, or by closing and locking (if manual) or de-energizing (if motor operated) at least one valve in the flow path from these pumps to the RCS. For conditions when the OPS is inoperable, additional restrictions are imposed on the RCS temperature, and pressurizer pressure and level. See Specification 3.1.A.8.b. (3).

References

1) FSAR Section 9
2) FSAR Section 6.2
3) FSAR Section 6.2
4) FSAR Section 6.3
5) FSAR Section 14.3.5
6) FSAR Section 1.2
7) FSAR Section 8.2
8) FSAR Section 9.6.1
9) FSAR Section 14.3
10) FSAR Section 6.8
11) FSAR Section 6.5
12) Response to Question 14.6, FSAR Volume 7
13) FSAR Appendix 14C
14) Response to Question 9.35, FSAR Volume 7
15) American Conference of Governmental Industrial Hygienists 1982 Industrial Ventilation, 17th Edition

(1) The charcoal shall have a methyl iodine removal efficiency ≥ 90% at ± 20% of the accident design flow rate, 0.05 to 0.15 mg/m^3 inlet methyl iodine concentration, ≥ 95% relative humidity and ≥ 125°F.

(2) A halogenated hydrocarbon (freon) test on charcoal adsorbers at ± 20% of the accident design flow rate and ambient conditions shall show ≥ 99% halogenated hydrocarbon removal.

(3) A locally generated DOP test of the HEPA filters at ± 20% of the accident design flow rate and ambient conditions shall show ≥ 99% DOP removal.

e. Each toxic gas monitoring system shall be demonstrated operable by performance of a channel check at lease once per day, a channel test at least once per 31 days and a channel calibration each refueling cycle.

6. <u>Fuel Storage Building Emergency Ventilation System</u>

a. The fuel storage building emergency ventilation system fan shall be operated for a minimum of 15 minutes every month when there is irradiated fuel in the spent fuel pit.

b. Prior to handling of irradiated fuel, the following conditions shall be demonstrated before the system can be considered operable:

(1) The pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches of water at ambient conditions and accident design flow rates.

(2) Using either direct or indirect measurements, the flow rate of the system fans shall be shown to be at least 90% of the accident design flow rate.

(3) The filtration system bypass assembly shall be isolated and leak tested to assure that it is properly sealed.

High efficiency particulate absolute (HEPA) filters are installed before the charcoal adsorbers to prevent clogging of these adsorbers for all emergency air treatment systems. The charcoal adsorbers are installed to reduce the potential release of radio-iodine to the environment. The in-place test results should indicate a system leak tightness of less than or equal to one percent leakage for the charcoal adsorbers and a HEPA efficiency of greater than or equal to 99 percent removal of DOP particulates. The laboratory carbon sample test results should indicate a methyl iodide removal efficiency of greater than or equal to 90 percent on the fuel handling system samples, and greater than or equal to 85 percent on the containment system samples for expected accident conditions. With the efficiencies of the HEPA filters and charcoal adsorbers as specified, further assurance is provided that the resulting doses will be less than the 10CFR100 guidelines for the accidents analyzed.

The control room is equipped with two independent toxic gas monitoring systems. One system in the control room consists of redundant channels for oxygen and a channel each for anhydrous ammonia and chlorine. The second system in the control room ventilation intake consists of one channel each for carbon dioxide, anhydrous ammonia and chlorine. Oxygen detectors are used in the control room monitoring system to indirectly monitor changes in carbon dioxide levels. These toxic gas monitoring systems are designed to alarm in the control room upon detection of the threshold limit value (TLV) for an 8-hour day, 40-hour week, 52 weeks per year environment of the monitored gases. The operability of the toxic gas monitoring systems provides assurance that the control room operators will have adequate time to take protective action in the event of an accidental toxic gas release. Selection of the gases to be monitored are based on the results described in the Indian Point Unit 3 Habitability Study for the Control Room, dated July, 1981. Threshold limits will be in accordance with industrial ventilation standards as defined by the American Conference of Governmental Industrial Hygienists.[4]

High efficiency particulate absolute (HEPA) filters are installed before the charcoal adsorbers to similarly prevent clogging of these adsorbers. The charcoal adsorbers are installed to reduce the potential intake of radio-iodine by control room personnel. The in-place test results should indicate a system leak tightness of less than or equal to one percent leakage for the charcoal adsorbers and a HEPA filter efficiency of greater than or equal to 99 percent removal of DOP particulates. The laboratory carbon sample test results should indicate a methyl iodide removal efficiency of greater than or equal to 90 percent for expected accident conditions.

References

(1) FSAR Section 6.2

(2) FSAR Section 6.4

(3) FSAR Section 6.8

(4) American Conference of Governmental Industrial Hygienists 1982 Industrial Ventilation, 17th Edition.

SPECIAL REPORTS (con't)

i. Radioactive environmental sampling results in excess of reporting levels (Appendix B Specification 2.7, 2.8, 2.9)

j. Operation of Overpressure Protection System (Specification 3.1.A.8.c.)

k. Operation of Toxic Gas Monitoring Systems (Specification 3.3.H.3)

6.10 RECORD RETENTION

6.10.1 The following records shall be retained for at least five years:

a. Records and logs of facility operation covering time interval at each power level.

b. Records and logs of principal maintenance activities, inspection, repair and replacements of principal items of equipment related to nuclear safety.

c. All REPORTABLE EVENTS submitted to the Commission.

d. Records of surveillance activities, inspections and calibrations required by these Technical Specifications.

e. Records of changes made to Operating Procedures.

f. Records of radioactive shipments.

g. Records of sealed source and fission detector leak tests and results.

h. Records of annual physical inventory of all source material of record.

i. Records of reactor tests and experiments.

6.10.2 The following records shall be retained for the duration of the Facility Operating License:

a. Records of any drawing changes reflecting facility design modifications made to systems and equipment described in the Final Safety Analysis Report.

b. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.

c. Records of facility radiation and contamination surveys.

d. Records of radiation exposure for all individuals entering radiation control areas.

ATTACHMENT II TO IPN-88-21
SAFETY EVALUATION FOR PROPOSED
TECHNICAL SPECIFICATION CHANGES
RELATED TO TOXIC GAS MONITORING

NEW YORK POWER AUTHORITY
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
DPR-64

Safety Evaluation of Proposed Technical Specifications Related to Toxic Gas Monitoring

I. Description of Change

This application seeks to amend Sections 3.3, 4.5 and 6.9 of the Indian Point 3 Technical Specifications to incorporate technical specifications for redundant toxic gas monitoring systems at Indian Point 3. These proposed technical specifications follow the guidance and intent of NUREG-0737 Item III.D.3.4, "Control Room Habitability and Generic Letter 83-37," NUREG-0737 Technical Specifications.

II. Evaluation of Changes

NUREG-0737, Item III.D.3.4, "Control Room Habitability" requires that the control room operators are adequately protected against the effects of an accidental release of toxic gases. As a result of a habitability study performed for Indian Point 3, (dated July, 1981), the Authority committed to installing a toxic gas monitoring system by the Cycle 4/5 refueling outage (June, 1985). The Authority installed chlorine, anhydrous ammonia and oxygen detectors during the Cycle 3/4 refueling outage to ensure the control room operators' protection.

Subsequent to this July, 1981 analysis, the Authority performed a probabilistic analysis of onsite and offsite chemical releases and their effects on control room habitability. This analysis which was submitted to the NRC on September 10, 1985, concluded that neither the offsite toxic chemicals (chlorine and anhydrous ammonia) nor the onsite stored chemical (carbon dioxide) pose a credible hazard to the control room operators. Although this probabilistic analysis showed there was no need for a toxic gas monitoring system at IP-3, the system that was installed during the Cycle 3/4 refueling outage was upgraded during the Cycle 4/5 refueling outage. This upgrade consisted of the addition of redundant oxygen (O_2) monitors; and the addition of a new, more sensitive chlorine (Cl_2) monitor. It should be noted that O_2 monitors are used for carbon dioxide (CO_2) monitoring. If CO_2 is present in the control room, the O_2 monitors will alarm to notify the operators that the O_2 level in the control room is decreasing. Therefore, instead of monitoring CO_2, we monitor the presence of O_2. These monitors are located in the Control Room. The system consists of a central control and alarm panel. Detectors are located near the fire display and control panel in order to monitor the atmosphere in the operator's area. This system is set sensitive enough to allow the control room operators to take the appropriate actions to ensure their safety after the alarm is sounded.

A new toxic gas monitoring system was installed during the Cycle 4/5 refueling outage which provides continuous indication of the control room's carbon dioxide, chlorine and anhydrous ammonia levels. An air sample is extracted from the outside air intake duct, analyzed and exhausted back to the air intake. The detector and monitor are mounted in the air conditioning equipment room in the Control Building at El. 15'-0". An alarm on panel SM in the control room is provided which will alarm on detection of these toxic gases, equipment trouble or loss of power. In addition, continous digital LED readout is provided in the air conditioning equipment room for each detector. With the installation of this system, the control room operators are protected by two separate and independent toxic gas monitoring systems.

The NRC has evaluated Indian Point 3 in letters dated January 27, 1982, September 27, 1985, March 13, 1986 and February 3, 1987 with regard to control room habitability. The NRC has concluded that Indian Point 3 meets all the requirements of NUREG-0737 Item III.D.3.4. However, the NRC does not agree with the probabilistic analysis the Authority submitted to show that a toxic gas monitoring system is not required at Indian Point 3. Therefore, the appropriate technical specifications are required to be submitted in accordance with NUREG-0737 and Generic Letter 83-37.

The proposed technical specifications follow the guidance and intent of Generic Letter 83-37, but are not an exact replica of what is recommended. The Authority does not agree with the recommendation of placing the control room ventilation system in a monitored recirculation mode of operation when one or both channels of a monitored toxic gas are inoperable. The Authority will install temporary/portable detectors, which are capable of detecting chlorine, anhydrous ammonia and carbon dioxide or oxygen, in lieu of placing the control room ventilation system in the recirculation mode. If one channel of a monitored toxic gas is inoperable for 7 days, then within the next 8 hours the Authority will install temporary/portable detectors. If both channels of a monitored toxic gas are inoperable, temporary/portable detectors will be installed within 8 hours. In addition, if at least one channel for a monitored toxic gas is not restored to operable status within 72 hours the Authority will submit a special report to the NRC within 14 days following the declaration of inoperability. This report will outline the actions taken, identify the cause of the inoperability and the plans and schedule for restoring the channels.

Indian Point 3 Technical Specifications for NUREG-0737 items such as plant vent sampling, wide range plant vent monitor, main steam line radiation monitors and high-range containment radiation monitor contain a requirement for alternate methods of sampling or monitoring capability. In addition if the system(s) are inoperable for more than 7 days, a special report similar to the one proposed for the toxic gas monitoring systems technical specifications is required. Since alternate monitoring capability will be installed to replace the inoperable channel(s) the control room operators will be protected in the unlikely event of a toxic gas release at or around Indian Point 3. Therefore, there is no need to place the control room ventilation system in the recirculation mode of operation.

III. No Significant Hazards Evaluation

In accordance with the requirements of 10 CFR 50.92, the application has been determined to involve no significant hazards based on the following:

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

   Response

   The event related to this proposed license amendment is an accidental release of toxic gases. The proposed license amendment has no effect on the probability of occurrence of this event since the amendment does not involve any changes or revisions to the storage and use of toxic gases at Indian Point 3. The potential consequences of an accidental release of a toxic gas are reduced since the proposed change provides additional assurance that the toxic gas monitoring systems are operable.

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

   Response

   The event related to this proposed license amendment is an accidental release of toxic gases. The toxic gas monitoring systems do not physically affect storage or use of any of the identified toxic gases of concern. Therefore, the installation of toxic gas monitoring systems will not create the possibility of a new or different kind of accident.

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

Response

The proposed license amendment constitutes an additional control not presently included in Indian Point 3 Technical Specifications. This proposed change does not affect safety limits or margins contained in other Indian Point 3 Technical Specifications. The proposed change will, therefore, not involve any reduction in a margin of safety.

In the April 6, 1983 Federal Register, Vol. 48, No. 67, Page 14870, the NRC published a list of examples of amendments that are not likely to involve a significant hazards concern. The Authority considers that the proposed changes can be classified as not likely to involve significant hazards considerations since the proposed changes "constitute an additional limitation, restriction or control not presently included in the Technical specifications." (Example (ii)).

IV. IMPACT OF CHANGE

This change will not impact the following:

- ALARA Program
- Security and Fire Protection Programs
- Emergency Plan
- FSAR or SER Conclusions
- Overall Plant Operations and the Environment

V. CONCLUSION

This change: a) will not increase the probability nor the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Safety Analysis Report; b) will not increase the possibility for an accident or malfunction of a different type than evaluated previously in the Safety Analysis Report: c) will not reduce the margin of safety as defined in the basis for any Technical Specification; d) does not constitute an unreviewed safety question as defined in 10 CFR 50.59; e) involves no significant hazards considerations as defined in 10 CFR 50.92.

VI. REFERENCES

a) IP-3 FSAR
b) IP-3 SER
c) NUREG-0737
d) Generic Letter 83-37 "NUREG-0737 Technical Specifications"
e) "Indian Point Unit No. 3 Habitability Study for the Control Room," dated July, 1981.
f) NRC Letters to New York Power Authority dated: 1/27/82, 9/27/85, 3/13/86 and 2/3/87.
g) New York Power Authority letters to the NRC dated: 9/10/85, 10/17/85 and 7/28/86.