NMC

Committed to Nuclear Excellence

Point Beach Nuclear Plant
Operated by Nuclear Management Company, LLC

December 8, 2006

NRC 2006-0086
GL-2003-01

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Point Beach Nuclear Plant Units 1 and 2
Docket Nos. 50-266 and 50-301
License Nos. DPR-24 and DPR-27

Generic Letter 2003-01: Control Room Habitability – Supplemental Response

References: 1) Letter from NMC to NRC dated August 11, 2003 (NRC 2003-0070)
2) Letter from NMC to NRC dated December 5, 2003 (NRC 2003-0116)
3) Letter from NMC to NRC dated September 29, 2004 (NRC 2004-0102)
4) Letter from NMC to NRC dated August 22, 2005 (NRC 2005-0100)

This letter provides supplemental information in response to Nuclear Regulatory Commission (NRC) Generic Letter (GL) 2003-01, "Control Room Habitability", for the Point Beach Nuclear Plant (PBNP).

On June 12, 2003, the NRC issued GL 2003-01, requesting licensees to provide information to confirm that the control room(s) at their facilities meet the applicable habitability regulatory requirements and that the control room habitability systems are designed, constructed, configured, operated, and maintained in accordance with the facility's design and licensing bases.

In Reference 1, Nuclear Management Company, LLC (NMC), provided the 60-day response to GL 2003-01 for PBNP. The letter included responses to items 1(b), 2 and 3. In addition, commitments to provide schedules for responses to items 1(a) and 1(c) were provided. The basis for the commitments was the need to conduct a control room envelope (CRE) baseline integrated unfiltered in-leakage test. In-leakage testing had been completed prior to the commitment date in Reference 1; however, the final vendor report had not been received.

Reference 2 provided the preliminary results for unfiltered in-leakage into the CRE as less than 100 SCFM while the Control Room Ventilation System is operating in the emergency mode assumed in the radiological accident analysis. Schedules for providing the final CRE unfiltered in-leakage results and responses to items 1(a) and 1(c) were also provided as two new commitments. Reference 3 revised the commitment dates provided in Reference 2. The final measured control room envelope unfiltered in-leakage value was provided to the NRC in Reference 4.

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On October 24, 2006, a phone call was held between NRC and NMC to discuss previous NMC responses to GL 2003-01. During this discussion, NMC agreed to submit a supplemental response to the NRC providing additional information regarding GL 2003-01 Questions 1 and 1(a). Enclosure 1 to this letter provides the supplemental response.

Summary of Commitments

This letter makes the following commitment:

NMC will submit a license amendment request to the NRC revising the current accident analysis for PBNP to demonstrate compliance with the dose limits of 10 CFR 50, Appendix A, GDC-19, using the Alternative Source Term by July 30, 2007. As part of this submittal, the post accident reliance on KI for control room staff will be addressed.

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Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Point Beach Nuclear Plant, USNRC
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PSCW

ENCLOSURE 1
GENERIC LETTER 2003-01: CONTROL ROOM HABITABILITY
SUPPLEMENTAL RESPONSE
POINT BEACH NUCLEAR PLANT UNITS 1 AND 2

The following information is provided in response to the Nuclear Regulatory Commission (NRC) staff's request for additional information regarding the Nuclear Management Company (NMC), LLC, response to GL 2003-01 for Point Beach Nuclear Plant (PBNP).

NRC Question 1:

Provide confirmation that your facility's control room meets the applicable habitability regulatory requirements (e.g., GDC 1, 3, 4, 5, and 19) and that the control room habitability systems (CRHS) are designed, constructed, configured, operated, and maintained in accordance with the facility's design and licensing bases.

NMC Response:

General Description:

The control room (CR) is common for PBNP Units 1 and 2 and is located in the control building within the turbine building approximately half way between Unit 1 and Unit 2. The control building contains the cable spreading room, control room proper, computer room, and mechanical equipment room. The computer room and mechanical equipment room are located on the 60 foot elevation (directly above the control room). The cable spreading room is located on the 26 foot elevation (directly below the control room), and can be accessed from the control room. The computer room and mechanical equipment room are accessible external to the control room. The control room contains a washroom and kitchenette/snack bar.

The control room HVAC system (VNCR) shares a common outside air intake and section of ductwork with the turbine building ventilation system and the cable spreading room (CSR) HVAC System (VNCSR). This intake and ductwork is functionally within the scope of all three systems, since the system supply air travels along the same path. The VNCR System branches from the common ductwork at the upstream side of VNCR-4849C and VNCR-4851A, the control room normal and emergency outside air dampers, respectively. The control room, the computer room, and cable spreading room share a common smoke and heat exhaust fan. Dampers VNCR-4849E, VNCOMP-4849D, and VNCSR-4850B are normally closed and fail closed upon loss of instrument air to isolate smoke and heat exhaust ductwork from the VNCR and VNCSR systems. A graphical representation is depicted in PBNP Final Safety Analysis Report (FSAR) Section 9.8.

The VNCR provides heating, ventilation, air conditioning and radiological habitability for the control and computer rooms, which are both within the control room envelope

(CRE). The mechanical equipment room and cable spreading room are not part of the control room envelope.

Two types of radiation monitors with control functions are located within the control room envelope: an area monitor and a process monitor. The area monitor (RE-101) is a low-range gamma sensitive G-M tube detector assembly, located in the control room. The process monitor (RE-235) is a scintillation type detector, calibrated to Xe-133, and physically located on the control building roof. The sensing line penetrates the control room supply ductwork downstream of the control room HVAC filter unit. Because noble gases cannot be filtered via HEPA or charcoal, the monitor measurements are relatively unaffected by the filters. A "high" signal from either detector will automatically switch the VNCR from the normal mode of operation to the emergency mode.

The control room ventilation system is currently designed for four modes of operation. The modes of operation are fully described and depicted in FSAR Section 9.8. A summary of each CR HVAC mode is provided below:

<u>Normal Operation -VNCR Mode 1</u>

For mode 1, one of two normal supply/recirculation fans is started. The fan start opens the normal outside air damper to a predetermined throttled position to supply approximately 1000 cfm of outside air ducted from an intake penthouse located on the roof of the auxiliary building. The outside air and return air from the control and computer rooms passes through a roughing filter and cooling coils before entering one of the normal recirculation fans. Room thermostats and/or humidistats control operation of the chilled water unit supplying the cooling coils. After leaving the normal recirculation fan, the filtered (roughing only) and cooled air passes through separate heating coils and humidifiers to supply the computer and control rooms. Room thermostats and humidistats also control the operation of the heating coils and humidifiers. The control room heating, cooling, and humidification systems are not required to demonstrate compliance with the control room habitability limits of 10 CFR 50 Appendix A, General Design Criteria (GDC) 19 as required by NUREG-0737, Item III.D.3.4. Additionally, one of two computer room supplemental air conditioning units and the control room washroom exhaust fan are operating in VNCR mode 1.

<u>Isolation with Recirculation -VNCR Mode 2</u>

Mode 2 operation is 100% recirculation of the air initiated by a containment isolation /safety injection signal or manually from a control room panel. When this mode is initiated, the normal outside air damper closes, the washroom exhaust fan is de-energized, and the washroom exhaust fan isolation damper closes. This mode is not credited in the radiological design basis accident analyses and therefore not a requirement for demonstrating control room habitability.

Isolation with Filtered Recirculation -VNCR Mode 3

Mode 3 operation employs one of two control room emergency filter fans and filtration unit, which includes a roughing filter, a HEPA filter, and a charcoal filter. This mode is initiated from a CR panel. A portion (approximately 25%) of the recirculated air is directed through the emergency filter bank and the operating emergency fan back to the suction of the normal recirculation fan. Operation in this mode also closes the normal outside make-up air damper, de-energizes the washroom exhaust fan, and closes the washroom exhaust fan isolation damper. This configuration is not credited in the radiological design basis accident analyses and therefore not a requirement for demonstrating control room habitability.

Pressurization with Filtered Outside Air Makeup -VNCR Mode 4

When mode 4 is actuated, the return air inlet damper to the emergency fans remains closed and the emergency outside air supply damper opens. This allows approximately 4950 cfm of makeup air to pass through the filter and the emergency fan to the suction of the normal recirculation fan, ensuring a positive pressure of ≥1/8 in. w.g. is maintained in the control and computer rooms to minimize excessive unfiltered in-leakage. Operation in this mode also closes the normal outside make-up air damper, de-energizes the washroom exhaust fan, and closes the washroom exhaust fan isolation damper. The mode 4 configuration is the control room emergency filtration system (CREFS) and is the only credited configuration of VNCR in the radiological accident analyses. This mode is initiated by a high radiation signal from the control room area monitor (RE-101), a high radiation signal from noble gas monitor (RE-235) located in the supply duct to the control room, or manually from panel C-67, which is located in the control room.

Additional Features:

Other features of the VNCR include the capability to exhaust smoke from the control room, computer room, or cable spreading room through the dedicated smoke and heat exhaust fan. The associated dampers for this evolution are interlocked so that only one room can be lined up for smoke and heat removal at a time. This operation precludes smoke damage to the air filters in the recirculation system. The controls for smoke and heat removal are on panel C-67A located on the exterior north wall of the control room.

The computer room has supplementary air conditioning units, to assist the normal CR HVAC in maintaining computer room temperatures below equipment design limits. The computer room is also equipped with a Halon fire suppression system. Activation of this system automatically isolates the computer room from the rest of the control room ventilation system and de-energizes the supplementary air conditioning units. The emergency filtration unit (F-16) has an automatically initiated water suppression system to mitigate a fire in the charcoal bed.

The control room ventilation system does not automatically restart after a loss of offsite power. Operators are directed by emergency procedures to reestablish power to this system. For the purposes of demonstrating that control room operator doses are within the dose limits of 10 CFR 50, Appendix A, GDC-19, a loss of offsite power is not required to be assumed. The NRC acknowledged this assumption in Reference 9.

Modifications Installed to Improve System Reliability

Due to the vintage of the plant design (i.e., 1960s), the control room HVAC system was designed and constructed similar to commercial applications (e.g., using ductwork construction with S-Slip and Drive joints). Since the original construction, modifications have been made to the control room envelope to improve its integrity and overall system reliability.

In light of recent industry concerns with regard to control room habitability, initiatives have been taken at PBNP to further increase system reliability, improve program implementation, gain safety margin, and increase the integrity of the control room HVAC system by leak tightening the envelope to reduce the potential areas for unfiltered air infiltration. Improvements to the system were made by the replacement of dampers on the periphery of the CRE with bubble-tight dampers (extremely low-leakage dampers) and hardcasting the seams of portions of the CRE ductwork. The hardcasting is a sealant applied to the seams of the ductwork consisting of a mineral gypsum compound impregnated fiber tape bonded with an adhesive.

Other modifications completed to date include installation of:

- a new balance damper and bubble tight isolation damper upstream of the cable spreading room outside air intake isolation,
- installation of a new bubble tight damper at the discharge of the control room washroom exhaust fan,
- installation of three new bubble tight dampers for the control room, computer room, and cable spreading room smoke and heat exhaust fan isolation,
- upgrades to the control room backup instrument air system,
- replacement of existing control room washroom exhaust fan with a direct drive fan,
- improved differential pressure indication between the control room and the exterior north wall of the control room,
- replacement of the accident fan motors with higher efficiency motors, and
- replacement of the accident fan adjustable motor sheaves with larger pitch diameter sheaves.

PBNP Control Room Habitability Design and Licensing Basis

Point Beach was licensed prior to the 1971 publication of 10 CFR Part 50, Appendix A, "General Design Criteria for Nuclear Power Plants". As such, PBNP is not licensed to these general design criteria (GDC). The PBNP FSAR Section 1.3 lists the plant-specific GDC to which the plant was licensed. The PBNP GDC are similar in content to the draft GDC proposed for public comment in 1967.

The applicable site specific design criteria and habitability regulatory requirements for PBNP are:

PBNP GDC-1: Quality Standards

> "Those systems and components of reactor facilities which are essential to the prevention, or the mitigation of the consequences, of nuclear accidents which could cause undue risk to the health and safety of the public shall be identified and then designed, fabricated, and erected to quality standards that reflect the importance of the safety function to be performed. Where generally recognized codes and standards pertaining to design, materials, fabrication, and inspection are used, they shall be identified. Where adherence to such codes or standards does not suffice to assure a quality product in keeping with the safety function, they shall be supplemented or modified as necessary. Quality assurance programs, test procedures, and inspection acceptance criteria to be used shall be identified. An indication of the applicability of codes, standards, quality assurance programs, test procedures, and inspection acceptance criteria used is required. Where such items are not covered by applicable codes and standards, a showing of adequacy is required."

The facility's essential components and systems were designed, fabricated, erected and tested in accordance with the specified quality standards, applicable codes and regulations. The control building, which houses the CRE and the control room HVAC system, is seismic class I.

The CRE is a passive component in the CRHS. When the control room HVAC system is running in the emergency mode, the CRE must be capable of maintaining a positive pressure in the CRE with respect to all adjacent spaces. Integrity of the CRE barrier is programmatically and procedurally monitored, maintained, and controlled.

The control room HVAC performs no safety related functions, but was re-classified as augmented quality (AQ) in January 1998. No formal safety classification rules existed when the original CR-HVAC system was designed. This system was upgraded to support the augmented quality function "provide radiation protection to permit continuous occupancy of the control room under any credible post-accident condition without excessive radiation exposure of personnel".

Since original construction, additional surveillance requirements and upgrades have been applied to the system to ensure a high confidence that the system will function reliably, when needed, at a degree of efficiency equal or better than assumed in the accident analyses. The system and associated components that support safe operation of the plant are tested, maintained, and operated in accordance with select elements of the NMC Quality Assurance Topical Report (QATR).

PBNP GDC-3: Fire Protection

> "A reactor facility shall be designed to ensure that the probability of events such as fires and explosions and the potential consequences of such events will not result in undue risk to the health and safety of the public. Noncombustible and fire resistant materials shall be used throughout the facility wherever necessary to preclude such risk, particularly in areas containing critical portions of the facility such as containment, control room, and components of engineered safety features."

Fire Protection Systems meeting the requirements of GDC 3 are installed. Fire in the control room and adjacent areas was addressed in the original plant design including the capability to shut down the reactor from outside the control room. The Fire Protection Evaluation Report (FPER) documents describe the Fire Protection Program for PBNP. The purpose of the Fire Protection Program is to provide assurance, through defense-in-depth design, that a fire will not prevent the performance of necessary safe shutdown functions or significantly increase the risk of radioactive release to the environment during a postulated fire. The FPER serves as PBNP fire plan as described in 10 CFR 50.48 and additionally documents PBNP compliance with Criterion 3 of Appendix A of 10 CFR 50. The FPER is implemented through engineered and administrative controls, which includes routine inspections to assure compliance.

The control room is separated from other adjacent areas by doors, floor, roof and walls having a minimum fire rating of two hours. To prevent spread of fire from the cable spreading room below, cable blockouts in the floor beneath the control and instrumentation racks are filled with a flame resistant material around the cables.

Breathing air is supplied to the control room by a manifold system from a storage reservoir located outside of the room. Access ports to the manifold system are located at the control panels. Breathing apparatus for essential control room operators is readily available at the control panels. The breathing apparatus includes a self-contained unit with a minimum of one-half hour rating.

Should a postulated fire occur outside the control room, fire emergency procedures direct operators to place the ventilation system in VNCR mode 3 or use the smoke and heat exhaust system. Notification to perform this action is in response to either engineered controls, such as fire detection and/or suppression actuation alarms, or administrative controls, such as personnel notifications of fire conditions. Additional portable smoke ejecting equipment is also available.

The safe shutdown analysis has demonstrated that there are alternative means to safely shutdown the facility in the event of a fire in the control room. If extensive fire damage occurs which impacts redundant control features, the alternate shutdown panels are provided outside of the control room to safely shut down the facility.

The walls, doors, floor, and ceiling containing the control room, and the computer room are classified as fire and HELB barriers. The doors, mechanical and electrical penetrations as well as ventilation duct penetrations are administratively controlled. All barrier penetrations, including piping, ducts, conduits, and cable trays, and passage doors associated with the CRE are routinely inspected and maintained.

PBNP GDC-11: Control Room:

> "The facility shall be provided with a control room from which actions to maintain safe operational status of the plant can be controlled. Adequate radiation protection shall be provided to permit continuous occupancy of the control room under any credible post-accident condition or as an alternative, access to other areas of the facility as necessary to shut down and maintain safe control of the facility without excessive radiation exposures of personnel."

PBNP is equipped with a common control room which contains those controls and instrumentation necessary for operation of each unit's reactor and turbine generator under normal and accident conditions. The control room is continuously occupied by the operating personnel under all operating conditions.

NUREG-0737, Item III.D.3.4, Control Room Habitability Requirements

This post-TMI NUREG required all licensees to submit a letter to the NRC stating whether or not they met the control room habitability criteria of applicable Standard Review Plans (SRPs) for radiation and toxic gas releases. It explicitly separated requirements into the following two categories: (1) licensees who were required to meet the SRP, and had to prove they met the SRP and (2) licensees who were not required to meet the SRP, who were required to "perform the necessary evaluations and identify appropriate modifications". PBNP fell into the latter category. This NUREG also required PBNP to complete an attachment entitled "Information Required for Control Room Habitability Evaluation" for an independent evaluation of the habitability system.

As part of meeting the requirements of this action item, PBNP implemented several modifications: portable lead shielding was staged for placement in front of the south and north control room doors and the east control room viewing window; additional self contained breathing apparatuses (SCBAs) were placed in the control room; and, control room air supply duct radioactive gas detection equipment was installed. NRC acceptance of PBNP actions regarding this action item was provided on August 10, 1982. Supplementing the NRC safety evaluation was a letter from Pacific Northwest Laboratories (PNL), who provided an independent review of the PBNP response. PNL concluded that the control room met the requirements of 10 CFR 50, Appendix A, General Design Criteria 3, 4, 5, and 19. All required modifications were implemented and communicated to the NRC on September 4, 1984. The only change made to these NUREG-0737, III.D.3.4 related modifications occurred in 1995, when an office area was built adjacent to the north wall of the control room, thereby, providing the necessary shielding in place of the lead shielding.

Continued compliance with the PBNP GDC-11 and NUREG-0737, III.D.3.4, is demonstrated via administrative controls, which establish periodic inspections and maintenance requirements. Changes to designs affecting safety-related structures, systems, or components (SSCs) or SSCs that support safe operation of the plant, are controlled by QA procedures. Design changes are processed in accordance with the design control process. Any planned changes that affect the CRE boundary integrity are required to be identified and appropriate breach control procedures invoked before work orders are authorized.

Radiological Accident Analyses

The loss of coolant accident is the limiting design basis accident for PBNP. The radiological consequence analysis presented in FSAR 14.3.5 is based on Regulatory Guide 1.4 (Reference 6). This analysis credits the operation of mode 4 of the CR HVAC (filtered outside air intake providing positive pressure ≥1/8 in. w.g.). The assumed amount of unfiltered in-leakage is 10 cfm based on the premise that a pressurized control room prevents the infiltration of unfiltered air. Unfiltered air only enters the control room envelope via ingress/egress. This assumption is consistent with the Murphy-Campe paper (Reference 7), which was first taken into consideration in the accident analysis post-TMI based on the recommendation of PNL during the review of the PBNP responses to NUREG-0737 action items. It was recognized by site personnel during the late 1990's that this assumption for PBNP might not be appropriate due to its CR HVAC design and configuration. At that time, the operability of the CRE and CREFS was assessed under the operability determination process. Tracer gas testing has since been performed to calculate the amount of CRE unfiltered in-leakage (refer to Reference 4 for more information on the tracer gas testing methodology and results). Additional discussion regarding the impact of the test result on the current licensing basis dose analysis is provided under the NMC response to 1(a) below.

In addition, the plant licensing basis for control room habitability analysis credits administration of the prophylactic potassium iodide (KI) to the operators to limit the potential dose to the thyroid. This analysis is not required to consider a loss of offsite power (LOOP) coincident with the limiting design basis accident (i.e., LOCA) for control room dose calculations. These issues were re-examined by the NRC during review of License Amendments 174 and 178 (Reference 8). These amendments were approved on July 9, 1997 and contained a license condition referencing reliance on KI. Upon further review, the NRC staff concurred with the licensing basis pertaining to control room habitability, as documented in Reference 9. The license condition regarding reliance on KI was subsequently removed from the operating licenses via License Amendments 198 and 203 (Reference 10).

PBNP Control Room Habitability Program

PBNP has created an administrative procedure titled, “Control Room Habitability Program.” This program defines the requirements to document the results of the control room in-leakage baseline test, and to coordinate activities and procedures by which documents, structures, systems, and components associated with CRE integrity and

Control Room Habitability Systems (CRHS) performance requirements will be monitored, controlled, and maintained during the life of the plant. This program addresses practices to identify, mitigate, or correct degraded or nonconforming conditions that may put the plant outside its design and licensing basis. The preparation of this program document provided information required to confirm CRE and CRHS are consistent with all applicable design and licensing basis for configuration, design, and operation, except for the unfiltered in-leakage rate. NMC response to Question 1 (a) below provides additional details.

NRC QUESTION 1 (a):

"That the most limiting unfiltered in-leakage into your CRE (and the filtered in-leakage if applicable) is no more than the value assumed in your design basis radiological analyses for control room habitability. Describe how and when you performed the analyses, tests, and measurements for this confirmation."

NMC Response:

Measurement of Unfiltered In-leakage

The amount of unfiltered air in-leakage into the CRE at PBNP was determined from a tracer gas air in-leakage test performed during September 2003 by NCS Corporation (NCS) and Lagus Applied Technology, Inc (LAT). The CRE in-leakage testing was based on the methodology described in ASTM E-741, "Standard Test Method for Determining Air Change in a Single Zone by Means of a Tracer Gas Dilution".

The final CRE in-leakage results were submitted to the NRC via NMC letter dated August 22, 2005 (Reference 4). The final CRE in-leakage result for the emergency mode (mode 4) reported was 96 ±173 standard cubic feet per minute (SCFM). The measured unfiltered in-leakage for the credited control room HVAC mode was less than 100 scfm; therefore, the uncertainty was provided for information only since its inclusion was not required per Regulatory Guide (RG) 1.197.

It is assumed that the mode 4 measured value of 96 scfm represents the maximum unfiltered in-leakage under accident response conditions. Therefore, the above test results confirm that the current analysis assumption of 10 cfm of unfiltered in-leakage for control room habitability is nonconservative, in spite of the fact that the CR is pressurized.

Operability of the Control Room Envelope

The CR HVAC system ensures that the control room is habitable for continuous occupancy of personnel and equipment during normal and design bases accident conditions. The tracer gas test results derived an unfiltered in-leakage of 96 scfm while operating in VNCR mode 4 (CREFS). Increasing the assumed amount of unfiltered in-leakage from 10 scfm to 96 scfm would result in the control room operator thyroid dose exceeding the acceptance criteria of 30 rem for the limiting accident (LOCA) due to the small amount of dose margin that exists in the current licensing basis analysis in FSAR 14.3.5.

The control room operator submergence whole body dose would also increase due to an increase in unfiltered in-leakage; however, it would not be expected that the whole body dose would exceed the acceptance criteria of 5 rem due to the fact that whole body dose is primarily due to the noble gases released post-accident and drawn into the control room by the CREFS, since noble gases are not filterable.

The impact of the measured value on the habitability of the control room was evaluated under the operability determination process. Using the current licensing basis methodology (TID-14844), an engineering evaluation demonstrated that the increase in dose due to the incorporation of the measured unfiltered in-leakage can be offset by changes made to the assumed containment sump volume and containment leakage.

The containment sump coolant volume assumed in the analysis was increased to reflect the additional coolant volume made available for recirculation by modifications to the containment lower cavity drains. Taking credit for the larger volume of sump water lowers the concentration of activity that would be available for release via emergency core cooling system (ECCS) leakage.

The calculation assumption for containment leakage was decreased to one-half of the Technical Specification value for containment leakage. This reduction was based on the results of historically low integrated leak test results, and represents an administratively imposed 50% reduction of the current Technical Specification limits. The administrative reduced leakage value was a commitment established in 1999 to replace the original supplemental surveillances established in a commitment in support of Technical Specification Change Request (TSCR) 192 approved July 9, 1997, (License Amendments 174/178) (Reference 8). The intent of the administrative control is to provide additional assurance that the operator dose would remain within the dose limits of GDC-19. The NRC acknowledged this change in Safety Evaluation contained in Reference 10. This assumption change reduces the release rate of activity from containment.

No additional compensatory measures are required to ensure operability of the control room ventilation system. The overall impact demonstrates that the control room operator dose remains within the dose limits documented in GDC-19 and CREFS is considered OPERABLE but non-conforming.

Resolution of this operable but non-conforming condition for the Control Room will require a license amendment to implement revised radiological accident analyses. Therefore, NMC will submit a license amendment request to the NRC revising the current accident analysis for PBNP to demonstrate compliance with the dose limits of 10 CFR 50, Appendix A GDC-19 using the Alternative Source Term by July 30, 2007. As part of this submittal, the post accident reliance on KI for Control Room staff will be addressed.

References:

1. Letter from Nuclear Management Company, LLC to Document Control Desk, "Point Beach Nuclear Plant, Units 1 and 2 - Generic letter 2003-01: Control Room Habitability - 60 Day Response", dated August 11, 2003.

2. Letter from Nuclear Management Company, LLC to Document Control Desk, "Point Beach Nuclear Plant, Units 1 and 2 - Generic Letter 2003-01: Control Room Habitability - Response to Commitments", dated December 5, 2003.

3. Letter from Nuclear Management Company, LLC to Document Control Desk, "Point Beach Nuclear Plant, Units 1 and 2 - Generic Letter 2003-01: Control Room Habitability - Supplemental Response and Commitment Change", dated September 29, 2004.

4. Letter from Nuclear Management Company, LLC to Document Control Desk, "Point Beach Nuclear Plant, Units 1 and 2 - Generic Letter 2003-01: Control Room Habitability - Supplemental Information", dated August 22, 2005.

5. USNRC Generic Letter 2003-01, "Control Room Habitability", dated June 12, 2003.

6. Regulatory Guide 1.4, "Assumptions Used for Evaluating the Potential Radiological Consequences of a Loss-of-Coolant Accident for Pressurized Water Reactors", Revision 2, dated July 1974.

7. K.G. Murphy and K.M. Campe, "Nuclear Power Plant Ventilation System Design for Meeting General Criterion19",13th AEC Air Cleaning Conference.

8. USNRC, "Point Beach Nuclear Plant, Unit Nos. 1 and 2 - Issuance of Amendment RE: Technical Specification Changes for Revised System Requirement to Ensure Post-Accident Containment Cooling Capability", dated July 9, 1997.

9. USNRC, "Point Beach Nuclear Plant, Units 1 and 2 - Discussion of Amendments Pertaining to Control Room Habitability (TAC Nos. MA1082 and MA1083)", dated April 7, 2000.

10. USNRC, "Point Beach Nuclear Plant, Units 1 and 2 - Issuance of Amendments RE: Control Room Habitability (TAC Nos. MA9042 and MA9043)", dated August 15, 2000.