Entergy Nuclear Northeast
Indian Point Energy Center
450 Broadway, GSB
P.O. Box 249
Buchanan, NY 10511-0249
Tel 914 734 6700

J. E. Pollock
Site Vice President

November 19, 2009

NL-09-144

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

SUBJECT: Proposed Technical Specification Change Regarding Ventilation Filter Testing Program
Indian Point Unit Number 2
Docket No. 50-247
License No. DPR-26

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Entergy Nuclear Operations, Inc, (Entergy) hereby requests a License Amendment to Operating License DPR-26, Docket No. 50-247 for Indian Point Nuclear Generating Unit No. 2 (IP2). The proposed amendment will revise charcoal testing criteria in Section 5.5.9 "Ventilation Filter Testing Program" to correct non-conservatisms in the current requirements which do not reflect the 95% charcoal efficiency assumed for elemental iodine in the accident analyses for alternate source term.

Entergy has evaluated the proposed change in accordance with 10 CFR 50.91(a)(1) using the criteria of 10 CFR 50.92(c) and Entergy has determined that this proposed change involves no significant hazards consideration, as described in Attachment 1. The marked-up page showing the proposed change is provided in Attachment 2. A copy of this application and the associated attachments are being submitted to the designated New York State official in accordance with 10 CFR 50.91.

Entergy requests approval of the proposed amendment within 12 months and an allowance of 30 days for implementation. There are no new commitments being made in this submittal. If you have any questions or require additional information, please contact Mr. Robert Walpole, Manager, Licensing at (914) 734-6710.

A001
NRR

I declare under penalty of perjury that the foregoing is true and correct. Executed on November 11/19, 2009.

Sincerely,

JEP/sp

Attachments:
1. Analysis of Proposed Technical Specification Change Regarding Ventilation Filter Testing Program
2. Markup of Technical Specification Page for Proposed Change Regarding Ventilation Filter Testing Program

cc: Mr. John P. Boska, Senior Project Manager, NRC NRR DORL
Mr. Samuel J. Collins, Regional Administrator, NRC Region 1
NRC Resident Inspector, IP2
Mr. Francis J. Murray, Jr., President and CEO, NYSERDA
Mr. Paul Eddy, New York State Dept. of Public Service

ATTACHMENT 1 TO NL-09-144

ANALYSIS OF PROPOSED TECHNICAL SPECIFICATION CHANGE

REGARDING VENTILATION FILTER TESTING PROGRAM

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NO. 2
DOCKET NO. 50-247

1.0 DESCRIPTION

Entergy Nuclear Operations, Inc (Entergy) is requesting a License Amendment to Operating License DPR-26, Docket No. 50-247 for Indian Point Nuclear Generating Unit No. 2 (IP2). The proposed amendment will revise charcoal testing criteria in Section 5.5.9 "Ventilation Filter Testing Program" to correct non-conservatisms in the current requirements which do not reflect the 95% charcoal efficiency assumed for elemental iodine in the accident analyses for alternate source term.

2.0 PROPOSED CHANGES

The requested amendment will change Technical Specification 5.5.9 item c under "The Required testing shall:" as follows:

From:

> Demonstrate that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, shows the methyl iodide penetration less than 5.0% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86°F) and a relative humidity of 95%, and a face velocity of 0.203 m/sec (40 ft/min).

To:

> Demonstrate that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, shows the methyl iodide penetration less than 2.5% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86°F) and a relative humidity of 95%, and a face velocity of 0.203 m/sec (40 ft/min).

There are no associated Bases to change.

3.0 BACKGROUND

As part of the NEI pilot program for use of NUREG-1465, Indian Point 2 submitted a radiological analysis of the consequences of accidents using NUREG-1465 (Reference 1). A Technical Specification (TS) amendment request was filed shortly afterwards based on this information (Reference 2). The information submitted included dose calculations that assumed the Control Room charcoal adsorbers removed 90% of the organic and 95% of the elemental iodine. The TS did not identify the value to be used for laboratory testing using methyl iodine at that time and no such change was proposed. The NRC approved this amendment as TS Amendment 211 in July of 2000 (Reference 3).

In response to Generic Letter 99-02 (Reference 4), Indian Point submitted a response that included a Proposed Technical Specification Amendment (Reference 5). This proposed amendment changed the TS to require laboratory testing of the Control Room charcoal adsorbers to 95% for methyl iodine (organic) consistent with ASTM D3803-1989. The 95% was determined by Reference to UFSAR Section 14.3.6.5 which cited an assumed efficiency of 90% and then the

application of a safety factor of 2 consistent with the guidance of Generic Letter 99-02. The NRC approved the change as TS Amendment 215 in February of 2001 (Reference 6).

Entergy did not identify this discrepancy when the TS were converted to the standard format. The NRC approved the conversion to the Improved Technical Specifications in 2003 (Reference 7) as amendment 248.

This amendment is being submitted to correct this non-conservative TS. Entergy has followed the guidance of Administrative Letter 98-10, and has performed laboratory testing of the Control Room charcoal adsorbers to the criteria proposed in this amendment request.

4.0 TECHNICAL ANALYSIS

The CR air filtration system is not in operation during normal plant operation. There is a single air filtration system consisting of an electric heater, HEPA filter and 2-2 inch charcoal filter beds. Operation is initiated by a safety injection signal or high radiation signal which directs outside air to the filtration system and initiates operation of one of the two booster fans to provide flow through the filtration system. The 2-2 inch carbon filters are an upgrade of the original 1 inch thick carbon filter.

Given that the current accident analysis (Reference 8) assumes a Control Room filter removal efficiency of 90% for organic and 95% for elemental iodine, the TS requirement for laboratory testing of methyl iodine penetration must reflect those assumptions. The guidance of Generic Letter 99-02 says the allowable penetration should be determined using the following formula (approved on Bases page 4.5-10 in Amendment 215):

$$\text{Allowable Penetration} = \frac{100\% - \text{Accident Assumed Removal Efficiency}}{\text{Safety Factor}}$$

Using the 95% assumed removal efficiency and the safety factor of 2 discussed in the generic letter results in an allowable penetration of 2.5% or 97.5% efficiency. Regulatory Guide 1.52 (Reference 9) uses the same formula to determine the allowable penetration, indicates that 99% is the maximum efficiency that may be assumed for a 4 inch bed of charcoal with the face velocity of 40 feet/minute and says that two 2 inch charcoal beds may be treated as one 4 inch bed. IP2 has two 2 inch charcoal beds and a 40 foot/minute face velocity so the design falls into the acceptance criteria of the RG.

The proposed change to the TS increases the required removal efficiency of charcoal for methyl iodine during laboratory testing and therefore provides increased assurance that the consequences of accidents previously evaluated will not increase and there is no lost margin. The laboratory testing of charcoal is not an accident initiator since it cannot initiate a previously evaluated accident and there are no changes to equipment or operations that could create a different type of accident.

5.0 REGULATORY ANALYSIS

5.1 No Significant Hazards Consideration

Entergy Nuclear Operations, Inc (Entergy) has evaluated the safety significance of the proposed change to the Indian Point 2 Technical Specifications that proposes to revise the acceptance

criteria for laboratory testing of the Control Room charcoal. This proposed change has been evaluated according to the criteria of 10 CFR 50.92, "Issuance of Amendment". Entergy has determined that the proposed change does not involve a Significant Hazards Consideration, as discussed below.

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

No. The proposed change revises testing acceptance criteria for the existing Indian Point 2 Control Room filtration system in Technical Specification (TS) 5.5.9 "Ventilation Filter Testing Program" to reflect current assumptions of iodine removal in accident dose calculations. The revised testing criteria does not add equipment or change the process for taking the test sample and only changes the test in the laboratory to be more restrictive. Therefore it cannot increase the probability of an accident occurring. The revised testing criteria is more stringent and therefore does not increase the consequences of an accident since it is more capable of mitigating control room doses and is consistent with existing analyses. Therefore the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

No. The proposed change revises the testing acceptance criteria for the existing Control Room filtration system. The proposed change does not involve installation of new equipment, modification of existing equipment, or result in a change to the way that the equipment or facility is operated so that no new equipment failure modes are introduced. Therefore the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

No. The proposed change revises the testing acceptance criteria for the existing Control Room filtration system. There is no change to the design requirements or the surveillance interval. The proposed change reflects the accident analysis dose calculation assumptions that assumed increased iodine removal. The factor of safety applied to the testing acceptance criteria remains the same. The new acceptance criterion is well within the system design capabilities. Therefore the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, Entergy concludes that the proposed amendment to the Indian Point 2 Technical Specifications presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of 'no significant hazards consideration' is justified.

5.2 Applicable Regulatory Requirements / Criteria

General Design Criteria (GDC) 11 dated July 11, 1967 formed part of the plant design basis. It required the facility to be provided with a control room from which actions to maintain safe operational status of the plant can be maintained.

IP2 Final Safety Analysis Report (FSAR) Chapter 7 discusses compliance with the GDC. Section 7.2 notes that the Control Room is continuously occupied by qualified operating personnel under all operating and Maximum Credible Accident (MCA) conditions. It specifically notes "More recently the application of the NUREG-1465 alternative source term methodology for Indian Point Unit 2 includes verification that the radiological dose to control room personnel following postulated accidents remains within the limits specified in 10 CFR 50.67 as presented in Section 14.3.6.5." These analyses assumed the Control Room charcoal adsorbers removed 90% of the organic and 95% of the elemental iodine and the revision to the TS is to reflect this.

5.3 Environmental Evaluation

The proposed change to the Indian Point 2 Technical Specifications does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in the individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with this proposed amendment.

5.4 Precedence

The precedence for the proposed TS change is found in Generic Letter 99-02 and Regulatory Guide 1.52. In both cases the proposed safety factor is identified as acceptable and the method for calculating the allowable penetration for laboratory testing is specified.

6.0 REFERENCES

1. Indian Point 2 Letter NL-99-104 to NRC Regarding NEI Pilot Program for use of NUREG-1465, dated October 8, 1999.

2. Indian Point 2 Letter NL-99-123 to NRC Regarding Proposed Amendment Consisting of Changes to Technical Specifications for Containment Air Filtration, Control Room Air Filtration, and Refueling Conditions, dated November 18, 1999.

3. NRC letter to IP2 Regarding Indian Point Nuclear Generating Unit No. 2 - RE: Issuance of Amendment Affecting Containment Air Filtration, Control Room Air Filtration, and Containment Integrity During Fuel Handling Operations (TAC No. MA6955), dated July 27, 2000.

4. Generic Letter 99-02, Laboratory Testing of Nuclear-Grade Activated Charcoal, dated June 3, 1999.

5. Indian Point 2 Letter NL-99-120 to NRC Regarding Proposed Technical Specification Amendment on the Laboratory Testing of Nuclear-Grade Activated Charcoal, dated November 22, 1999.

6. NRC Letter IP2 Regarding Indian Point Nuclear Generating Unit No. 2 - RE: Revision to Ventilation Charcoal Adsorber Testing Program (TAC No. MA7375), dated February 21, 2001.

7. NRC letter to Entergy regarding Indian Point Nuclear Generating Unit No. 2 - Amendment RE: Conversion to Improved Technical Specifications (TAC No. MB4739), dated November 21, 2003.

8. Calculation CRA-03-55, Revision 0, "Indian Point 2 – LOCA Doses for Stretch Power Uprate"

9. Regulatory Guide 1.52, "Design, Inspection, and Testing Criteria for Air Filtration and Adsorption Units of Post-Accident Engineered-Safety-Feature Atmosphere Cleanup Systems in Light-Water-Cooled Nuclear Power Plants" Revision 3

ATTACHMENT 2 TO NL-09-144

MARKUP OF TECHNICAL SPECIFICATION PAGE FOR PROPOSED CHANGE

REGARDING VENTILATION FILTER TESTING PROGRAM

Changes indicated by lineout for deletion and **Bold**/*Italics* for additions

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NO. 2
DOCKET 50-247

5.5 Programs and Manuals

5.5.9 Ventilation Filter Testing Program (VFTP) (continued)

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Ventilation Filter Testing Program.

The Required testing shall:

a. Demonstrate that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass < 0.05% when tested in accordance with Regulatory Position C.5.c of Regulatory Guide 1.52, Revision 2, March 1978, and ANSI N510-1975, while operating the system at ambient conditions and at a flow rate of 2000 cfm ±10%.

b. Demonstrate that an inplace test of the charcoal adsorber shows a penetration and system bypass < 0.05% when tested in accordance with Regulatory Position C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and ANSI N510-1975, while operating the system at ambient conditions and at a flow rate of 2000 cfm ±10%.

c. Demonstrate that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, shows the methyl iodide penetration less than ***2.5***~~5.0~~% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86°F) and a relative humidity of 95%, and a face velocity of 0.203 m/sec (40 ft/min).

d. Demonstrate that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than 6 inches water gauge when tested in accordance with Regulatory Guide 1.52, Revision 2, and N510-1975 at the system flowrate of 2000 cfm (± 10%).

5.5.10 Explosive Gas and Storage Tank Radioactivity Monitoring Program

This program provides controls for potentially explosive gas mixtures contained in the Waste Gas Holdup System, the quantity of radioactivity contained in gas storage tanks, and the quantity of radioactivity contained in unprotected outdoor liquid storage tanks. The gaseous radioactivity quantities shall be determined following the methodology in Branch Technical Position (BTP) ETSB 11-5, "Postulated Radioactive Release due to Waste Gas System Leak or Failure." The liquid radwaste quantities shall be determined in accordance with Standard Review Plan, Section 15.7.3, "Postulated Radioactive Release due to Tank Failures."