Entergy

Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
P.O. Box 5029
White Plains, NY 10601-5029
Tel 914 272 3200 Fax 914 272 3205

Michael R. Kansler
Senior Vice President &
Chief Operating Officer

October 23, 2001
IPN-01-076

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, DC 20555-0001

SUBJECT: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
License No. DPR-64
Proposed Technical Specification Amendment for Laboratory Testing Of Nuclear-Grade Activated Charcoal per NRC Generic Letter 99-02

References:
1. ASTM D 3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon."
2. Indian Point 3 letter to the NRC, "60-Day Response to NRC Generic Letter 99-02," dated August 2, 1999 (IPN-99-083).
3. NRC Generic Letter 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal," dated June 3, 1999 and Errata, dated August 23,1999.
4. Indian Point 3 letter to the NRC, "Response to NRC Generic Letter 99-02 and Application for Technical Specification Amendment for Laboratory Testing of Nuclear Grade Activated Charcoal," dated November 29, 1999 (IPN-99-123).

Dear Sir:

The purpose of this letter is to submit an application for amendment to Section 5.5.10 of Appendix A to the Indian Point 3 (IP3) Technical Specifications (TS). The proposed amendment adopts the standard American Society for Testing and Materials (ASTM) D3803-1989 (Reference 1) for testing nuclear-grade activated charcoal and corrects an erroneous pressure differential value. This submittal completes a commitment (Reference 2) to submit a proposed TS change in response to Generic Letter (GL) 99-02 (Reference 3) requirements. The proposed amendment deviates from GL 99-02 and ASTM D3803-1989 to reflect the plant's design. The proposed TS change clarifies these deviations as follows:

1. Fuel Storage Building Emergency Ventilation System (FSBVS) – A face velocity of 59 ft/min will be used in lieu of 40 ft/min.

A081

2. Control Room Ventilation System (CRVS) - A face velocity of 50 ft/min will be used in lieu of 40 ft/min. A bed depth of 1 inch or equivalent will be used in lieu of a 2 inch bed depth. The minimum allowable charcoal filter efficiency will be changed to 91% and exception to the factor of safety of 2 discussed in GL 99-02 is taken.

3. Containment Fan Cooler Units (CFCU) - A face velocity of 59 ft/min will be used in lieu of 40 ft/min.

4. Containment Purge System (CPS) - A face velocity of 31 ft/min will be used in lieu of 40 ft/min.

The signed original of the "APPLICATION FOR AMENDMENT TO OPERATING LICENSE " is enclosed for filing. The proposed new TS pages and the safety evaluation for the proposed changes are included in Attachments I and II, respectively. Marked up pages of the TS are included in Attachment III, for information only.

In accordance with 10 CFR 50.91, a copy of this application and the associated attachments are being submitted to the designated New York State official.

There are no new commitments made by Entergy in this submittal. The proposed amendment in Reference 4, withdrawn for administrative reasons, is replaced by this transmittal for satisfaction of commitments. If you have any questions regarding this submittal, please contact Mr. J. Donnelly at (914) 736-8310.

Very truly yours,

Michael R. Kansler
Senior Vice President &
Chief Operating Officer

cc: next page

att: as stated

cc: Mr. Hubert J. Miller
Regional Administrator
Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Resident Inspector's Office
Indian Point Unit 3
U.S. Nuclear Regulatory Commission
295 Broadway, Suite 3
P.O. Box 308
Buchanan, NY 10511-0308

Mr. William M. Flynn
New York State Energy, Research and Development Authority
Corporate Plaza West
286 Washington Avenue Extension
Albany, NY 12203-6399

Mr. Patrick D. Milano, Project Manager
Project Directorate I,
Division of Reactor Projects I/II
U.S. Nuclear Regulatory Commission
Mail Stop 8 C2
Washington, DC 20555

Mr. Paul Eddy
NYS Department of Public Service
3 Empire Plaza
Albany, NY 12223

BEFORE THE UNITED STATES
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
ENTERGY NUCLEAR OPERATIONS, INC.	)	Docket No. 50-286
Indian Point Nuclear Generating Unit No. 3	)	

APPLICATION FOR AMENDMENT TO OPERATING LICENSE

Pursuant to Section 50.90 of the regulations of the Nuclear Regulatory Commission, Entergy Nuclear Operations, Inc. (ENO), as holder of Facility Operating License No. DPR-64, hereby applies for an Amendment to Section 5.5.10 of the Technical Specifications (TS) contained in Appendix A of the license. The proposed amendment adopts the standard American Society for Testing and Materials (ASTM) D3803-1989 for testing nuclear-grade activated charcoal and corrects an erroneous pressure differential value. This submittal completes a commitment to submit a proposed TS change in response to Generic Letter (GL) 99-02 requirements. The proposed amendment deviates from GL 99-02 and ASTM D3803-1989 to reflect the plant's design. The proposed TS change clarifies these deviations as follows:

1. Fuel Storage Building Emergency Ventilation System (FSBVS) – A face velocity of 59 ft/min will be used in lieu of 40 ft/min.
2. Control Room Ventilation System (CRVS) - A face velocity of 50 ft/min will be used in lieu of 40 ft/min. A bed depth of 1 inch or equivalent will be used in lieu of a 2 inch bed depth. The minimum allowable charcoal filter efficiency will be changed to 91% and exception to the factor of safety of 2 discussed in GL 99-02 is taken.
3. Containment Fan Cooler Units (CFCU) - A face velocity of 59 ft/min will be used in lieu of 40 ft/min.
4. Containment Purge System (CPS) - A face velocity of 31 ft/min will be used in lieu of 40 ft/min.

The proposed new TS pages and the safety evaluation for the proposed changes are included in Attachments I and II, respectively. A markup of the affected TS change is provided in Attachment III, for information only.

ENTERGY NUCLEAR OPERATIONS, INC.

Michael R. Kansler
Senior Vice President &
Chief Operating Officer

STATE OF NEW YORK
COUNTY OF WESTCHESTER
Subscribed and sworn to before me
This 23rd day of October 2001.

Notary Public
Doreen Costabile

DOREEN COSTABILE
Notary Public, State of New York
Registration No. 01CO5034831
Qualified in Putnam County,
Commission Expires October 17, 2002

ATTACHMENT I TO IPN-01-076

PROPOSED TECHNICAL SPECIFICATION CHANGE

REGARDING LABORATORY TESTING OF

NUCLEAR-GRADE ACTIVATED CHARCOAL

INSERT	DELETE
Page 5.0-24	Page 5.0-24
Page 5.0-25	Page 5.0-25

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
DPR-64

5.5.10 Ventilation Filter Testing Program (VFTP) (continued)

c. Demonstrate for each system that a laboratory test of a sample of the charcoal adsorber shows the methyl iodide removal efficiency specified below when tested in accordance with ASTM D3803-1989, subject to clarification below, at a temperature of 86°F and a relative humidity of 95%.

Ventilation System	Methyl iodide removal efficiency (%):	ASTM D3803-1989 Clarification:
Fuel Storage Building Emergency Ventilation System	≥ 90	59 ft/min face velocity
Control Room Ventilation System	≥ 91	50 ft/min face velocity and 1" bed depth
Containment Fan Cooler Units	≥ 85	59 ft/min face velocity
Containment Purge System	≥ 90	31 ft/min face velocity

(continued)

5.5 Programs and Manuals

5.5.10 Ventilation Filter Testing Program (VFTP) (continued)

d. Demonstrate for each system that the pressure drop across the combined HEPA filters, the demisters and prefilters (if installed), and the charcoal adsorbers is less than the value specified below when tested at the flowrate specified below.

Ventilation System	Delta P (inches wg)	Flowrate (cfm):
Fuel Storage Building Emergency Ventilation System	6	≥ 90% of design accident rate
Control Room Ventilation System	2	≥ 90% of design accident rate
Containment Fan Cooler Units	6	≥ 90% of design accident rate

(continued)

ATTACHMENT II TO IPN-01-076

SAFETY EVALUATION FOR

PROPOSED TECHNICAL SPECIFICATION CHANGE

REGARDING LABORATORY TESTING OF

NUCLEAR-GRADE ACTIVATED CHARCOAL

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
DPR-64

SAFETY EVALUATION OF TECHNICAL SPECIFICATION CHANGE REGARDING LABORATORY TESTING OF NUCLEAR-GRADE ACTIVATED CHARCOAL

I. DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 3 Technical Specifications (TS) proposes to amend Section 5.5.10 of Appendix A of the Operating License. The proposed amendment adopts the standard American Society for Testing and Materials (ASTM) D3803-1989 for testing nuclear-grade activated charcoal and corrects an erroneous pressure differential value. This submittal completes a commitment to submit a proposed TS change in response to Generic Letter (GL) 99-02 requirements. The proposed amendment deviates from GL 99-02 and ASTM D3803-1989 to reflect the plant's design.

The proposed changes are:

1. In Section 5.5.10, item c, delete the words "at the conditions specified below" and insert the words "in accordance with ASTM D3803-1989, subject to clarification below, at a temperature of 86°F and a relative humidity of 95%."

2. In Section 5.5.10, item c, under the column entitled "Methyl iodide removal efficiency (%) replace "≥ 90" with "≥ 91" for the Control Room Ventilation System.

3. In Section 5.5.10, item c, delete the four columns entitled "Methyl iodide inlet concentration (mg/m^3):", "Flow velocity equivalent to following flow rate (cfm):", Temperature (degrees F):", and "Relative Humidity (%)" and delete the note referenced in these columns that says "* Per test 5.b in Table 2 of Regulatory Guide 1.52, March 1978." Insert a new column entitled "ASTM D3803-1989 Clarification:" and insert next to the indicated ventilation systems the following:

   a) Fuel Storage Building Emergency Ventilation System (FSBVS) – "59 ft/min face velocity"

   b) Control Room Ventilation System (CRVS) – "50 ft/m face velocity and 1" bed depth"

   c) Containment Fan Cooler Units (CFCU) – "59 ft/min face velocity"

   d) Containment Purge System (CPS) – "31 ft/min face velocity"

4. In Section 5.5.10, item d, column "Delta P (inches wg)" delete "6" and insert "2" for the Control Room Ventilation System.

II PURPOSE OF THE PROPOSED CHANGE

Entergy has proposed the amendment to adopt the standard ASTM D3803-1989 for testing nuclear-grade activated charcoal in order to complete a commitment to submit a proposed TS change in response to GL 99-02 requirements. Entergy has proposed a revision to the differential pressure acceptance criteria for the CRVS in order to correct a non-conservative TS.

III SAFETY IMPLICATION OF PROPOSED CHANGES

Control Room Ventilation System Pressure Differential

TS 5.5.10 requires testing to demonstrate that the CRVS pressure drop across the combined high efficiency particulate air (HEPA) filters, the demisters and prefilters (if installed), and the charcoal adsorbers is less than 6 inches water. An engineering evaluation (Reference 1) determined that the pressure drop to be used should be less than or equal to 2 inches of water. The evaluation determined that the booster fans in the CRVS will not provide required flow for 30 days with an initial pressure differential of greater than 2 inches of water due to filter loading. Changing the acceptance criteria to require the initial pressure differential to be less than or equal to 2 inches of water is not a design change or a change to system operation. Current testing verifies compliance with this value. The proposed criterion is a calculated value based on system design characteristics (e.g., fan head, normal pressure drop). The system operating procedures are considered in the surveillance procedure for checking pressure drop. Therefore, there will be no significant increase in the probability or consequences of an accident previously evaluated because the ability of the CRVS to perform the design function will not be reduced and there has been no change to the design or required operation of the CRVS. There will be no possibility of a new or different accident from those previously evaluated because there has been no change to the design or required operation of the CRVS. There has been no significant reduction in the margin of safety because the new standard provides greater assurance that the charcoal will perform as credited in accident analyses.

Generic Letter 99-02 Charcoal Testing

In GL 99-02 the NRC documented their determination that testing of nuclear grade activated charcoal to a protocol other than ASTM D3803-1989 does not provide assurance that the charcoal will perform as required by dose analyses to demonstrate compliance with design limits. The current TS 5.5.10 for testing charcoal is therefore a non-conservative TS requiring change. High temperatures used in testing are of concern because they cause regeneration of the charcoal. Testing at 86°F provides assurance that appropriate test results will be obtained. The GL required a TS change request if the ASTM D3803 protocol were adopted. The TS change is to identify the test temperature, the relative humidity, the penetration or iodide removal efficiency, and, if

any face velocity is greater than 40 ft/min plus 10 percent, the face velocity. The GL takes a position that a safety factor of 2 or greater should be used unless approved on a case by case basis. The following discuss the design characteristics of the ventilation systems subject to TS. The discussions confirm that there will be no changes to the charcoal efficiencies credited in accident analyses, no changes to system design flow requirements to meet accident analysis assumptions, no hardware changes, and no changes to the operation of systems. Therefore there will be no significant increase in the probability or consequences of an accident previously evaluated because the ability of the ventilation systems to perform their function will not be reduced and there has been no change to the design or required operation of the ventilation systems. There is no possibility of a new or different accident from those previously evaluated because there has been no change to the design or required operation of the ventilation systems. There has been no significant reduction in the margin of safety because the new standard provides greater assurance that the charcoal will perform as credited in accident analyses.

Fuel Storage Building Emergency Ventilation System (FSBVS)

The current TS for FSBVS requires that impregnated charcoal shall have a methyl iodide removal efficiency $\geq$ 90% at $\pm$ 20% of the accident design flow rate with a 0.05 to 0.15 mg/m^3 inlet methyl iodide concentration, a relative humidity $\geq$ 95%, and a temperature $\geq$ 125°F. The proposed TS amendment requires no change to the design or operation of the FSBVS. The proposed TS retains the methyl iodide removal efficiency of $\geq$ 90 % and specifies the requirements of ASTM D3803-1989, including a relative humidity of 95% and a temperature of 86°F, with a system face velocity of 59 ft/min. The ASTM standard specifies the allowable variation for air flow in the test rig.

The Indian Point 3 FSBVS is designed with 30 Type II carbon trays (Reference 2) that are 33" long, 28 7/8" wide, and 6 1/4" deep. For a rated 500 cfm, the calculated (per ASME AG-1) residence time is 0.226 seconds (Reference 3). The maximum system flow rate is 20,000 cfm giving a maximum flow rate of about 667 cfm per tray. For the 667 cfm flow rate the residence time is calculated [(500 cfm)(0.226sec)/(667 cfm)] to be 0.17 seconds. The corresponding face velocity (face velocity = thickness / residence time) used for testing is 58.8 ft/min. Surveillance testing (Reference 4) allows an as left flow rate of 18,000 to 20,000 cfm.

The TS efficiency of 90% (equivalent to 10% penetration) provides a factor of safety (penetration assumed in analysis divided by penetration acceptance criteria) of 2 and has additional margin to account for the 1% allowable bypass. Dose analyses assumed a methyl iodide removal efficiency of 70% for the charcoal filter. The FSBVS charcoal was tested in January 2001 using the criteria of the proposed TS with a 50 ft/min face velocity and a test result of 98.74% efficiency was achieved (Reference 4). This test result was judged acceptable for based on the correlation in equation 1 of ASTM D3809-1989, Section 9. The formula is used for insufficient samples of charcoal to convert the results of a substandard depth to the standard depth. The formula may be used to

correlate an insufficient face velocity to the required face velocity since the log linear function of penetration to depth and the log linear function of penetration to face velocity are the same (Reference 5). The FSBVS filtration system has nevertheless been declared inoperable and the charcoal will be tested in accordance with the proposed TS before it is used again.

The FSAR will be revised to clarify that TS surveillance testing of the ventilation system is based upon a maximum flow of 20,000 cfm and a safety factor of 2 for the assumed methyl iodide removal efficiency plus a 1% factor for bypass. The safety factor (penetration assumed in analysis divided by penetration acceptance criterion) will also be defined.

Control Room Air Filtration System (CRAFS)

The current TS for CRAFS requires that impregnated charcoal shall have a methyl iodide removal efficiency $\geq$ 90% at $\pm$ 20% of the accident design flow rate, 0.05 to 15 mg/m^3 inlet methyl iodide concentration, $\geq$ 95% relative humidity and a temperature $\geq$ 125°F. The proposed TS amendment requires no change to the design or operation of the CRVS. The proposed TS increases the methyl iodide removal efficiency to $\geq$ 91 % and specifies the requirements of ASTM D3803-1989, including a relative humidity of 95% and a temperature of 86°F, with a system face velocity of 50 ft/min and a 1" bed depth. The 1% increase in the required efficiency is to reflect the allowable value of 1% for bypass leakage. The ASTM standard specifies the allowable variation for air flow in the test rig.

The Indian Point 3 CRVS has two filters (Reference 6) with each having a 1" bed depth that was designed with a residence time of 0.075 seconds at 1,000 cfm. This equates to a face velocity of 66.7 ft/min (Reference 3). Based on the CRAFS maximum flow through the filters of 1,500 cfm (750 cfm per filter), the associated face velocity is 50 ft/min and the associated residence time is 0.101 seconds. The maximum flow is less than maximum system filter rated flow of 2,000 cfm to assure that filter efficiency is maximized. To assure we limit the maximum recirculation flow to 1500 cfm, the system functional test (Reference 7) limits the combined flow from the outside air intake and the control room envelop. The minimum flow to meet accident analysis assumptions (Reference 8) is 1,080 cfm of recirculated air and 40 cfm of outside air (there is a maximum of 400 cfm of outside air).

The TS efficiency of 91% provides a factor of safety of 1 and 1% allowable for bypass. Dose analyses assumed a methyl iodide removal efficiency of 90% for the charcoal filter. These dose analyses represent the current licensing basis (Reference 9) and constitute an exception to the safety factor of 2 discussed in GL 99-02. GL 99-02 notes that the NRC staff has approved reductions in the safety factor for plants adopting ASTM D3803-1989 on a case by case basis. The CRVS charcoal was tested in May 2001 using the criteria of the proposed TS and a test result of 94.28% efficiency was achieved (Reference 10).

The FSAR will be revised to clarify that TS surveillance testing of the ventilation system is based upon a maximum flow of 1,500 cfm and a safety factor of 1 for the assumed methyl iodide removal efficiency plus a 1% factor for bypass.

Containment Fan Cooler Units (CFCU)

The current TS for CFCU requires that impregnated charcoal from each of the five fan cooler units shall have a methyl iodide removal efficiency $\geq$ 85% at $\pm$ 20% of the accident design flow rate, 5 to 15 mg/m^3 inlet methyl iodide concentration, $\geq$ 95% relative humidity and a temperature $\geq$ 250°F. The proposed TS amendment requires no change to the design or operation of the CFCU. The proposed TS retains the methyl iodide removal efficiency of $\geq$ 85% and specifies the requirements of ASTM D3803-1989, including a relative humidity of 95% and a temperature of 86°F, with a system face velocity of 59 ft/min. The ASTM standard specifies the allowable variation for air flow in the test rig.

The proposed TS amendment requires no change to the design or operation of the CFCU. The proposed TS retains the methyl iodide removal efficiency of $\geq$ 85 % and specifies the requirements of ASTM D3803-1989 with a system face velocity of 59 ft/min. The Indian Point 3 CFCU is designed with 12 carbon filter cells that are 33 1/4" long, 30 1/8" wide, and 7 5/8" deep (Reference 3). For the nominal flow of about 666 cfm per filter cell, the Westinghouse Technical Manual says the face velocity is 53 ft/min. The maximum system flow is calculated to be 8,000 under post accident conditions and with a 10 percent allowance, the maximum system flow would be 8,800 cfm (about 733 cfm per filter cell). The face velocity for the maximum flow is 58.25 ft/min and the corresponding resident time is 0.172 sec (determined by dividing the charcoal thickness (2") by the face velocity (Reference 3)).

The TS efficiency of 85% (equivalent to 15% penetration) provides a factor of safety (penetration assumed in analysis divided by penetration acceptance criteria) of 2 without considering the 1% allowable for bypass. Dose analyses assumed a methyl iodide removal efficiency of 70% for the charcoal filter. The CFCU charcoal was tested in May 2001 using the criteria of the proposed TS with a 40 ft/min face velocity. Test results of 99.02%, 99.30%, 98.52%, 97.95%, and 98.68% efficiency were achieved (Reference 11). This test result was judged acceptable based on the correlation in equation 1 of ASTM D3809-1989, Section 9. The formula is used for insufficient samples of charcoal to convert the results of a substandard depth to the standard depth. The formula may be used to correlate an insufficient face velocity to the required face velocity since the log linear function of penetration to depth and the log linear function of penetration to face velocity are the same (Reference 5). Using this correlation, the efficiency of all the CFCU filters exceeds 96%. The CFCU filtration system is considered operable and the charcoal will be tested during the next refuel outage in accordance with the requirements of the proposed TS.

The FSAR will be revised to clarify that TS surveillance testing of the ventilation system is based upon a maximum flow of 8,800 cfm and a safety factor of 2 for the assumed methyl iodide removal efficiency without considering a 1% factor for bypass.

Containment Purge System (CPS)

The current TS for CPS requires that impregnated charcoal have a methyl iodide removal efficiency $\geq$ 90% at $\pm$ 20% of operating air flow velocity with methyl iodide concentration, temperature and relative humidity determined per test 5.b in Table 2 of Regulatory Guide 1.52, March 1978. The proposed TS amendment requires no change to the design or operation of the CPS. The proposed TS retains the methyl iodide removal efficiency of $\geq$ 90 % and specifies the requirements of ASTM D3803-1989, including a relative humidity of 95% and a temperature of 86°F, with a system face velocity of 31 ft/min. The ASTM standard specifies the allowable variation for air flow in the test rig.

The proposed TS amendment requires no change to the design or operation of the CPS. The proposed TS retains the methyl iodide removal efficiency of $\geq$ 90 % and specifies the requirements of ASTM D3803-1989 with a system face velocity of 31 ft/min. The Indian Point 3 CPS is designed with 7 carbon filter beds that have a calculated effective screen area of 143.22 ft^2 (Reference 3). For the original design flow of 40,000 cfm, the face velocity is approximately 39.9 ft/min. However, the system flow has been reduced to 28,000 cfm, giving a face velocity of about 28 ft/min. The maximum system flow is 30,800 cfm (about 4,400 cfm per filter cell) since surveillance testing (Reference 12) allows an as left flow rate of 28,000 cfm plus or minus 10%. The face velocity at maximum flow is 30.72 ft/min and the corresponding residence time for the 2 inch beds is 0.325 seconds.

The TS efficiency of 90% (equivalent to 10% penetration) provides a factor of safety (penetration assumed in analysis divided by penetration acceptance criteria) of 2 and has additional margin to account for the 1% allowable for bypass. Dose analyses assumed a methyl iodide removal efficiency of 70% for the charcoal filter. The CPS charcoal was tested in April 2001 using the criteria of the proposed TS with a face velocity of 30 cfm and a test result of 99.28% efficiency was achieved (Reference 12). This test result was judged acceptable based on the correlation in equation 1 of ASTM D3809-1989, Section 9.

The FSAR will be revised to clarify that TS surveillance testing of the ventilation system is based upon a maximum flow of 30,800 cfm (28,000 cfm plus 10%) and a safety factor of 2 for the assumed methyl iodide removal efficiency plus a 1% factor for bypass.

The proposed changes will not adversely affect the ALARA and the Environmental Programs, the Security and Fire Protection Programs or the Emergency Plan. This

conclusion is based on the type of changes being made in comparison to the purpose, scope and content of these programs. The FSAR will be revised as described above.

IV EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION

Consistent with the criteria of 10 CFR 50.92, the enclosed application is judged to involve no significant hazards based on the following information:

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

Response:

The proposed license amendment adopts the new test method and acceptance criteria of ASTM D3803-1989, with the exceptions identified, for activated charcoal filters and changes the allowable pressure differential for Control Room ventilation. The changes require laboratory performance testing of adsorber carbon that yields a more accurate result than the testing currently required by the TS and requires a more stringent limit on the Control Room ventilation pressure differential. The proposed change to delete non-conservative TS requirements for testing of adsorber carbon and limiting the Control Room ventilation differential pressure are not plant accident initiators as described in the Final Safety Analysis Report (FSAR). The proposed amendment does not change the function of any structure, system or component (SSC). The function of the ventilation systems is filtration of radiological releases during postulated accidents. The proposed changes will provide greater assurance that this function is provided. The revised TS requirements are for laboratory tests and pressure differential measurements that are currently in place and change only the TS testing requirements. They will not result in any changes to the efficiency assumed in accident analysis. The changes do not alter, degrade or prevent actions described or assumed in an accident described in the FSAR. Therefore, the proposed amendment does not change the possibility of an accident previously evaluated or significantly increase the consequences of an accident previously evaluated.

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

Response:

The proposed license amendment adopts the new test method and acceptance criteria of ASTM D3803-1989, with the exceptions identified, for activated charcoal filters and changes the allowable pressure differential for Control Room ventilation. The change does not involve any modifications to the plant, will not require changes to how the plant is operated nor will it affect the operation of the plant. The changes require laboratory performance testing of adsorber carbon

that yields a more accurate result than the testing currently required by the TS and requires a more stringent limit on the Control Room ventilation pressure differential. The proposed changes to delete non-conservative TS requirements for testing of adsorber carbon and limiting the Control Room ventilation differential pressure are not plant accident initiators as described in the Final Safety Analysis Report (FSAR). The proposed amendment does not change the function of any structure, system or component (SSC). The function of the ventilation systems is filtration of radiological releases during postulated accidents. The proposed changes will provide greater assurance that this function is provided. The revised TS requirements are for laboratory tests and pressure differential measurements that are currently in place and change only the TS testing requirements. They will not result in any changes to the efficiency assumed in accident analysis. The changes do not alter, degrade or prevent actions described or assumed in an accident described in the FSAR. Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

Response:

The proposed license amendment adopts the new test method and acceptance criteria of ASTM D3803-1989, with the exceptions identified, for activated charcoal filters and changes the allowable pressure differential for Control Room ventilation. The proposed license amendment does not reduce the margin of safety but enhances by requiring more accurate testing and a more conservative pressure differential. The proposed test change will require the use of a current and improved ASTM standard to ensure that the carbon ability to adsorb radioactive material will remain at or above the capability credited in our accident analysis. The proposed differential pressure limit will assure that the system provides sufficient flow though the charcoal to meet accident analyses.

V IMPLEMENTATION OF THE PROPOSED CHANGE

This amendment request meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) as follows:

(i) The amendment involves no significant hazards consideration.

As described in Section IV of this evaluation, the proposed change involves no significant hazards consideration.

(ii) There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

The proposed change does not involve the installation of any new equipment, or the modification of any equipment that may affect the types or amounts of effluents that may be released offsite. Therefore, there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

(iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed changes do not involve any physical plant changes, or introduce any new mode of plant operation. Therefore, there is no significant increase in individual or cumulative occupational radiation exposure.

Based on the above, Entergy concludes that the proposed changes meet the criteria specified in 10 CFR 51.22 for a categorical exclusion from the requirements of 10 CFR 51.21 relative to requiring a specific environmental assessment by the Commission.

VI CONCLUSIONS

The proposed changes will not alter assumptions relative to the mitigation of an accident or transient event, and will not adversely affect normal plant operation and testing. The proposed changes are consistent with the current safety analysis assumptions.

The Plant Operating Review Committee and Safety Review Committee have reviewed this proposed change to the TS and have concluded that it does not involve a significant hazards consideration and will not endanger the health and safety of the public.

VII REFERENCES

1. 10 CFR 50.59 evaluation 97-3-270 CRHV, Rev. 1 dated May 12, 1999.

2. Drawing ASK-1743-980.

3. Engineering Report IP3-RPT-HVAC-03370, "Charcoal Filtration System Design Requirements," dated February 23, 2001.

4. Surveillance test 3PT-R32A, "Fuel Storage Building Filtration System," Rev. 15.

5. Discussions with representative of NCS, Corporation.

6. Drawing DSK 1743-1921-9.

7. Surveillance test 3PT-R032C "Control Room Filtration System Functional," R 18.

8. Calculation 83990.164-2-HVAC-092.

9. Letter of January 27, 1982, "NUREG-0737 Item No. III.D.3.4 Control Room Habitability For Indian Point Unit No. 3."

10. Surveillance test 3PT-R032C completed May 3, 2001.

11. Surveillance tests 3PT-R032B1, 3PT-R032B2, 3PT-R032B3, 3PT-R032B1, and 3PT-R032B1, "Fan Cooler Unit Functional Test," Rev. 4.

12. Surveillance test 3PT-R32H, "VC Purge Exhaust Filtration System," Rev. 6.

ATTACHMENT III TO IPN-01-076

MARKED PAGES FOR THE PROPOSED TECHNICAL

SPECIFICATION CHANGE AND IMPROVED TS REGARDING

LABORATORY TESTING OF NUCLEAR-GRADE ACTIVATED CHARCOAL

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
DPR-64

5.5.10 Ventilation Filter Testing Program (VFTP) (continued)

c. Demonstrate for each system that a laboratory test of a sample of the charcoal adsorber shows the methyl iodide removal efficiency specified below when tested ~~at the conditions specified below~~. in accordance with ASTM D3803-1989, subject to clarification below, at a temperature of 86 °F and a relative humidity of 95%.

--- DELETE THREE COLUMNS ---

Ventilation System	Methyl iodide removal efficiency (%):	ASTM D3803-1989 Clarification ~~Methyl iodide inlet concentration (mg/m³):~~	Flow velocity equivalent to following flow rate (cfm):	Temperature (degrees F):	Relative Humidity (%):
Fuel Storage Building Emergency Ventilation System	≥ 90	59 ft/min face velocity ~~0.05 to 0.15~~	80% to 120% of design accident rate	≥ 125	≥ 95
Control Room Ventilation System	≥ 91 ≥ ~~90~~	50 ft/min face velocity and 1" bed depth ~~0.05 to 0.15~~	80% to 120% of design accident rate	≥ 125	≥ 95
Containment Fan Cooler Units	≥ 85	59 ft/min face velocity ~~5 to 15~~	80% to 120% of design accident rate	≥ 250	≥ 95
Containment Purge System	≥ 90	31 ft/min face velocity ~~*~~	80% to 120% of design operating rate	*	*

~~* Per test 5.b in Table 2 of Regulatory Guide 1.52, March 1978.~~

(continued)

5.5 Programs and Manuals

5.5.10 Ventilation Filter Testing Program (VFTP) (continued)

d. Demonstrate for each system that the pressure drop across the combined HEPA filters, the demisters and prefilters (if installed), and the charcoal adsorbers is less than the value specified below when tested at the flowrate specified below.

Ventilation System	Delta P (inches wg)	Flowrate (cfm):
Fuel Storage Building Emergency Ventilation System	6	≥ 90% of design accident rate
Control Room Ventilation System	2 ~~6~~	≥ 90% of design accident rate
Containment Fan Cooler Units	6	≥ 90% of design accident rate

(continued)