Entergy

Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
Indian Point 3 NPP
P.O. Box 308
Buchanan, NY 10511
Tel 914 736 8001 Fax 736 8012

Robert J. Barrett
Vice President, Operations–IP3

December 17, 2002
IPN-02-093

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
Revision to Proposed Technical Specification Amendment for Laboratory Testing of Nuclear-Grade Activated Charcoal per NRC Generic Letter 99-02 (TAC No. MB3329)

References:
1. Letter to the NRC "Proposed Technical Specification Amendment for Laboratory Testing Of Nuclear-Grade Activated Charcoal per NRC Generic Letter 99-02," dated October 23, 2001 (IPN-01-076).
2. Letter to the NRC, "Response to Request For Additional Information Regarding Proposed Technical Specification Amendment for Laboratory Testing Of Nuclear-Grade Activated Charcoal per NRC Generic Letter 99-02," dated March 29, 2002 (IPN-02-022).

Dear Sir:

The purpose of this letter is to submit a revision to the application for amendment to Section 5.5.10c of the Indian Point 3 (IP3) Technical Specifications (TS) submitted in Reference 1. The revision changes the safety evaluation for the proposed amendment to incorporate our prior response to a request for additional information found in Reference 2 and to modify that response to address conversations with the NRC staff regarding the safety factor for the charcoal filters in the Control Room Ventilation System (CRVS). This letter also withdraws the previously proposed change to TS 5.5.10d that has a non-conservative requirement for a maximum CRVS differential pressure of six inch water gauge (w.g.).

The revision to the proposed amendment addresses the issues raised by the NRC staff regarding the CRVS as follows:

1. The proposed TS has been revised to provide a CRVS methyl iodide removal efficiency of greater than or equal to 95.5%, and to remove the notation that there is a one inch bed depth. This will provide a safety factor of 2 as discussed in Generic Letter (GL) 99-02 subject to item 3 below.

A081

2. The proposed TS has been revised to allow continued use of the existing CRVS through Refuel Outage 13, April 2005, to allow for the design, fabrication and installation of a 2 inch charcoal filter bed in the CRVS.

3. A proposed note in the TS requires a demonstration of charcoal efficiency of 93% when changing the charcoal in the existing one inch CRVS beds prior to moving fuel in the upcoming refuel outage 12 (scheduled to start March 28, 2003) and every six months thereafter until the end of refuel outage 13 or the two inch beds are installed. This will provide a safety factor of 1.285 until the 2 inch beds are installed.

The withdrawal of the proposed change to the differential pressure for the CRVS filters from 6 inch w.g. to 2 inch w.g. results from the proposal to add the two inch charcoal beds. Changing the TS 5.5.10d pressure drop now could affect installation of the new charcoal beds since another TS change would be required. The administrative controls currently in place to test for a maximum two inch water gauge differential pressure will be maintained until the new two inch beds are installed. When the maximum pressure drop for the new two inch charcoal beds is determined, a TS change will be submitted.

With the above changes, the proposed amendment adopts GL 99-02 and ASTM D3803-1989 for the Fuel Storage Building Emergency Ventilation System (FSBVS), the Containment Fan Cooler Units (CFCU), and the Containment Purge System (CPS) with one exception to reflect the plant's design. The Containment Fan Cooler Units (CFCU) have a safety factor of 1.93, an exception to the factor of safety of 2 discussed in GL 99-02.

The safety evaluation for the proposed TS change is in Attachment I and marked up TS pages are in Attachment II. Margin bars identify where changes have been made to the safety evaluation in Reference 1 to reflect the above changes and the information in Reference 2. Commitments made in this submittal are listed in attachment III.

In accordance with 10 CFR 50.91, a copy of this submittal, with attachments, is being sent to the designated New York State official.

If you have any questions regarding this submittal, please contact Mr. K. Kingsley at (914) 734-5581.

I declare under penalty of perjury that the foregoing is true and correct.

Very truly yours,

Executed on 12/17/02
(Date)

Robert J. Barrett
Vice President, Operations
Indian Point 3 Nuclear Power Plant

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
P.O. Box 337
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

ATTACHMENT I TO IPN-02-093

SAFETY EVALUATION FOR

PROPOSED TECHNICAL SPECIFICATION CHANGE

REGARDING LABORATORY TESTING OF

NUCLEAR-GRADE ACTIVATED CHARCOAL

This Safety Evaluation Supercedes the Safety Evaluation transmitted in IPN-01-076 dated October 23, 2001 and incorporates information provided in IPN-02-022 dated March 29, 2002

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. This submittal completes a commitment to submit a proposed TS change in response to Generic Letter (GL) 99-02 requirements.

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 "≥ 95.5" 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) – "78 ft/min face velocity"

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

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

4. Delete the existing note under the table that says "* Per test 5.b in Table 2 of Regulatory Guide 1.52, March 1978." And add a note that says "Note: For the 1" beds, the Control Room Ventilation System methyl iodide removal efficiency is verified greater than or equal to 93% rather than 95.5% at a face velocity of 50 ft/min under the above requirements. This is done prior to fuel movement in Refuel Outage 12 and every 6 months after Refuel Outage 12 until the end of Refuel Outage 13 or the 2" beds are installed."

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.

III SAFETY IMPLICATION OF PROPOSED CHANGES

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, one hardware change being made in a separate modification is reflected in the TS change (installation of 2 " filters in the CRVS), 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 that could affect the probability of or consequences of an accident. 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 ≥ 90% at ± 20% of the accident design flow rate with a 0.05 to 0.15 mg/m^3 inlet methyl iodide concentration, a relative humidity ≥ 95%, and a temperature ≥ 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 ≥ 90 % and specifies the requirements of ASTM D3803-1989, including a relative humidity of 95% and a temperature of 86°F. The TS includes the system face velocity of 59 ft/min as required by the GL since the face velocity deviates more than 10% from 40 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 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 was tested in accordance with the proposed TS before it was used again. That test showed a 2.4% penetration (Reference 13).

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 minus 1% for bypass divided by penetration acceptance criterion) will also be defined.

Control Room Ventilation System (CRVS)

The current TS for CRVS 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 reflects plans to replace the existing 1" charcoal beds with 2" charcoal beds prior to or during refuel outage 13. A design change to the filter train has been determined to be feasible but engineering work has not progressed to the point where on-line replacement is considered feasible. The proposed TS increases the methyl iodide removal efficiency to $\geq$ 93 % for the existing 1" beds and 95.5% for the replacement 2" beds and specifies the requirements of ASTM D3803-1989, including a relative humidity of 95% and a temperature of 86°F for both. The TS includes the system face velocity of 50 ft/min for the 1" bed depth and 78 ft/min for the 2" bed as required by the GL since the face velocity deviates more than 10% from 40 ft/min. 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 administratively controlled CRVS 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 note added to the TS indicates that the 1" charcoal beds will be in service until the 2" filter beds are installed which will be no later than start up from Refuel Outage 13. The above flow rates will be maintained during this time as indicated by the 50 ft/min in the note. The efficiency of $\geq$ 93% in the note will provide a safety factor of 1.285 when calculated according to the following:

SF = [100%-accident methyl iodide efficiency plus 1% bypass] / [100%-TS criteria]

The TS note specifies that the charcoal be tested to demonstrate an efficiency of $\geq$ 93% at a six month interval. The 6 month interval was derived by assuming that charcoal degrades linearly over the period of use. The safety factor of 1.285 for 6 months and safety factor of 2 for 24 months provide the same margin using this assumption. This assumption is considered conservative since the charcoal is seeing flow about 15 minutes per month during testing. The 93% acceptance criteria is considered acceptable since the last two tests on new charcoal have results of 94.285% and 93.18% and it is our intent to accomplish the six month test by replacing the charcoal with tested charcoal.

The new charcoal filter system will have a 2" depth with a calculated residence time of 0.128 seconds with a flow of 2,000 cfm (1000 cfm per filter). The residence time of 0.128 seconds equates to a 78 ft/min face velocity for the 2" bed. This exceeds the 40 ft/min criteria of the ASTM by more than 10% and has been included in the proposed TS. The flow velocity of 2000 cfm was used for the proposed TS because the charcoal filter modification will increase the current 1500 cfm limit (750 cfm per filter), if feasible, to increase the cleanup rate. The CRVS will be adjusted to assure that the maximum cfm is not exceeded using the functional test. The proposed TS efficiency of 95.5% provides a safety factor of 2 with 1% allowable for bypass. Dose analyses assumed a methyl iodide removal efficiency of 90% for the charcoal filter. The installed system is expected to have a maximum differential pressure that is less than the current TS value of 6. Administrative controls will be used to control the differential pressure to an acceptable value until the TS 5.5.10d can be changed.

The FSAR will be revised, when the modification is complete, to clarify that TS surveillance testing of the ventilation system is based upon a maximum flow to be defined by the filter modification and a safety factor of 2 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 ≥ 85% at ± 20% of the accident design flow rate, 5 to 15 mg/m^3 inlet methyl iodide concentration, ≥ 95% relative humidity and a temperature ≥ 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 ≥ 85% and specifies the requirements of ASTM D3803-1989, including a relative humidity of 95% and a temperature of 86°F. The TS includes the system face velocity of 59 ft/min as required by the GL since the face velocity deviates more than 10% from 40 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 ≥ 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 cfm 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 of 1.93 (100% minus 70% efficiency assumed in dose analysis plus 1% to reflect allowable bypass that must be compensated for by filter efficiency divided by penetration acceptance criteria). This constitutes 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. This exception is based on original design.

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 1.93 for the assumed methyl iodide removal efficiency 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 ≥ 90% at ± 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 ≥ 90 % and specifies the requirements of ASTM D3803-1989, including a relative humidity of 95% and a temperature of 86°F. The TS includes the system face velocity of 31 ft/min as required by the GL since the face velocity deviates more than 10% from 40 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 ≥ 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 (30% penetration assumed in dose analyses minus 1% for bypass divided by penetration acceptance criteria of 10) greater than 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 ft/min 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 at least 2 for the assumed methyl iodide removal efficiency when considering a 1% 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 for activated charcoal filters. The changes require laboratory performance testing of adsorber carbon that yields a more accurate result than the testing currently required by the TS. The proposed change to delete non-conservative TS requirements for testing of adsorber carbon is not a plant accident initiator 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 that are currently in place to address Generic Letter 99-02, with one exception to the safety factor of 2, and accommodate the change of the Control Room Ventilation System (CRVS) charcoal beds to two inches. The change only affects the TS testing requirements since the modification to the CRVS will be accomplished separately from the TS change. The TS changes 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 for activated charcoal filters. The change does not involve any modifications to the plant but will accommodate the planned modification of the CRVS to change the charcoal beds from 1 inch to 2 inches. The change 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. The proposed changes to delete non-conservative TS requirements for testing of adsorber carbon is not a plant accident initiator 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 that are currently in place to address Generic Letter 99-02, with one exception to the safety factor of 2, and accommodate the change of the Control Room Ventilation System (CRVS) charcoal beds to two inches. The change only affects the TS testing requirements since the modification to the CRVS will be accomplished separately from the TS change. The TS changes 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 for activated charcoal filters. The proposed license amendment does not reduce the margin of safety but enhances it by requiring more accurate testing. 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.

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 Onsite Safety 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. Deleted
11. Surveillance tests 3PT-R032B1, 3PT-R032B2, 3PT-R032B3, 3PT-R032B4, and 3PT-R032B5, "Fan Cooler Unit Functional Test," Rev. 4.
12. Surveillance test 3PT-R32H, "VC Purge Exhaust Filtration System," Rev. 6.
13. NCS Corporation "Radioactive Penetration And Retention Test Report," January 25, 2002.

ATTACHMENT II TO IPN-02-093

MARKED UP TECHNICAL SPECIFICATION PAGE

FOR THE 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

5.5 Programs and Manuals

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 ^{0}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/m^3):~~	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	~~≥~~ 95.5 ≥ ~~90~~	78 ft/min face velocity ~~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.~~
Note: For the 1" beds, the Control Room Ventilation System methyl iodide removal efficiency is verified greater than or equal to 93% rather than 95.5% at a face velocity of 50 ft/min under the above requirements. This is done prior to fuel movement in Refuel Outage 12 and every 6 months after Refuel Outage 12 until the end of Refuel Outage 13 or the 2" beds are installed.

(continued)

Commitments Made In Technical Specification Submittal

Number	Commitment	Due Date
IPN-02-093-01	Design, issue, and track a plant modification to install 2" charcoal beds in the CRVS.	Refuel Outage 13
IPN-02-093-02	Prepare and submit a TS change to correct TS 5.5.10(d) pressure differential for CRVS two inch beds.	Refuel Outage 13
IPN-02-093-03	Prepare administrative controls to test 2 inch beds to defined filter pressure drop until TS is approved.	Refuel Outage 13
IPN-02-093-04	Test CRVS at 2" wg for filter delta P until 2" filters are installed or the end of RO13.	Refuel Outage 13