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Indiana Michigan Power
Cook Nuclear Plant
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AEP.com

June 13, 2007

AEP:NRC:7751
10 CFR 50.90

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

SUBJECT: Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. 50-315 and 50-316
License Amendment Request to Reduce Maximum Ventilation System HEPA/Charcoal Pressure Drop Allowed by Technical Specifications

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant Units 1 and 2, proposes to amend Facility Operating Licenses DPR-58 and DPR-74. The proposed amendment would revise the Technical Specifications (TS) to impose lower, i.e., more restrictive, limits on the maximum pressure drop across the combined high efficiency particulate air filters and charcoal adsorbers in three safety-related ventilation systems. These ventilation systems are the Control Room Emergency Ventilation System, the Engineered Safety Features Ventilation System, and the Fuel Handling Area Exhaust Ventilation System. The more restrictive pressure drop limits will be consistent with the required system flow rates and the limits recommended by the applicable filter vendors. The more restrictive limits have already been implemented via I&M controlled administrative measures.

Enclosure 1 to this letter provides an affirmation statement regarding information in this amendment request. Enclosure 2 provides a description of the proposed TS changes and an evaluation of the proposed TS changes. Attachments 1A and 1B provide TS pages marked to show changes for Unit 1 and Unit 2, respectively. Attachments 2A and 2B provide TS pages with the proposed changes incorporated. No specific approval date is requested. I&M requests that the amendment allow an implementation period of 45 days.

Copies of this letter and its enclosures and attachments are being transmitted to the Michigan Public Service Commission and Michigan Department of Environmental Quality, in accordance with the requirements of 10 CFR 50.91.

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NRR

Should you have any questions, please contact Ms. Susan D. Simpson, Regulatory Affairs Manager, at (269) 466-2428.

Sincerely,

Joseph N. Jensen
Site Vice President

Enclosures:

1. Affirmation
2. Proposed Technical Specification Changes and Evaluation

Attachments:

1A. Donald C. Cook Nuclear Plant Unit 1 Technical Specification Pages Marked To Show Changes
1B. Donald C. Cook Nuclear Plant Unit 2 Technical Specification Pages Marked To Show Changes
2A. Donald C. Cook Nuclear Plant Unit 1 Technical Specification Pages with the Proposed Changes Incorporated
2B. Donald C. Cook Nuclear Plant Unit 2 Technical Specification Pages with the Proposed Changes Incorporated

c: J. L. Caldwell, NRC Region III
K. D. Curry, AEP Ft. Wayne, w/o enclosures/attachments
J. T. King, MPSC
MDEQ – WHMD/RPMWS
NRC Resident Inspector
P. S. Tam, NRC Washington, DC

AFFIRMATION

I, Joseph N. Jensen, being duly sworn, state that I am Site Vice President of Indiana Michigan Power Company (I&M), that I am authorized to sign and file this request with the Nuclear Regulatory Commission on behalf of I&M, and that the statements made and the matters set forth herein pertaining to I&M are true and correct to the best of my knowledge, information, and belief.

Indiana Michigan Power Company

Joseph N. Jensen
Site Vice President

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 13th DAY OF June, 2007

Regan D. Wendzel
Notary Public

REGAN D. WENDZEL
Notary Public, Berrien County, MI
My Commission Expires Jan. 21, 2009

My Commission Expires

Enclosure 2 to AEP:NRC:7751

Proposed Technical Specification Changes and Evaluation

Documents referenced in this attachment are identified in Section 8.0.

1.0 DESCRIPTION

Pursuant to 10 CFR 50.90, Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP) Units 1 and 2, proposes to amend Facility Operating Licenses DPR-58 and DPR-74. The proposed amendment would revise the Technical Specifications (TS) to impose lower, i.e., more restrictive, limits on the maximum pressure drop across the combined high efficiency particulate air (HEPA) filters and charcoal adsorbers in three ventilation systems. These ventilation systems are the Control Room Emergency Ventilation (CREV) System, the Engineered Safety Features (ESF) Ventilation System, and the Fuel Handling Area Exhaust Ventilation (FHAEV) System. The more restrictive pressure drop limits will be consistent with the required system flow rates and the limits recommended by the applicable filter vendors. The more restrictive limits have already been implemented by I&M controlled administrative measures.

2.0 PROPOSED TS CHANGES

Section 5.5.9 of the TS specifies the Ventilation Filter Test Program (VFTP) requirements for the CREV System, ESF Ventilation System, and FHAEV System. Paragraph 5.5.9.d of that section requires that, for each of these systems, the pressure drop across the combined HEPA filter and charcoal adsorber bank (HEPA/charcoal assembly) be verified every 24 months to be less than (<) 6 inches water gauge, with the system flow rates within the stated system-specific bands. The proposed amendment would reduce the < 6 inches water gauge criteria to < 4 inches water gauge.

TS pages marked to show the specific text changes for Unit 1 and Unit 2 are provided in Attachments 1A and 1B to this letter, respectively.

3.0 BACKGROUND

3.1 System Descriptions

CREV System

The CREV System provides a protected control room environment for operators following an accident. The CREV System consists of two trains that circulate and filter the control room and outside air. Each train shares a common filter unit consisting of a prefilter, a HEPA filter for removal of radioactive particulates, and an activated charcoal adsorber for removal of gaseous

activity (principally iodines), and associated ductwork, dampers, and instrumentation. Each train includes an independent and redundant filter unit fan. The CREV System is an emergency system that is normally in the standby mode of operation.

Upon receipt of an actuating signal, the emergency air intake supply to the CREV System is opened to a predetermined position and the CREV System fans start. Both outside air and control room air are directed through the CREV System HEPA filter and charcoal adsorber, and discharged to the control room atmosphere to maintain the control room at a positive pressure with respect to the area outside the control room boundary. Pressurization of the control room prevents infiltration of unfiltered air from the surrounding areas of the building. The actuating signals consist of a safety injection signal from either unit and/or a control room high radiation signal.

ESF Ventilation System

The ESF Ventilation System filters air from enclosures containing ESF equipment (containment spray pumps, residual heat removal pumps, safety injection pumps, residual heat removal heat exchangers, containment spray heat exchangers, and centrifugal charging pumps) during normal operation, transients, and accidents. The ESF Ventilation System consists of two independent and redundant trains. Each train consists of a roughing filter, a HEPA filter, an activated charcoal adsorber, a fan, and associated ductwork, dampers, and instrumentation. Each train includes a charcoal adsorber bypass flow path with air operated dampers.

Normally, one ESF Ventilation System train is in operation, directing the exhaust air through the roughing and HEPA filters, bypassing the charcoal adsorber section, and discharging to the unit vent, while the other train is in standby. In the event of a containment Phase B isolation, a) the fan in the standby train automatically starts, and b) the charcoal adsorber bypasses are automatically closed for both trains, thereby directing the air through the charcoal adsorber in addition to the roughing and HEPA filters. The standby train starts on any train-related ESF System pump start signal, or a safety injection signal.

FHAEV System

The FHAEV System filters airborne radioactivity from the area of the spent fuel pool following a fuel handling accident. The FHAEV System is a common Unit 1 and Unit 2 system and consists of two trains with redundant fans sharing a common filter unit, and associated ductwork, dampers, and instrumentation. Each fan can draw air through a common plenum along the north side of the spent fuel pool to direct it through the common filter unit and discharge it to the Unit 1 vent. The filter unit consists of a roughing filter, a HEPA filter, and an activated charcoal adsorber. There is a normally open bypass for the charcoal adsorber flowpath.

One train is in operation with the filter unit bypass damper closed during the movement of irradiated fuel assemblies in the auxiliary building. The FHAEV System fan draws air through

the fuel handling area into the plenum and through the FHAEV System filter unit. The fuel handling area, as well as the entire space within the auxiliary building pressure boundary, are maintained at a slightly negative pressure. Upon receipt of a high fuel handling area radiation signal, the charcoal adsorber section bypass dampers receive a close signal ensuring that the air is directed through the filter unit.

3.2 History of HEPA/Charcoal Assembly Pressure Drop TS Criteria

The < 6 inch water gauge criteria for the ventilation systems now designated as the CREV System, ESF Ventilation System, and FHAEV System has existed in the CNP TS since their original issuance. The original CNP TS were based on the standard Westinghouse pressurized water reactor TS at that time, provided by NUREG-0452 (Reference 1). NUREG-0452 specified a parenthetical value of < 6 inches water gauge as the limit for the pressure drop across the HEPA/charcoal assemblies. Parenthetical or bracketed values were used in NUREG-0452 to indicate standard information such as typical vendor values. As indicated in Regulatory Guide 1.52 (Reference 2), Paragraph 3.1, the safety-related ventilation systems of nuclear power plants are likely to include a HEPA filter, followed by a charcoal adsorber, followed by another filter. The typical value for the maximum permissible pressure drop across such a design would be < 6 inches water gauge.

However, the CNP design for these systems does not include a filter downstream of the charcoal adsorber. The CNP design for these systems contains a single HEPA filter and a charcoal adsorber. The vendor recommended pressure drop limit for this design is < 4 inches water gauge. It appears that the difference between the design assumed in NUREG-0452 and the design existing at CNP was not recognized during the preparation of the original CNP TS. Consequently, the existing VFTP limits for the pressure drop across the HEPA/charcoal assemblies are non-conservative with respect to the vendor recommended pressure drop.

During design reviews conducted as part of the 1997-2000 extended shutdown of CNP Unit 1 and Unit 2, it was determined that the existing < 6 inch water gauge TS limits for the pressure drop across the HEPA/charcoal assemblies were also non-conservative with respect to the required minimum flow rates for the associated systems. I&M calculations demonstrated that the minimum flow rate requirements for these systems could not be achieved with a pressure drop across the HEPA/charcoal assembly at or near 6 inches water gauge. Failure to maintain the minimum specified flow rates may impact associated accident analyses. Accordingly, administrative controls were implemented to impose the more restrictive < 4 inch water gauge limit during the performance of TS required surveillance testing. A large scope "control room habitability" license amendment request (Reference 3), submitted in June 2000, included correction of the non-conservative HEPA/charcoal assembly pressure drop criteria by replacing the < 6 inch water gauge limit with a < 4 inch water gauge limit in the TS Surveillance Requirements for these systems.

In a September 2002 telephone conference regarding the control room habitability license amendment request, members of the U. S. Nuclear Regulatory Commission (NRC) staff indicated that the < 4 inch water gauge value should be verified using the test method described in American Society of Mechanical Engineers (ASME) N510 (Reference 4), Section 8.5.1. That method consists of blanking off portions of the filter or adjusting throttling dampers to produce an increased pressure drop and then measuring actual flow. I&M subsequently requested that the NRC proceed with approval of the other portions of the control room habitability amendment request because other portions were needed to support approval of a planned power uprate in December 2002, and it was evident that the staff's concern could not be resolved in time to support that schedule. The other portions of the control room habitability amendment request were approved in November 2002 (Reference 5). No further licensing action was taken regarding the changes to the TS limits on the HEPA/charcoal assembly pressure drop proposed in the control room habitability license amendment request.

Another telephone conference between I&M personnel and NRC staff was conducted in June 2005, in preparation for submittal of a new amendment request to correct the HEPA/charcoal assembly pressure drop criteria. In that telephone conference, the NRC staff again indicated that a change to the TS HEPA/charcoal assembly pressure drop criteria should be supported by performance of testing described in ASME N510, Section 8.5.1. The staff also suggested that I&M re-evaluate the need to change the TS criteria. I&M has re-evaluated the need to change the TS criteria and, as detailed in the Section 4.0, Technical Analysis," I&M has determined the proposed amendment to be appropriate.

Additionally, testing in accordance ANSI/ASME N510 8.5.1 would impose a significant burden. Performance of such testing would result in rendering the affected systems inoperable. The CREV System and the ESF Ventilation System are required to be operable in Modes 1 through 4. Consequently testing of these systems could only be conducted during outages, potentially impacting overall outage schedules. Depending on which system is being tested, the testing would involve such activities as breaching potentially radiologically contaminated system boundaries, performing temporary system modifications, disturbing preset flow balance damper positions, restoring the system boundary, reverifying system integrity, and restablishing flow balance damper positions.

4.0 TECHNICAL ANALYSIS

As stated in 10 CFR 50.36(c)(3), TS Surveillance Requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the Limiting Conditions for Operation will be met. A HEPA/charcoal assembly pressure drop in excess of the established limit would indicate a potential concern regarding the ability of the system to maintain adequate flow and the ability of the HEPA filter to fulfill its safety function throughout an accident. I&M considers < 4 inches water gauge to be the appropriate value for the limit on the pressure drop

across HEPA/charcoal assemblies in safety-related ventilation systems at CNP for the following reasons:

- I&M calculations have confirmed that the required flow rates for the CREV System, the ESF Ventilation System, and the FHAEV System can be achieved with a < 4 inch water gauge HEPA/charcoal assembly pressure drop. These are relatively uncomplicated calculations based on the applicable fan curves and ventilation industry handbook data on system and component resistances.
- The proposed < 4 inch water gauge limit is in accordance with the vendor recommendations.
- The CNP administrative controls that specify a maximum limit of < 4 inches water gauge for the HEPA/charcoal assembly pressure drop at the TS required flow rates for these systems have been successfully implemented since 2000.
- The proposed < 4 inch water gauge TS limit is more restrictive than the existing < 6 inch water gauge TS limit.

I&M also considers that the provisions of ASME N510 do not require that testing specified in Section 8.5.1 of the standard be performed to support the proposed amendment. As stated in Section 1.2 of ASME N510:

> This standard shall be applied in its entirety to systems designed and built to ASME N509 specifications. Sections of this standard may be used for technical guidance for testing air treatment systems designed to other criteria.

The CNP CREV System, the ESF Ventilation System, and the FHAEV System were not designed or built to ASME N509. The statement that sections of the standard "may be used for testing air treatment systems designed to other criteria" does not constitute a requirement.

Additionally, a note in ASME N510, Section 8.5.1 states: "The tests described in para. 8.5.1 need be performed only as acceptance tests and after major system modification or repair." The proposed TS changes are not needed for acceptance testing or for a major system modification or repair.

Finally, I&M has identified two NRC approved amendments, issued to other licensees, that reduce the TS limit on the pressure drop across filters and charcoal adsorbers in safety-related ventilation systems similar to the systems that are the subject of this amendment request. These amendments were approved based on licensee calculations or engineering studies supporting the proposed new pressure drop limits, rather than the testing specified by ASME N510, Section 8.5.1, or similar testing. These other amendments are identified in Section 7.0, "Precedent Licensing Actions."

I&M has, therefore, concluded that < 4 inches water gauge is the appropriate TS limit for the maximum pressure drop across the HEPA/charcoal assemblies in CNP safety-related ventilation

systems, and that ASME N510 provisions and licensing precedents do not indicate testing in accordance with ASME N510, Section 8.5.1, is required.

5.0 REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Consideration

Indiana Michigan Power Company (I&M) has evaluated whether a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of Amendment," as discussed below:

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

   Response: No

   The proposed change consists of establishing more restrictive criteria in the Technical Specification (TS) for the maximum pressure drop across high efficiency particulate air filters (HEPA) and charcoal adsorbers in safety-related ventilation systems. These TS criteria are used to determine the acceptability of periodic test results. These criteria are not accident initiators. Therefore, there will be no effect on the probability of an accident. The safety-related ventilation systems involved in the proposed change function to mitigate the consequences of accidents. The proposed change will provide increased assurance that the HEPA filters and charcoal adsorbers in these systems will be capable of performing their safety function of reducing the release of radioactive material resulting from evaluated accidents. Therefore, there will be no increase in the consequences of those accidents.

   Therefore, the proposed change will not involve a significant increase in the probability or consequences of any accident previously evaluated.

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

   Response: No

   The proposed change consists of establishing more restrictive acceptance criteria for existing TS required periodic tests. The proposed change does not affect the manner in which the tests are performed. The proposed change will not result in any new or different methods or modes of operation of existing structures, systems, or components. The proposed change will not introduce any new structures, system, or components.

   Therefore, the proposed change will 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?

   Response: No

   The margin of safety associated with the proposed change is the capability of the applicable safety-related ventilation systems to prevent radiation exposures from exceeding acceptable limits due to the release of radioactive material caused by an evaluated accident. The proposed change will provide increased assurance that the HEPA filters and charcoal adsorbers in these systems will be capable of performing this function.

   Therefore, the proposed change will not create a significant reduction in a margin of safety.

In summary, based upon the above evaluation, I&M has concluded that the proposed amendment involves 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

Regulation 10 CFR 50.36(c) identifies the categories of items that a utilization facility's TS must include. Paragraph 10 CFR 50.36(c)(3) describes the TS Surveillance Requirements as follows:

> Surveillance requirements. Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

Donald C. Cook Nuclear Plant Unit 1 and Unit 2 TS Surveillance Requirements 3.7.10.2, 3.7.12.2, and 3.7.13.3 require performance of filter testing for the Control Room Emergency Ventilation (CREV) System, Engineered Safety Features (ESF) Ventilation System, and Fuel Handling Area Exhaust Ventilation (FHAEV) System, respectively, in accordance with the VFTP. Section 5.5.9 of the TS contains the Ventilation Filter Test Program requirements for these systems. Paragraph 5.5.9.d of that section specifies, for each of these systems, the limit on the maximum pressure drop across the HEPA/charcoal assemblies in these systems. As described in Section 4.0 of this attachment, the proposed new pressure drop limit of < 4 inches water gauge is needed to assure that safety limits will be met, assure the necessary quality of HEPA filters in the CREV System, ESF Ventilation System, and FHAEV System is maintained. The proposed new pressure drop limit of < 4 inches water gauge is therefore needed to assure that these systems will remain operable as required by Limiting Conditions for Operation 3.7.10, 3.7.12, and 3.7.13.

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner,

(2) such activities will be conducted in compliance with the Nuclear Regulatory Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health or safety of the public.

6.0 ENVIRONMENTAL CONSIDERATIONS

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. The proposed amendment 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 individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

7.0 Precedent Licensing Actions

By References 6 and 7, respectively, the NRC approved reductions in the maximum pressure drop allowed by the Palo Verde Nuclear Generating Station TS and the North Anna Power Station TS across filters and charcoal adsorbers in safety-related ventilation systems similar to systems that are the subject of this amendment request for CNP. These amendments were similar to the amendment proposed for CNP in that they addressed existing design issues that affected the pressure drop across filters and adsorbers, although the design issues differed somewhat from the design issue involved in the proposed CNP amendment. These amendments were approved based on licensee calculations and engineering studies supporting the proposed new pressure drop limits rather than the testing specified by ASME N510, Section 8.5.1, or other similar testing.

8.0 REFERENCES

1. NUREG-0452, "Standardized Technical Specifications for Westinghouse PWRs," Revision 0, dated May 15, 1976.

2. Regulatory Guide 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," dated June 2001 (NRC ADAMS Accession No. ML011710176).

3. Letter from R. P. Powers, I&M, to NRC Document Control Desk, "License Amendment Request for Control Room Habitability and Generic Letter 99-02," dated June 12, 2000 (NRC ADAMS Accession No. ML003724470).

4. ASME N510-1989, "Testing of Nuclear Air-Cleaning Systems," dated December 15, 1989.

5. Letter from J. F. Stang, NRC, to A. C. Bakken III, I&M, "Donald C. Cook Nuclear Plant, Units 1 and 2 - Issuance of Amendments (TAC Nos. MB5318 and MB5319)," dated November 14, 2002 (NRC ADAMS Accession No. ML022980619).

6. Letter from J. Donohew, NRC, to G. R. Overbeck, Arizona Public Service Company, "Palo Verde Nuclear Generating Station, Units 1, 2, and 3 – Issuance of Amendments on Ventilation Filter Testing Program (TAC Nos. MB3693,MB3694, and MB3695)," dated June 18, 2002, (NRC ADAMS Accession No. ML021510323).

7. Letter from S. R. Monarque, NRC, to D. A. Christian, Virginia Electric and Power Company, "North Anna Power Station, Units 1 and 2 – Issuance of Amendments Re: Control Room Emergency Habitability Systems Increase Number of Compressed Air Bottles and Revise Differential Pressure Limit for Filter Assemblies (TAC Nos. MB0759 and MB0760)," dated December 12, 2001 (NRC ADAMS Accession No. ML013460632).

Attachment 1A to AEP:NRC:7751

DONALD C. COOK NUCLEAR PLANT UNIT 1
TECHNICAL SPECIFICATION PAGES
MARKED TO SHOW CHANGES

5.5-9

5.5 Programs and Manuals

5.5.9 Ventilation Filter Testing Program (VFTP) (continued)

ESF Ventilation System	Face Velocity (fpm)	Penetration (%)	RH (%)
CREV System	NA	1	95
ESF Ventilation System	45.5	5	95
FHAEV System	46.8	5	95

In addition, the carbon samples not obtained from test canisters shall be prepared by either:

1. Emptying one entire bed from a removed adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed; or

2. Emptying a longitudinal sample from an adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed.

d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters and the charcoal adsorbers is less than the value specified below when tested at the system flowrate specified below:

ESF Ventilation System	Delta P (inches water gauge)	Flowrate (cfm)
CREV System	~~6~~4	≥5,400 and ≤6,600
ESF Ventilation System	~~6~~4	≥22,500 and ≤27,500
FHAEV System	~~6~~4	≥27,000 and ≤33,000

Attachment 1B to AEP:NRC:7751

DONALD C. COOK NUCLEAR PLANT UNIT 2
TECHNICAL SPECIFICATION PAGES
MARKED TO SHOW CHANGES

5.5-9

5.5 Programs and Manuals

5.5.9 Ventilation Filter Testing Program (VFTP) (continued)

ESF Ventilation System	Face Velocity (fpm)	Penetration (%)	RH (%)
CREV System	NA	1	95
ESF Ventilation System	45.5	5	95
FHAEV System	46.8	5	95

In addition, the carbon samples not obtained from test canisters shall be prepared by either:

1. Emptying one entire bed from a removed adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed; or

2. Emptying a longitudinal sample from an adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed.

d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters and the charcoal adsorbers is less than the value specified below when tested at the system flowrate specified below:

ESF Ventilation System	Delta P (inches water gauge)	Flowrate (cfm)
CREV System	~~6~~4	≥5,400 and ≤6,600
ESF Ventilation System	~~6~~4	≥22,500 and ≤27,500
FHAEV System	~~6~~4	≥27,000 and ≤33,000

Attachment 2A to AEP:NRC:7751

DONALD C. COOK NUCLEAR PLANT UNIT 1
TECHNICAL SPECIFICATION PAGES WITH THE PROPOSED
CHANGES INCORPORATED

5.5-9

5.5 Programs and Manuals

5.5.9 Ventilation Filter Testing Program (VFTP) (continued)

ESF Ventilation System	Face Velocity (fpm)	Penetration (%)	RH (%)
CREV System	NA	1	95
ESF Ventilation System	45.5	5	95
FHAEV System	46.8	5	95

In addition, the carbon samples not obtained from test canisters shall be prepared by either:

1. Emptying one entire bed from a removed adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed; or

2. Emptying a longitudinal sample from an adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed.

d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters and the charcoal adsorbers is less than the value specified below when tested at the system flowrate specified below:

ESF Ventilation System	Delta P (inches water gauge)	Flowrate (cfm)
CREV System	4	≥5,400 and ≤6,600
ESF Ventilation System	4	≥22,500 and ≤27,500
FHAEV System	4	≥27,000 and ≤33,000

Attachment 2B to AEP:NRC:7751

DONALD C. COOK NUCLEAR PLANT UNIT 2
TECHNICAL SPECIFICATION PAGES WITH THE PROPOSED CHANGES INCORPORATED

5.5-9

5.5 Programs and Manuals

5.5.9 Ventilation Filter Testing Program (VFTP) (continued)

ESF Ventilation System	Face Velocity (fpm)	Penetration (%)	RH (%)
CREV System	NA	1	95
ESF Ventilation System	45.5	5	95
FHAEV System	46.8	5	95

In addition, the carbon samples not obtained from test canisters shall be prepared by either:

1. Emptying one entire bed from a removed adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed; or

2. Emptying a longitudinal sample from an adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed.

d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters and the charcoal adsorbers is less than the value specified below when tested at the system flowrate specified below:

ESF Ventilation System	Delta P (inches water gauge)	Flowrate (cfm)
CREV System	4	≥5,400 and ≤6,600
ESF Ventilation System	4	≥22,500 and ≤27,500
FHAEV System	4	≥27,000 and ≤33,000