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January 12, 2001

Mr. Lawrence C. Ruth
U.S. Nuclear Regulatory Commission
NRR/DSSA/SPLB
Mail Stop 11A1
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

Re: JCN J-2427, Task 8, "Engineered Safety Features Ventilation System Technical Specification Amendment Reviews" - Sub-task 2.e - Final Technical Evaluation Report (TER) - Kewaunee Nuclear Power Plant, TAC MA7279.

Dear Mr. Ruth:

For licensee submittals in response to Generic Letter 99-02, "Laboratory Testing of Nuclear Grade Activated Charcoal," Sub-tasks 2.a and 2.b specify that BNL review the technical specification (TS) Amendment Request for Compliance with the Actions Requested in Generic Letter 99-02. BNL is to prepare a letter with input for a request for additional information (RAI), as necessary, to support the review of the TS amendment request and submit the draft RAI input to the NRC Technical Monitor, John Segala. BNL is to then participate in telephone discussions with the NRC Technical Monitor, as necessary, to discuss the RAI input and prepare final RAI input and submit final RAI input to the Technical Monitor. Following a telephone call with licensee under Sub-task 2.c, as necessary, BNL is to prepare a draft technical evaluation report (TER) regarding review of the TS amendment request under Sub-task 2.d. (BNL is not required to provide any summary of the telephone calls. Such summaries are normally written by the NRC Project Manager for each plant). Under Sub-task 2.e, the draft TER will be accepted as the final TER if the Technical Monitor does not have any comments.

In fulfillment of Sub-task 2.e, we are enclosing a hard copy **Final TER** for the Kewaunee Nuclear Power Plant. The Final TER package includes the TER and associated tables (Table 1 - Current TS Requirements; Table 2 - Proposed TS Requirements, both part of the TER). Table GL99-02 (Kewaunee Nuclear Power Plant), entitled "Industry Responses to Generic Letter (GL) 99-02 on Laboratory Testing of Nuclear-Grade Activated Charcoal," which contains five sections summarizing the licensee response to Items 1 to 5 of GL 99-02, is for NRC information purposes only.

A081

Richard Deem reviewed the original TS change request by the licensee dated November 29, 1999 and prepared the draft RAIs. On May 11, 2000, Tony Fresco sent the final RAIs to NRC for comments. In its original submittal the licensee proposed to keep the safety factor of 1 for all four ESF ventilation systems. In addition, the licensee proposed to revise the testing requirements in case of fire, painting or chemical release, and did not reference ASTM D3803-1989 standard in the TS sections. However, the licensee suggested to keep this reference in the TS basis sections applicable to all four ESF systems. In two telephone calls on July 21, 2000 and August 16, 2000, NRC and the licensee discussed these proposed changes and responses to all RAIs. On November 10, 2000, the licensee submitted revised TS change requests including the written responses to the RAIs and changed the safety factor to 2 for all systems. However, the licensee still did not reference ASTM standard in the TS sections. Finally, in a telephone call on November 16, 2000 the licensee agreed to reference the ASTM standard in the TS sections. In response to this, the licensee resubmitted the proposed changes of both the TS bases and the TS sections on December 15, 2000.

We are enclosing the Final TER under Sub-task 2.e. If there are no further comments on this Final TER, we will assume that JCN J-2427, Task 8, is complete for the Kewaunee Nuclear Power Plant. We will be most pleased to answer any questions on this matter.

Sincerely yours,

Mano Subudhi
Engineer

MS

enclosure
c: J. Segala, NRC

w/o enclosure
D. Diamond
J. Higgins
W. Horak

ATTACHMENT

TECHNICAL EVALUATION REPORT
BROOKHAVEN NATIONAL LABORATORY
FOR THE OFFICE OF NUCLEAR REACTOR REGULATION
DIVISION OF SYSTEMS SAFETY AND ANALYSIS
PLANT SYSTEMS BRANCH
RELATED TO AMENDMENT TO FACILITY OPERATING LICENSE NO. DPR- 43
WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
DOCKET NO. 50 - 305

1.0 INTRODUCTION

By letter dated November 29, 1999 (NRC-99-084), Wisconsin Public Service Corporation (WPSC) submitted its response to the actions requested in Generic Letter (GL) 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal," dated June 3, 1999, for the Kewaunee Nuclear Power Plant (KNPP). By the same letter dated November 29, 1999, WPSC requested changes to the Technical Specifications (TS) Section 3.6.b.3.B for the Shield Building Ventilation System(SBVS) and Auxiliary Building Special Ventilation System (ABSVS), TS Section 3.8.a.9.b.2 for the Spent Fuel Pool Sweep Ventilation System (SFPSVS), and TS Section 3.12.c.2 for the Control Room Post-Accident Recirculation System (CRPARS) for the Kewaunee Nuclear Power Plant. By letter dated November 10, 2000 (NRC-00-087), WPSC resubmitted TS changes modifying the TS surveillance requirements and the TS bases to incorporate several additional action items requested in the GL, provided additional information on face velocities and safety factors, and withdrew the proposed revision in the TS basis sections with regard to testing requirements in case of painting, fire, or chemical release. By letter dated December 15, 2000 (NRC-00-099), WPSC resubmitted again the TS change sections after inserting qualifying statements in the TS bases and including the reference of ASTM D3803-89 in the TS surveillance requirements. The proposed changes would revise the TS surveillance testing of the safety related ventilation system charcoal to meet the requested actions of GL 99-02.

2.0 BACKGROUND

Safety-related air-cleaning units used in the engineered safety features (ESF) ventilation systems of nuclear power plants reduce the potential onsite and offsite consequences of a radiological accident by filtering radioiodine. Analyses of design basis accidents assume particular safety related charcoal adsorption efficiencies when calculating offsite and control room operator doses. To ensure that the charcoal filters used in these systems will perform in a manner that is consistent with the licensing basis of a facility, licensees have requirements in their TS to periodically perform a laboratory test (in accordance with a test standard) of charcoal samples taken from these ventilation systems.

In GL 99-02, the staff alerted licensees that testing nuclear-grade activated charcoal to standards other than American Society for Testing and Materials (ASTM) D3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon," does not provide assurance for complying with their current licensing bases with respect to the dose limits of General Design Criterion (GDC) 19 of Appendix

A to Part 50 of Title 10 of the Code of Federal Regulations (10 CFR) and Subpart A of 10 CFR Part 100.

GL 99-02 requested that all licensees determine whether their TS reference ASTM D3803-1989 for charcoal filter laboratory testing. Licensees whose TS do not reference ASTM D3803-1989 were requested to either amend their TS to reference ASTM D3803-1989 or propose an alternative test protocol.

3.0 EVALUATION

3.1 Laboratory Charcoal Sample Testing Surveillance Requirements

The current and proposed laboratory charcoal sample testing TS surveillance requirements for the Shield Building Ventilation System (SBVS), the Auxiliary Building Special Ventilation System (ABSVS), the Spent Fuel Pool Sweep Ventilation System (SFPSVS), and the Control Room Post-Accident Recirculation System (CRPARS) are shown in Table 1 and Table 2, respectively.

The proposed use of ASTM D3803-1989 is acceptable because it provides accurate and reproducible test results. The proposed test temperature of 30°C and 95% relative humidity (RH) for all four systems are acceptable because it is consistent with ASTM D3803-1989. This is consistent with the actions requested in GL 99-02.

By letter dated November 10, 2000, the credited removal efficiency for radioactive organiciodine for each of the four systems is 90%. The proposed test penetration for radioactive methyl iodide for each system is less than 5%. The proposed test penetration was obtained by applying a safety factor of 2 to the credited efficiency. The proposed safety factor of 2 for all systems is acceptable because it ensures that the efficiency credited in the accident analysis is still valid at the end of the surveillance interval. This is consistent with the minimum safety factor of 2 specified in GL 99-02.

The August 23, 1999 errata to GL 99-02 clarified that if the maximum actual face velocity is greater than 110% of 40 fpm, then the test face velocity should be specified in the TS. By letter dated November 10, 2000, the face velocity for all four systems is less than 40 fpm. The proposed testing of the charcoal adsorbers will be performed in accordance with ASTM D3803-1989 which specifies a test face velocity of 40 fpm with appropriate margins. This is acceptable because it ensures that the testing will be consistent with the operation of the ventilation system during accident conditions. Therefore, it is not necessary to specify the face velocity in the proposed TS change. This is consistent with the errata to GL 99-02 dated August 23, 1999.

4.0 CONCLUSION

On the basis of its evaluation, BNL recommends that the NRC staff consider the proposed TS changes to be acceptable.

Principal Contributors: Richard E. Deem, Anthony Fresco and Mano Subudhi
Date: January 12, 2000

TABLE 1 - CURRENT TS REQUIREMENTS

System Description						Current TS Requirements					
TS Section	System	Bed Thickness (inches) *	Actual Charcoal Res. Time (sec) ***	Actual Charcoal Face Velocity (fpm) **	Credited Efficiency (% methyl iodine) **	Test Penetration (% methyl iodide)	Safety Factor	Test Standard **	Test Temp (° C)	Test RH (%)	Test Face Velocity (fpm)
3.6.b.3.B	Shield Building Ventilation System (SBVS)	2	0.315	31.713	90	<10	1	Reg. Guide 1.52-1976 RDT M 16-1T, Oct. 1973	130	95	Not stated
3.6.b.3.B	Aux. Bldg. Special Ventilation System (ABSVS)	2	0.263	38.056	90	<10	1	Reg. Guide 1.52-1976 RDT M 16-1T, Oct. 1973	66	95	Not stated
3.8.a.9.b.2	Spent Fuel Pool Sweep Ventilation System (SFPSVS)	2	0.263	38.056	90	<10	1	Reg. Guide 1.52-1973 RDT M 16-1T, Oct. 1973	66	95	Not stated
3.12.c.2	Control Room Post-Accident Recirculation System (CRPARS)	2	0.42	23.785	90	<10	1	Reg. Guide 1.52-1973 RDT M 16-1T, Oct. 1973	66	95	Not stated

* Per letter dated November 29, 1999.
** Per letter dated November 10, 2000.
*** Residence time is calculated based on the bed thickness and face velocity given in letter dated November 10, 2000.

TABLE 2 - PROPOSED TS REQUIREMENTS

System Description						Proposed TS Requirements					
TS Section	System	Bed Thickness (inches) *	Actual Charcoal		Credited Efficiency (% methyl iodide) **	Test Penetration (% methyl iodide)	Safety Factor	Test Standard *****	Test Temp (° C)	Test RH (%)	Test Face Velocity (fpm) ****
			Res. Time (sec) ***	Face Velocity (fpm) **							
3.6.b.3.B	Shield Building Ventilation System (SBVS)	2	0.315	31.713	90	<5	2	ASTM D3803-1989	30	95	Not stated (40)
3.6.b.3.B	Aux. Bldg. Special Ventilation System (ABSVS)	2	0.263	38.056	90	<5	2	ASTM D3803-1989	30	95	Not stated (40)
3.8.a.9.b.2	Spent Fuel Pool Sweep Ventilation System (SFPSVS)	2	0.263	38.056	90	<5	2	ASTM D3803-1989	30	95	Not stated (40)
3.12.c.2	Control Room Post-Accident Recirculation System (CRPARS)	2	0.42	23.785	90	<5	2	ASTM D3803-1989	30	95	Not stated (40)

* Per letter dated November 29, 1999.
** Per letter dated November 10, 2000.
*** Residence time is calculated based on the bed thickness and face velocity given in letter dated November 10, 2000.
**** Test face velocity is in accordance with ASTM D3803-89 requirements.
***** Per letter dated December 15, 2000.

TABLE GL99-02 (KEWAUNEE NUCLEAR POWER PLANT)
(FOR NRC INFORMATION ONLY - 1/11/2001)

INDUSTRY RESPONSES TO GENERIC LETTER (GL) 99-02 ON LABORATORY TESTING OF NUCLEAR-GRADE ACTIVATED CHARCOAL

PLANT NAME	Kewaunee Nuclear Power Plant	DOCKET NUMBER(S)	50-305	UTILITY/LICENSEE	Wisconsin Public Service Corp.
REACTOR TYPE	2-loop PWR	TAC NUMBER(S)	MA7279	NSSS/ARCH. ENGR.	Westinghouse/Fluor Engineering

ENGINEERED SAFETY FEATURES (ESF) VENTILATION SYSTEMS

No.	VENTILATION SYSTEM	GL GROUP (1-4)	TECH SPEC SECTIONS	CURRENT STANDARDS	ACTUAL FACE VELOCITY (FT/MIN)	COMMENTS
1	Shield Building Ventilation System (SBVS)	2	3.6..b.3.B	Reg. Guide 1.52, Rev.1 RDT M 16-1T, Oct. 1973	31.713	
2	Auxiliary Building Special Ventilation System (ABSVS)	2	3.6..b.3.B	Reg. Guide 1.52, Rev.1 RDT M 16-1T, Oct. 1973	38.056	
3	Spent Fuel Pool Sweep Ventilation System (SFPSVS)	2	3.8.a.9.b.2	Reg. Guide 1.52, Rev.1 RDT M 16-1T, Oct. 1973	38.056	
4	Control Room Post-Accident Recirculation System (CRPARS)	2	3.12.c.2	Reg. Guide 1.52, Rev.1 RDT M 16-1T, Oct. 1973	23.785	

GENERIC LETTER REQUESTED ACTION ITEMS

ITEM 1: Current Tech Spec (TS) Requirements for the Laboratory Testing of Charcoal Samples (Due by November 30, 1999)

No.	TEST PROTOCOL	TEST TEMPERA-TURE (°C)	TEST RELATIVE HUMIDITY (%)	TEST PENETRATION %	BED THICKNESS (INCHES)	RESIDENCE TIME/BED DEPTH (SEC)	COMMENTS
1	RDT M 16-1T	130	95	<10%	2"	0.315	
2	RDT M 16-1T	66	95	<10%	2"	0.263	
3	RDT M 16-1T	66	95	<10%	2"	0.263	
4	RDT M 16-1T	66	95	<10%	2"	0.42	

TABLE GL99-02 (KEWAUNEE NUCLEAR POWER PLANT)
(FOR NRC INFORMATION ONLY - 1/11/2001)

ITEM 2: Proposed TS Requirements - ASTM D3803-1989 Test Protocol (Due by November 30, 1999)						November 29, 1999
No.	TEST TEMPERATURE (°C)	TEST RELATIVE HUMIDITY (%)	TEST PENETRATIO N (%)	TEST FACE VELOCITY (FT/MIN)	NEXT TEST SCHEDULE	COMMENTS
1	30	95	<5	40	Prior to 2000 refueling outage	
2	30	95	<5	40	Prior to 2000 refueling outage	
3	30	95	<5	40	Prior to 2000 refueling outage	
4	30	95	<5	40	Prior to 2000 refueling outage	
ITEM 3: Proposed TS Requirements - Alternate Test Protocol (Due by November 30, 1999)					13 Req. Items Available	Not Applicable
TEST TEMPERATURE (°C)		TEST RELATIVE HUMIDITY (%)	TEST PENETRATIO N (%)	FACE VELOCITY (FT/MIN)	NEXT TEST SCHEDULE	COMMENTS
Not Applicable		Not Applicable	Not Applicable	Not Applicable	Not Applicable	

ITEM 4: Charcoal Test Performed After August 2, 1999	See Item 2 above	COMMENTS
TESTED IN ACCORDANCE WITH ASTM D3803-1989 ?	Yes	* Submittal states results of testing to both the current TS requirements and to ASTM D3803-1989 were acceptable. The safety factor is not specified.
NEW CHARCOAL PROCURED TO ASTM D3803-1989 ?	Not stated	
CHARCOAL TEST RESULTS WITHIN ACCEPTABLE LIMITS WITH A SAFETY FACTOR OF 2 ?	Yes*	
ITEM 5: Proposed Alternate Course of Action (Due by August 2, 1999)		Not Applicable
PLANS TO PURSUE A PROPOSED ALTERNATE COURSE OF ACTION		Not Applicable
SCHEDULE FOR SUBMITTING THE PROPOSED TEST PROTOCOL FOR NRC REVIEW (Due by November 30, 1999)		Not Applicable
BASIS FOR CONTINUED OPERATION OF AFFECTED SYSTEMS AND COMPONENTS		Not Applicable

TABLE GL99-02 (KEWAUNEE NUCLEAR POWER PLANT)
(FOR NRC INFORMATION ONLY - 5/11/2000)

ADOPTED CHARCOAL TEST PROTOCOL DATA (ASTM D3803-1989)

SPECIFICATIONS :	PRE-EQUILIBRIUM (FIRST 16HOURS)	EQUILIBRIUM, CHALLENGE, & ELUTION (FINAL 4 HOURS)	COMMENTS
TEST TEMPERATURE (°C)	30.0±0.4	30.0±0.2	30°C
RELATIVE HUMIDITY (%) Without Humidity Control With Humidity Control	91.0 to 96.0 68.0 to 71.0	93.0 to 96.0 68.0 to 71.0	95%
FACE VELOCITY (M/min)	12.2±0.6	12.2±0.3	Not stated
ABSOLUTE PRESSURE (kPa)	101±5	101±5	Not stated
BED DIAMETER AND DEPTH (mm)	50±1	50±1	Not stated
ADSORBATE CONCENTRATION (mg/M^3)	Not Applicable	1.75±0.25	Not stated

SUMMARY OF TECHNICAL SPECIFICATION DATA (CURRENT & PROPOSED)

No.	VENTILATION SYSTEM	TECH SPEC SECTIONS	CREDITED EFFICIENCY (%)		TEST PENETRATION (%)		SAFETY FACTOR		TEST TEMPERATURE (°C)		TEST RELATIVE HUMIDITY (%)		COMMENTS
			CURR	PROP	CUR R	PROP	CURR	PROP	CURR	PROP	CURR	PROP	
1	Shield Building Ventilation System (SBVS)	3.6..b.3.B	90	90	<10%	<5%	1	2	130	30	95	95	
2	Auxiliary Building Special Ventilation System (ABSVS)	3.6..b.3.B	90	90	<10%	<5%	1	2	66	30	95	95	
3	Spent Fuel Pool Sweep Ventilation System (SFPSVS)	3.8.a.9.b.2	90	90	<10%	<5%	1	2	66	30	95	95	
4	Control Room Post-Accident Recirculation System (CRPARS)	3.12.c.2	90	90	<10%	<5%	1	2	66	30	95	95	

CORRESPONDENCE/TELECONS WITH THE LICENSEE

BNL REQUEST FOR ADDITIONAL INFORMATION (RAI)
(5/11/2000)

PLANT NAME: KEWAUNEE NUCLEAR POWER PLANT

TAC: MA7279 NRC TARGET COMPLETION DATE: 8/31/2000

The following questions pertain to all four systems, (1) Shield Building Ventilation System (SBV), (2) Auxiliary Building Special Ventilation System (ABSV), (3) Spent Fuel Pool Sweep Ventilation System (SFPSVS), and (4) Control Room Post-Accident Recirculation System (CRPAR), unless otherwise noted.

- For all four systems, the test penetration is stated in both the current and proposed TS in terms of the allowable filter removal efficiency of ≥90%. Therefore, the allowable test penetration limit is <10%. However, neither the charcoal filter efficiencies credited in the FSAR accident analyses nor the safety factors were provided. Please refer to or provide this information in docketed form for both the current and proposed TS and confirm that a safety factor of 2 is being applied to the proposed TS amendment request in accordance with the requirements of GL 99-02.

2) In the November 29, 1999 letter, Attachment 1, page 4, it is stated that as the SBV, ABSV, CRPAR and SFPS filters face velocity is less than 110% of 0.203 m/s [40 ft/min], KNPP's TS do not specify the face velocity.

   Please indicate how the actual system face velocities are calculated.

   The actual system face velocities can be calculated by dividing the maximum system flow rates specified in the technical specification (TS) (nominal + typically 10% upper value) by the total exposed surface area of the charcoal filter media. Per GL 99-02, if this value is>110% of 40 ft/min, then the TS should be revised to specify that value as the test face velocity. (The guidance on calculation of the residence times in ASME AG-1-1997, Division II, Sections FD and FE, Articles I-1000 or in ANSI N510-1975 can be used to calculate the actual system face velocities).

NOTES TO NRC:

- The licensee is only in the proposed TS bases statements, and not in the proposed TS action statements, that testing is to be performed in accordance with ASTM D3803-1989.

- The licensee states in the submittal letter that Attachment 2 "contains the strike-out Technical Specification pages", and "Attachment 3 contains the affected Technical Specification pages as revised". For example, for the ABSV system, page TS B4.4-3 of Attachment 2 contains highlighted information referencing the ASTM D3803-1989 standard, which, according to the licensee's submittal letter is to be deleted. In Attachment 3, the identical wording on the same page is highlighted again, which according to the licensee's submittal letter is the revision. BNL assumes that the shaded material is information that is being added, not information being struck out.

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- For all four systems, the test penetration is stated in both the current and proposed TS in terms of the allowable filter removal efficiency of ≥90%. Therefore, the allowable test penetration limit is <10%. However, neither the charcoal filter efficiencies credited in the FSAR accident analyses nor the safety factors were provided. Please refer to or provide this information in docketed form for both the current and proposed TS and confirm that at least a safety factor of 2 is being applied to the proposed TS amendment request in accordance with the requirements of GL 99-02.

4) In the November 29, 1999 letter, Attachment 1, page 4, it is stated that as the SBV, ABSV, CRPAR and SFPSVS filters face velocity is less than 110% of 0.203 m/s [40 ft/min], KNPP's TS do not specify the face velocity.

   Please indicate how the actual system face velocities are calculated.

   The actual system face velocities can be calculated by dividing the maximum system flow rates specified in the technical specification (TS) (nominal + typically 10% upper value) by the total exposed surface area of the charcoal filter media. Per GL 99-02, if this valueis >110% of 40 ft/min, then the TS should be revised to specify that value as the test face velocity. (The guidance on calculation of the residence times in ASME AG-1-1997, Division II, Sections FD and FE, Articles I-1000 or in ANSI N510-1975 can be used to calculate the actual system face velocities).

3) The TS Amendment proposes to revise TS Bases 4.4.c, 4.4.d, 4.12, and 4.17 to specify "such that the charcoal adsorber could become contaminated from fumes, chemicals, or foreign materials." The November 29, 1999 letter states that this sentence adds clarity to the term "communicating." This is inconsistent with the staff position provided in the 9/11/97 letter to Entergy Operations, Inc. This letter specified that:

   > "The staff considers that a painting, fire, or chemical release is not communicating with a ventilation system only if the ventilation system is not in operation and the isolation dampers for the system are closed and leak tight thereby preventing air from passing through the filters."

   Specifying "could become contaminated" is vague with regards to communication. It ignores the operation of the ventilation system and the leak tightness of the isolation dampers. Please provide the basis for why this sentence should be added to TS Bases 4.4.c, 4.4.d, 4.12, and 4.17.

4) GL 99-02 states in Requested Action 2 that if you choose to adopt the ASTM D3803-1989 standard, then submit a TS amendment request to require testing to this standard. In addition, GL 99-02 specifically includes the ASTM D3803-1989 standard in the attached sample TS, not in the TS Bases. However, the November 29, 1999 letter proposed to add ASTM D3803-1989 to the TS Bases rather than in the proposed TS action statements. Please provide the basis for why the ASTM D3803-1989 standard should be added to TS Bases instead of the TS action statements.

Also, what is meant by the proposed sentence in TS Bases 3.6, 3.8, and 3.12 which states "Laboratory testing of the charcoal adsorbers will be performed in accordance with the applicable sections of ASTM D3803-89 standard?" This seems to imply that exceptions are being proposed.

NOTE TO NRC:

- The licensee states in the submittal letter that Attachment 2 "contains the strike-out Technical Specification pages", and "Attachment 3 contains the affected Technical Specification pages as revised". For example, for the ABSV system, page TS B4.4-3 of Attachment 2 contains highlighted information referencing the ASTM D3803-1989 standard, which, according to the licensee's submittal letter is to be deleted. In Attachment 3, the identical wording on the same page is highlighted again, which according to the licensee's submittal letter is the revision. BNL assumes that the shaded material is information that is being added, not information being struck out.

CONTACT NAME/TELEPHONE: WPSC personnel
NRC MONITOR: John Segala
BNL ENGINEER: Anthony Fresco
DATE: July 21, 2000

RAI 1

Credited charcoal filter efficiency is 90% for all four systems and with 10% required test penetration, the safety factor is 1. Licensee is also proposing to keep this SF equal to 1 and will provide document history and basis for this.

RAI 2

Dose analysis based on single train operation. Each is a Type II tray with 333cfm and 0.25 sec residence time. Licensee will provide actual face velocity later.

RAI 3

History to be provided later.

RAI 4

Licensee disgrees to state the ASTM std in the TS action statements.

Licensee to respond in 2-3 week, sometime in August.