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Your ref: Docket No. 52-006
Our ref: DCP_NRC_002907

June 1, 2010

Subject: AP1000 Response to Request for Additional Information (SRP 6)

Westinghouse is submitting a response to the NRC request for additional information (RAI) on SRP Section 6. This RAI response is submitted in support of the AP1000 Design Certification Amendment Application (Docket No. 52-006). The information included in this response is generic and is expected to apply to all COL applications referencing the AP1000 Design Certification and the AP1000 Design Certification Amendment Application.

Enclosure 1 provides the response for the following RAI(s):

RAI-SRP6.4-SPCV-16

Questions or requests for additional information related to the content and preparation of this response should be directed to Westinghouse. Please send copies of such questions or requests to the prospective applicants for combined licenses referencing the AP1000 Design Certification. A representative for each applicant is included on the cc: list of this letter.

Very truly yours,

A handwritten signature in black ink, appearing to read "Robert Sisk".

Robert Sisk, Manager
Licensing and Customer Interface
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/Enclosure

1. Response to Request for Additional Information on SRP Section 6

cc:	D. Jaffe	- U.S. NRC	1E
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ENCLOSURE 1

Response to Request for Additional Information on SRP Section 6

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP6.4-SPCV-16
Revision: 0

Question:

TS 5.5.13 states that a "program shall be established to implement the following required testing of Engineered Safety Feature (ESF) filter ventilation systems at the frequencies specified in accordance with Regulatory Guide 1.52, Revision 3, ASME N510-1989, and AG-1." Item d of TS 5.5.13 requires a test of "the pressure drop across the combined HEPA filter, the charcoal adsorber, and the post filter." For the combined HEPA filter, charcoal adsorber, and post filter pressure drop test, please provide a specific citation and reference for performing this test and provide the required test frequency.

Westinghouse Response:

The Technical Specification 5.5.13 proposed in the response to RAI-SRP6.4-SPCV-15 will be revised to list the frequencies for each test listed in 5.5.13.a, b, c, and d. The test in 5.5.13.d will be conducted every 24 months which aligns with the frequencies in the HEPA filter and charcoal adsorber in place tests and the charcoal adsorber sampling and analysis (5.5.13.a, b, and c). A specific Regulatory Guide or Standard citation is not needed with the revised Technical Specification 5.5.13.d as the test is described by the Tech Spec itself. The reference to Regulatory Guide 1.52 Revision 3 and ASME N510-1989 that were included in the Technical Specification 5.5.13.d proposed in the response to RAI-SRP6.4-SPCV-15 are removed.

Design Control Document (DCD) Revision:

The Technical Specification 5.5.13 proposed in the DCD revisions in the response to RAI-SRP6.4-SPCV-15 is replaced with the following.

AP1000 TECHNICAL REPORT REVIEW
Response to Request For Additional Information (RAI)

5.5.13 Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of the VES.

Tests described in Specification 5.5.13.a and 5.5.13.b shall be performed: i.) initially; ii.) once each 24 months; iii.) after partial or complete replacement of a HEPA filter or charcoal adsorber; iv.) after any detection of, or evidence of, penetration or intrusion of water or other material into any portion of the VES that may have an adverse effect on the functional capability of the filters; v.) following painting, fire, or chemical release in any ventilation zone communicating with the VES that may have an adverse effect on the functional capability of the system.

Tests described in Specification 5.5.13.c shall be performed: i.) after each 720 hours of system operation or at least once each 24 months, whichever comes first; ii.) following painting, fire, or chemical release in any ventilation zone communicating with the VES that may have an adverse effect on the functional capability of the carbon media; iii.) following detection of, or evidence of, penetration or intrusion of water or other material into any portion of the VES that may have an adverse effect on the functional capability of the carbon media.

Tests described in 5.5.13.d shall be performed once per 24 months.

- a. Demonstrate for the VES that an in-place test of the high efficiency particulate air (HEPA) filter shows a penetration and system bypass $\leq 0.05\%$ when tested in accordance with Regulatory Guide 1.52, Revision 3, and ASME N510-1989 at a flow rate at least 600 cfm greater than the flow measured by VES-FT-003A/B. The flow rate being measured is a combination of the VES breathable air supply flow and the recirculation flow drawn through the eductor.

ESF Ventilation System

Flowrate

VES

$\geq 600 + \text{VES supply flow (cfm)}$

- b. Demonstrate for the VES that an in-place test of the charcoal adsorber shows a penetration and system bypass $\leq 0.05\%$ when tested in accordance with Regulatory Guide 1.52, Revision 3, and ASME N510-1989 at a flow rate at least 600 cfm greater than the flow measured by VES-FT-003A/B. The flow rate being measured is a combination of the VES breathable air supply flow and the recirculation flow drawn through the eductor.

Ventilation Filter Testing Program (VFTP) (continued)

AP1000 TECHNICAL REPORT REVIEW
Response to Request For Additional Information (RAI)

ESF Ventilation System

Flowrate

VES

≥600 + VES supply flow (cfm)

- c. Demonstrate for the VES that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 3, shows the methyl iodide penetration less than the value specified below when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86°F) and the relative humidity specified below.

ESF Ventilation System

Penetration

RH

VES

5%

95%

- d. Demonstrate for the VES that the pressure drop across the combined HEPA filter, the charcoal adsorber, and the post filter is less than the value specified below when tested at the system flow rate specified below +/- 10%.

ESF Ventilation System

Delta P

Flow rate

VES

5 in.
water gauge

660 cfm

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP test frequencies.

PRA Revision:

None

Technical Report (TR) Revision:

None