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Your ref: Project Number 740
Our ref: DCP/NRC1998

September 18, 2007

Subject: AP1000 COL Response to Requests for Additional Information (TR 107)

In support of Combined License application pre-application activities, Westinghouse is submitting responses to the NRC requests for additional information (RAIs) on AP1000 Standard Combined License Technical Report 107, APP-GW-GLR-107, AP1000 Technical Support Center. These RAI responses are submitted as part of the NuStart Bellefonte COL Project (NRC Project Number 740). The information included in the responses is generic and is expected to apply to all COL applications referencing the AP1000 Design Certification.

Responses are provided for RAI-TR107-NSIR-01 through RAI-TR107-NSIR-07, transmitted in an email from Dave Jaffe to Sam Adams dated August 17, 2007. These responses complete all requests received to date for Technical Report 107

Pursuant to 10 CFR 50.30(b), the responses to the requests for additional information on Technical Report 107, are submitted as Enclosure 1 under the attached Oath of Affirmation.

Questions or requests for additional information related to the content and preparation of these responses 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. Sterdis, Manager
Licensing and Customer Interface
Regulatory Affairs and Standardization

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1063

HRO

/Attachment

1. "Oath of Affirmation," dated September 18, 2007

/Enclosure

1. Responses to Requests for Additional Information on Technical Report No. 107

cc:	D. Jaffe	- U.S. NRC	1E	1A
	E. McKenna	- U.S. NRC	1E	1A
	G. Curtis	- TVA	1E	1A
	P. Hastings	- Duke Power	1E	1A
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	G. Zinke	- NuStart/Entergy	1E	1A
	D. Hutchings	- Westinghouse	1E	1A

ATTACHMENT 1

“Oath of Affirmation”

ATTACHMENT 1

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of:)
NuStart Bellefonte COL Project)
NRC Project Number 740)

APPLICATION FOR REVIEW OF
"AP1000 GENERAL COMBINED LICENSE INFORMATION"
FOR COL APPLICATION PRE-APPLICATION REVIEW

W. E. Cummins, being duly sworn, states that he is Vice President, Regulatory Affairs & Standardization, for Westinghouse Electric Company; that he is authorized on the part of said company to sign and file with the Nuclear Regulatory Commission this document; that all statements made and matters set forth therein are true and correct to the best of his knowledge, information and belief.



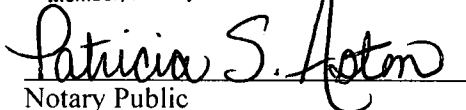
W. E. Cummins
Vice President
Regulatory Affairs & Standardization

Subscribed and sworn to
before me this 18th day
of September 2007.

COMMONWEALTH OF PENNSYLVANIA

Notarial Seal
Patricia S. Aston, Notary Public
Murrysville Boro, Westmoreland County
My Commission Expires July 11, 2011

Member, Pennsylvania Association of Notaries



Notary Public

ENCLOSURE 1

Responses to Requests for Additional Information on Technical Report No. 107

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI-TR107-NSIR-01

Revision: 0

Question:

Westinghouse Technical Report (TR) 107 changes numerous “Technical Support Center” (or “TSC”) references in the AP1000 Design Control Document (DCD) to “Control Support Area” (or “CSA”). The staff reviewed these proposed changes (i.e., DCD marked-up pages), as well as various parts of DCD Revision 14 that had been reviewed as part of the initial AP1000 certified design application, and found some references to TSC that the staff believes should have been changed to CSA.

These include the reference to “main control room/technical support center” in (Tier 2) section 9.4.1.1.1 (second full paragraph on page 9.4-2), references to “technical support center” in (Tier 2) section 14.2.9.2.10 (bullets on page 14.2-55), and the “MCR/TSC Supply” designation in the following (Tier 1) figures:

- Figure 2.7.1-1 (Sheet 1 of 2), Nuclear Island Non-radioactive Ventilation System
- Figure 2.7.2-1 (Sheet 1 of 2), Central Chilled Water System
- Figure 2.7.2-1 (Sheet 2 of 2), Central Chilled Water System

Please clarify the above, and provide revised figures/pages (if appropriate). Of note, the use of the words “area” or “areas” should be clear, as they are used in changing (for example) “main control room and technical support center areas” to “main control room and control support area area” (page 9.4-2) or “Technical support center area monitor” to “control support area area monitor” (page 11.5-13) (emphasis added) – if those are the intended changes. See also, sections 9.4.1.1.2 (pages 9.4-3), 9.4.1.2.1.1 (page 9.4-5), 9.4.1.2.3.1 (page 9.4-10), 9.4.1.5 (page 9.4-16), and 11.5.6.2 (page 11.5-16).

Westinghouse Response:

Westinghouse agrees that the reference to “main control room/technical support center” in (Tier 2) subsection 9.4.1.1.1 (second full paragraph on page 9.4-2), should be “main control room/control support area.”

Westinghouse agrees that the references to “technical support center” should be “control support area” in Tier 2 subsection 14.2.9.2.10 (bullets on page 14.2-55).

Westinghouse agrees that the Tier 1 Figures 2.7-1 (Sheet 1 of 2) and Figure 2.7.2-1 (both sheets) should refer to MCR/CSA in lieu of MCR/TSC. Westinghouse notes that DCD Revision 16 already includes the changes and that the TR should have identified those changes.

Westinghouse will revise the DCD as indicated below to incorporate the above responses.

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Response to Request For Additional Information (RAI)

In response to the NRC noted point related to clarification on the use of "area" or "areas," changes to clarify the use of "area" or "areas" will also be included as indicated below. In order to avoid confusion with the terms "control support area area" and "control support area areas," Westinghouse will use "CSA area" and "CSA areas."

References:
None

Design Control Document (DCD) Revision:

Post DCD Revision 16, Changes:

Tier 2

Change subsection 9.4.1.1.1, forth paragraph as follows:

Portions of the system that provide the defense-in-depth function of filtration of main control room/~~technical support center~~control support area air during conditions of abnormal airborne radioactivity are designed, constructed, and tested to conform with Generic Issue B-36, as described in Section 1.9 and Regulatory Guide 1.140 (Reference 30), as described in Appendix 1A, and the applicable portions of ASME AG-1 (Reference 36), ASME N509 (Reference 2), and ASME N510 (Reference 3).

Change subsection 9.4.1.1.2 as follows:

9.4.1.1.2 Power Generation Design Basis

Main Control Room/~~Technical Support Center~~Control Support Area (CSA) Areas

The nuclear island nonradioactive ventilation system provides the following specific functions:

- Controls the main control room and control support area relative humidity between 25 to 60 percent
- Maintains the main control room and ~~control support area~~CSA areas at a slightly positive pressure with respect to the adjacent rooms and outside environment during normal operations to prevent infiltration of unmonitored air into the main control room and ~~control support~~CSA areas
- Isolates the main control room and/or ~~control support area~~CSA area from the normal outdoor air intake and provides filtered outdoor air to pressurize the main control room

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Response to Request For Additional Information (RAI)

and ~~control support~~ CSA areas to a positive pressure of at least 1/8 inch wg when a high gaseous radioactivity concentration is detected in the main control room supply air duct

- Isolates the main control room and/or ~~control support area~~ CSA area from the normal outdoor air intake and provides 100 percent recirculation air to the main control room and ~~control support~~ CSA areas when a high concentration of smoke is detected in the outside air intake

Change subsection 9.4.1.2.1.1 as follows:

9.4.1.2.1.1 Main Control Room/Control Support Area HVAC Subsystem

The main control room/control support area HVAC subsystem serves the main control room and control support area with two 100 percent capacity supply air handling units, return/exhaust air fans, supplemental air filtration units, associated dampers, instrumentation and controls, and common ductwork. The supply air handling units and return/exhaust air fans are connected to common ductwork which distributes air to the main control room and ~~control support~~ CSA areas. The main control room envelope consists of the main control room, shift manager's office, operation work area, toilet, and operations break room area. The ~~control support area~~ CSA areas consists of the main control support area operations area, conference rooms, NRC room, computer rooms, shift turnover room, kitchen/rest area, and restrooms. The main control room and control support area toilets have separate exhaust fans.

Change subsection 9.4.1.2.3.1 as follows:

9.4.1.2.3.1 Main Control Room/Control Support Area HVAC Subsystem

Normal Plant Operation

During normal plant operation, one of the two 100 percent capacity supply air handling units and return/exhaust air fans operates continuously. Outside makeup air supply to the supply air handling units is provided through an outside air intake duct. The outside airflow rate is automatically controlled to maintain the main control room and ~~control support area~~ CSA areas at a slightly positive pressure with respect to the surrounding areas and the outside environment.

Abnormal Plant Operation

Control actions are taken at two levels of radioactivity as detected in the main control room supply air duct. The first is "high" radioactivity based upon gaseous radioactivity

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Response to Request For Additional Information (RAI)

instrumentation. The second is "high-high" radioactivity based upon either particulate or iodine radioactivity instruments.

If "high" gaseous radioactivity is detected in the main control room supply air duct and the main control room/control support area HVAC subsystem is operable, both supplemental air filtration units automatically start to pressurize the main control room and ~~control support area~~ CSA areas to at least 1/8 inch wg with respect to the surrounding areas and the outside environment using filtered makeup air. After the room is pressurized, one of the supplemental air filtration units is manually shut down. The normal outside air makeup duct and the main control room and control support area toilet exhaust duct isolation dampers close. The smoke/purge exhaust isolation dampers close, if open. The main control room/control support area supply air handling unit continues to provide cooling with recirculation air to maintain the main control room passive heat sink below its initial ambient air design temperature and maintains the main control room and ~~control support area~~ CSA areas within their design temperatures. The supplemental air filtration subsystem pressurizes the combined volume of the main control room and control support area concurrently with filtered outside air. A portion of the recirculation air from the main control room and control support area is also filtered for cleanup of airborne radioactivity. The main control room/control support area HVAC equipment and ductwork that form an extension of the main control room/control support area pressure boundary limit the overall infiltration (negative operating pressure) and exfiltration (positive operating pressure) rates to those values shown in Table 9.4.1-1. Based on these values, the system is designed to maintain personnel doses within allowable General Design Criteria (GDC) 19 limits during design basis accidents in both the main control room and the control support area.

If ac power is unavailable for more than 10 minutes or if "high-high" particulate or iodine radioactivity is detected in the main control room supply air duct, which would lead to exceeding GDC 19 operator dose limits, the protection and safety monitoring system automatically isolates the main control room from the normal main control room/control support area HVAC subsystem by closing the supply, return, and toilet exhaust isolation valves. Main control room habitability is maintained by the main control room emergency habitability system, which is discussed in Section 6.4.

The main control room and ~~control support~~ CSA areas ventilation supply and return/exhaust ducts can be remotely or manually isolated from the main control room.

If a high concentration of smoke is detected in the outside air intake, an alarm is initiated in the main control room and the main control room/control support area HVAC subsystem is manually realigned to the recirculation mode by closing the outside air and toilet exhaust duct isolation valves. The main control room and control support area toilet exhaust fans are tripped upon closure of the isolation valves. The main control room/~~control support~~ CSA areas are not pressurized when operating in the recirculation mode. The main control room/control support area HVAC supply air subsystem continues to provide cooling, ventilation, and temperature control to maintain the emergency habitability passive heat sink below its initial ambient air design temperature and maintains the main control room and ~~control support~~ CSA areas within their design temperatures.

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Change subsection 9.4.1.5, 2nd to last paragraph as follows:

Relative humidity indication and alarms are provided to monitor the average relative humidity in the return air from the main control room/~~control support area~~CSA areas and the inlet air to the supplemental air filtration unit charcoal filters.

Change subsection 11.5.5, last bullet as follows:

- ~~Control support area~~CSA area monitor

Change subsection 11.5.6.2, 2nd to last paragraph as follows:

Control Support Area (CSA) Area Monitor

The control support area is the location from which engineering support will be provided to the operators following a postulated accident. The ~~control support area~~CSA area radiation monitor (RMS-JE-RE016) is located so that its readout is representative of the radiation to which the support personnel are exposed. A local readout, an audible alarm, and visual alarms are provided locally to alert personnel to increasing exposure rates. A local readout, an audible alarm, and visual alarms are provided outside of the room and are visible to personnel prior to entry. Indication and alarms are also provided in the main control room.

Change subsection 14.2.9.2.10, last 4 bullets under subheading **Purpose** as follows:

- Provide heating, ventilation, and cooling for the main control room, ~~technical support center~~control support area, and Class 1E electrical equipment rooms
- Provide air filtration to limit radioactivity in the main control room and ~~technical support center~~control support area
- Maintain passive heat sinks at acceptably low initial temperatures
- Maintain the main control room and ~~technical support center~~control support area at positive pressure

PRA Revision:

None

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Response to Request For Additional Information (RAI)

Technical Report (TR) Revision:

None; the TR107 RAI responses plus the TR document the changes to the DCD.

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Response to Request For Additional Information (RAI)

RAI Response Number: RAI-TR107-NSIR-02
Revision: 0

Question:

In regard to area radiation monitor RMS-RE016, the following two (Tier 1) tables identify this monitor in relation to the TSC (Table 3.5-7 was included in TR 107, and Table 3.5-5 was not). Both tables retain the component name as the Technical Support Center Area (Radiation) Monitor. Table 3.5-7 proposes a component location change from the Annex Building to the TSC. It is unclear whether the monitor will be in the CSA, or move with the TSC if the TSC is located somewhere other than in the CSA. (See also, reference to Detector RMS-JE-RE016 in Table 11.5-2 (page 11.5-20)). Clarify the TSC designation in these two tables, and provide revised tables (if appropriate).

- Table 3.5-5, Area Radiation Monitors (page 3.5-4)
- Table 3.5-7 (cont.), untitled table (page 3.5-8)

Westinghouse Response:

The intent is to leave the radiation monitor in the CSA. That way, the Tier 1 commitment of having RMS-RE016 service the CSA can always be accommodated, even in the event that an applicant takes a departure from the DCD and moves the TSC from the CSA. (The departure would be to the Tier 2* statement in 18.8.3.5 of “[*The TSC is located in the control support area (CSA)*]*”

DCD Tier 2, section 11.5 already properly reflects the relationship between the radiation monitor, RMS-RE016, and the CSA. Tier 1, Tables 3.5-5 and 3.5-7 do not and will be revised to be consistent with Tier 2, section 11.5 as noted below.

References:
None

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Response to Request For Additional Information (RAI)

Design Control Document (DCD) Revision:

The following post DCD Revision 16, Tier 1, Section 3.5 mark-ups reflect the necessary changes to Tables 3.5-5 and 3.5-7 to provide consistency with Tier 2, Section 11.5.

Table 3.5-5 Area Radiation Monitors	
Technical Support Center <u>CSA</u> Area Monitor	RMS-RE016

Table 3.5-7		
Component Name	Tag No.	Component Location
Technical Support Center <u>CSA</u> Area Radiation Monitor	RMS-RE016	Technical Support Center <u>Control Support Area</u>

PRA Revision:

None

Technical Report (TR) Revision:

None; the TR107 RAI responses plus the TR document the changes to the DCD.

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Response to Request For Additional Information (RAI)

RAI Response Number: RAI-TR107-NSIR-03
Revision: 0

Question:

In TR 107 (Tier 1) section 3.1, Emergency Response Facilities (page 3.1-1), Design Description number 6 states that “[t]he TSC provides a habitable workspace environment.” In contrast, the proposed change in (Tier 1) Table 3.1-1, “Inspections, Tests, Analyses, and Acceptance Criteria” (or ITAAC) (page 3.1-2), Design Commitment number 6 states “[t]he CSA provides a habitable workspace environment” (emphasis added). TR 107 changes TSC to CSA in Table 3.1-1, but not in the comparable list on page 3.1-1. Please clarify, and provide a revised table/page (if appropriate).

Westinghouse Response:

In reviewing this RAI and the DCD Revision 16 Tier 1 requirement, Westinghouse notes that DCD Revision 16 uses the term CSA in both Design Commitment number 6 and the comparable list on page 3.1-1. The TR is thus in error. Westinghouse notes that the term CSA is used in both places in DCD Revision 16 and this is correct (as opposed to using TSC) because the HVAC system described in the acceptance criteria column will always supply air to the CSA, but will not supply air to the TSC should an applicant choose take a departure to the DCD and move the TSC location from the CSA.

References:
None

Design Control Document (DCD) Revision:
None

PRA Revision:
None

Technical Report (TR) Revision:
None; the TR107 RAI responses plus the TR document the changes to the DCD.

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Response to Request For Additional Information (RAI)

RAI Response Number: RAI-TR107-NSIR-04
Revision: 0

Question:

In (Tier 2) section 18.2.1.3 (page 18.2-3), the words "and/or a site-specific TSC" have been added to the statement that the combined license (COL) applicant is responsible for designing the emergency operations facility (EOF). In regard to the use of the word "or," please explain how the COL applicant would be responsible for designing the EOF, but not the TSC; and the TSC, but not the EOF. Wouldn't the COL applicant be responsible for both?

Westinghouse Response:

In reviewing this RAI and DCD 18.2.1.3, Westinghouse notes that the words, "and/or a site specific TSC" are not actually included in DCD Revision 16 and the TR is inconsistent with DCD Revision 16. DCD Revision 16 correctly states that the EOF is the responsibility of the COL applicant. The TSC is fully described in the DCD and is not the responsibility of the COL applicant. If however, the COL applicant chooses to take a departure to the DCD TSC location, they may do so in their COL application and they will provide information as appropriate. There is, of course, no requirement for them to take such a departure.

References:
None

Design Control Document (DCD) Revision:
None

PRA Revision:
None

Technical Report (TR) Revision:
None; the TR107 RAI responses plus the TR document the changes to the DCD.

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI-TR107-NSIR-05
Revision: 0

Question:

The second and third paragraphs on page 18.8-18 of (Tier 2) subsection 18.8.3.5 have been entirely deleted. While some of the deleted language appears to be addressed elsewhere in the AP1000 DCD, TR 107 does not clearly explain why these two specific paragraphs have been removed. Please explain why these two paragraphs have been removed.

Westinghouse Response:

The deleted language provided what Westinghouse considers to be redundant descriptive material that is true for the TSC only when the TSC is located in the CSA. Figures in the DCD show the location of the CSA, which in the previous DCD revisions was identified as being the TSC. When combined with the Revision 16 Tier 2* statement of “[*The TSC is located in the control support area (CSA)*]”*, the CSA is clearly the TSC. DCD sections 9.4.1 and 6.4 provide the descriptive information necessary to describe the VBS HVAC capabilities, which service the TSC. Here again, the descriptive material is only accurate when the TSC is located in the CSA.

If a COL applicant chooses to take a departure from the AP1000 standard and move the TSC from the CSA, the descriptive material will no longer be valid because the VBS and VES systems will no longer service the TSC, and the TSC will no longer be located in the CSA. Accordingly, the COL applicant will need to describe the new systems that they have put in place to service the TSC in its new location.

Westinghouse attempted to, but could not revise the language in 18.8.3.5 to be valid regardless of the TSC location and recognized that describing the same information in multiple locations was likely to introduce errors, especially if the TSC were moved. As a result, Westinghouse chose to remove the noted language from the DCD. As DCD Revision 16, section 18.8.3.5 contains the newly added Tier 2* requirement of “[*The TSC is located in the control support area (CSA)*]”* and retains the existing Tier 2* requirement of “[*The TSC complies with the habitability requirements of Reference 27 when electrical power is available.*]”*, along with the necessary descriptive material elsewhere in the DCD, Westinghouse believes that removing the language from the DCD should be acceptable to the NRC.

Design Control Document (DCD) Revision:

None

PRA Revision:

None

Technical Report (TR) Revision:

None

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Response to Request For Additional Information (RAI)

RAI Response Number: RAI-TR107-NSIR-06
Revision: 0

Question:

The staff did not review the entire AP1000 DCD to identify all occurrences of TSC reference that should be changed to CSA (consistent with TR 107), as this is the applicant's responsibility. Are there any additional TSC references in the DCD that should be changed to CSA (beyond those identified in TR 107 or by the staff in RAI-TR107-NSIR-01, RAI-TR107-NSIR-02, or RAI-TR107-NSIR-03)? If so, provide the proposed changes.

Westinghouse Response:

Westinghouse has re-reviewed the DCD and TR 107 in light of the NRC RAIs (RAI-TR107-NSIR-01, RAI-TR107-NSIR-02, RAI-TR107-NSIR-03) and due to comments received from industry reviewers and have identified additional changes needed to the DCD. The changes are described below.

While Westinghouse has attempted to change the terminology "TSC" to "CSA" in all of the appropriate DCD sections, it is recognized that the COL applicant may need to add information to Tier 1, revise the Tier 2* statement in section 18.8.8.3.5 {that, "[The TSC is located in the control support area (CSA)]*"} and make additional changes to Tier 2 should they want to take a departure to the AP1000 certified design and move the TSC from the CSA. It is most important that the work performed in the TR and the subsequent RAI responses for the DCD make it such that an applicant wanting to move the TSC from the CSA will not require an exemption to any of the existing or proposed Tier 1 requirements.

DCD Rev. 16 Tier 2 Table 7.5-1

"technical support center" should be "control support area" in the table and in Note 2 of the table.

DCD Rev. 16 Tier 2 Table 7.5-8

"technical support center" should be "control support area" in the table.

DCD Rev. 16 Tier 2 subsection 9.4.1.2.1.2 2nd paragraph

"technical support center" should be "control support area" in two (2) places – TR 107 properly identifies these changes, but DCD Rev. 16 did not included them.

DCD Rev. 16 Tier 2 section 9.4.1.4, first paragraph

"MCR/TSC" Should be "MCR/CSA."

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DCD Rev. 16 Tier 2 section 9.4.12

“MCR/TSC HVAC subsystem's” should be “MCR/CSA HVAC Subsystem's.”

DCD Rev. 16 Tier 2 subsection 9A.3.4.16 Room name associated with fire zone 4041 AF 4043, Room 40403 – Deleted “operations area” from room name to be consistent with Figure 9A-3 (Sheet 2 of 3). – DCD Rev. 16 already includes this change.

DCD Rev. 16 Tier 2 subsection 9A.3.4.16, first paragraph under **Smoke Control Features** “technical support center” should be “control support area” – TR 107 properly identifies the change, but DCD Rev. 16 did not included it.

DCD Rev. 16 Tier 2 subsection 18.8.3.5, 6th paragraph
TR107 proposes a change of TSC to CSA in two (2) places – DCD Rev.16 does not reflect these changes and should not as the section is discussing the TSC regardless of its location.

Reference:

None

Design Control Document (DCD) Revision:

Post Rev. 16 DCD changes:

Tier 2

Change Table 7.5-1 and Note 2 at the end of Table 7.5-1 as follows:

Table 7.5-1 (Sheet 12 of 12)								
POST-ACCIDENT MONITORING SYSTEM								
Variable	Range/ Status	Type/ Category	Qualification		Number of Instruments Required	Power Supply	QDPS Indication (Note 2)	Remarks
			Environmental	Seismic				
Technical support center control support area radiation	10 ⁻¹ - 10 ⁴ mR/hr	E3	None	None	1	Non-IE	No	

2. The same information is available in the ~~technical support center~~ control support area via the monitor bus. Information available on the qualified data processing system is also available at the remote shutdown workstation.

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Response to Request For Additional Information (RAI)

Change Table 7.5-8 as follows:

Table 7.5-8		
SUMMARY OF TYPE E VARIABLES		
Function Monitored	Variable	Type/Category
Area Radiation	Technical support center Control support area radiation level	E3

Change subsection 9.4.1.2.1.2, 2nd paragraph as follows:

Each subsystem consists of two 100 percent capacity supply air handling units, return/exhaust air fans, associated dampers, controls and instrumentation, and common ductwork. The supply air handling units and return/exhaust air fans are connected to a common ductwork which distributes air to the Class 1E electrical rooms. The outside supply air intake enclosure for the A and C subsystem is common to the main control room/~~technical support center~~control support area intake located on the roof of the auxiliary building at elevation 153'-0". The outside supply air intake for the B and D subsystem is located separate from the main control room/~~technical support center~~control support area air intake enclosure on the auxiliary building roof at elevation 153'-0". The exhaust ducts from the battery rooms are connected to the turbine building vent to remove hydrogen gas generated by the batteries.

Change subsection 9.4.1.4, 1st paragraph as follows:

The nuclear island nonradioactive ventilation system is designed to permit periodic inspection of system components. Each component is inspected prior to installation. Components of each system are accessible for periodic inspection during normal plant operation. A system air balance test and adjustment to design conditions is conducted in the course of the plant preoperational test program. Airflow rates are measured and balanced within a tolerance of ± 10 percent of design flow rate in accordance with the guidelines of SMACNA HVAC systems, Testing, Adjusting and Balancing (Reference 19) except the supplemental air filtration units which are balanced in accordance with the guidelines of ASME N510 (Reference 3). Instruments are calibrated during testing. Automatic controls are tested for actuation at the proper setpoints. Alarm functions are checked for operability. Air quality within the MCR/~~TSC~~CSA environment is confirmed to be within the guidelines of Table 1 and Appendix C, Table C-1, of Reference 32 by analyzing air samples taken during preoperational testing.

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Response to Request For Additional Information (RAI)

Change section 9.4.12 as follows:

9.4.12 Combined License Information

The Combined License applicants referencing the AP1000 certified design will implement a program to maintain compliance with ASME AG-1 (Reference 36), ASME N509 (Reference 2), ASME N510 (Reference 3) and Regulatory Guide 1.140 (Reference 30) for portions of the nuclear island nonradioactive ventilation system and the containment air filtration system identified in subsection 9.4.1 and 9.4.7. The Combined License applicant will also provide a description of the ~~MCR/TSC-CSA HVAC subsystem's~~ Subsystem's recirculation mode during toxic emergencies, and how the subsystem equipment isolates and operates, as applicable, consistent with the toxic issues, including conformance with Regulatory Guide 1.78 (Reference 37), to be addressed by the Combined License applicant as discussed in DCD subsection 6.4.7.

Change subsection 9.A.3.4.16 1st paragraph under **Smoke Control Features** follows:

Smoke Control Features

Combination fire-smoke dampers in the main control room/~~technical support center~~control support area HVAC subsystem of the NI non-radioactive ventilation system (VBS) close automatically upon detection of smoke or on high temperature to isolate this fire area. The balance of this and other VBS subsystems continue to provide ventilation to the unaffected fire areas. This subsystem may be manually realigned to the once-through smoke exhaust ventilation mode to minimize the potential migration of smoke. If the exhaust fire-smoke damper for this fire area is operable, the damper may be reopened to further reduce the migration of smoke. After the fire, smoke is removed from this fire area by reopening the fire dampers and operating the ventilation system in the once-through ventilation mode.

PRA Revision:

None

Technical Report (TR) Revision:

None; the TR107 RAI responses plus the TR document the changes to the DCD.

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Response to Request For Additional Information (RAI)

RAI Response Number: RAI-TR107-NSIR-07
Revision: 0

Question:

Is a COL Action Item (COL information) needed to ensure that all of the references to TSC or CSA in the site-specific portion of the Final Safety Analysis Report (FSAR) are properly made by an applicant who references the AP1000 certified design? If not, explain why. If so, provide the proposed COL Action Item (COL information).

Westinghouse Response:

Westinghouse does not consider a COL Information Item to be necessary to ensure that all of the references to TSC or CSA in the site-specific portion of the FSAR are properly made by an applicant who references the AP1000 certified design. The AP1000 standard is such that the TSC is located in the CSA. DCD section 18.8.3.5 contains a Tier 2* statement indicating this. As a result there should be little or no site specific discussion in the COL application as to the location or adequacy of the TSC location other than incorporation by reference of the DCD language when the standard design is implemented and addressing of already existing COL Information Items. Should an applicant choose to take a departure from the AP1000 DCD standard and move the TSC from the CSA, the applicant will then have to advise the NRC that the Tier 2* statement is no longer valid for their plant. At that time, the applicant will have to demonstrate how in moving the TSC that they continue to adequately address all regulatory requirements associated with the different TSC location. It is most important that the changes involving TSC and CSA are implemented properly in Tier 1 so that if an applicant chooses to move the TSC from the CSA that an exemption to Tier 1 will not be necessary.

Reference:
None

Design Control Document (DCD) Revision:
None

PRA Revision:
None

Technical Report (TR) Revision:
None