

PMBelCOL PEmails

From: Habib, Donald
Sent: Wednesday, January 27, 2010 11:38 AM
To: Habib, Donald; Sebrosky, Joseph; 'rgrumbir@gmail.com'; 'alsterdis@tva.gov'; 'erg-xl@cox.net'; 'pshastings@duke-energy.com'; 'kslays@duke-energy.com'; 'Bob Hirmanpour'; 'Spink, Thomas E'; 'Ryan, William T III'; Wes Sparkman; VogtleCOL Resource
Cc: PMBelCOL PEmails; Hodgdon, Ann; Martin, Jody; Joshi, Ravindra; Coffin, Stephanie
Subject: RE: Draft RAI 4281 - 6.4 Control Room Habitability System
Attachments: RAI 4281.doc

To All,

Attached is the correct RAI document. The previously attached document was sent in error.

Donald C. Habib
NRO/DNRL
AP1000 Projects Branch 1
301-415-1035

From: Habib, Donald
Sent: Wednesday, January 27, 2010 11:10 AM
To: Sebrosky, Joseph; 'rgrumbir@gmail.com'; 'alsterdis@tva.gov'; 'erg-xl@cox.net'; 'pshastings@duke-energy.com'; 'kslays@duke-energy.com'; 'Bob Hirmanpour'; 'Spink, Thomas E'; 'Ryan, William T III'; Wes Sparkman; VogtleCOL Resource
Cc: PMBelCOL PEmails; Hodgdon, Ann; Martin, Jody; Joshi, Ravindra; Coffin, Stephanie
Subject: Draft RAI 4281 - 6.4 Control Room Habitability System

To All,

Attached is a draft Bellefonte RAI related to the staff's review of control room habitability. Please contact me within 3 days if a conference call is required for clarification, or the final RAI will be issued.

Thank you,

Donald C. Habib
Project Manager
U.S. Nuclear Regulatory Commission
Office of New Reactors, DNRL/NWE1
Room T-6D14
Washington, DC 20555
301-415-1035
dch3@nrc.gov

Hearing Identifier: Bellefonte_COL_Public_EX
Email Number: 1765

Mail Envelope Properties (E3D0DF334F617344BE38EB00C881B1B30A2437D357)

Subject: RE: Draft RAI 4281 - 6.4 Control Room Habitability System
Sent Date: 1/27/2010 11:37:55 AM
Received Date: 1/27/2010 11:37:58 AM
From: Habib, Donald

Created By: Donald.Habib@nrc.gov

Recipients:

"PMBelCOL PEmails" <PMBelCOL.PEmails@nrc.gov>
Tracking Status: None
"Hodgdon, Ann" <Ann.Hodgdon@nrc.gov>
Tracking Status: None
"Martin, Jody" <Jody.Martin@nrc.gov>
Tracking Status: None
"Joshi, Ravindra" <Ravindra.Joshi@nrc.gov>
Tracking Status: None
"Coffin, Stephanie" <Stephanie.Coffin@nrc.gov>
Tracking Status: None
"Habib, Donald" <Donald.Habib@nrc.gov>
Tracking Status: None
"Sebrosky, Joseph" <Joseph.Sebrosky@nrc.gov>
Tracking Status: None
"rgrumbir@gmail.com" <rgrumbir@gmail.com>
Tracking Status: None
"alsterdis@tva.gov" <alsterdis@tva.gov>
Tracking Status: None
"erg-xl@cox.net" <erg-xl@cox.net>
Tracking Status: None
"pshastings@duke-energy.com" <pshastings@duke-energy.com>
Tracking Status: None
"kslays@duke-energy.com" <kslays@duke-energy.com>
Tracking Status: None
"Bob Hirmanpour" <bobhirman@live.com>
Tracking Status: None
"Spink, Thomas E" <tespink@tva.gov>
Tracking Status: None
"Ryan, William T III" <wtryan@tva.gov>
Tracking Status: None
"Wes Sparkman" <wasparkm@southernco.com>
Tracking Status: None
"VogtleCOL Resource" <VogtleCOL.Resource@nrc.gov>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	Size	Date & Time
MESSAGE	1135	1/27/2010 11:37:58 AM
RAI 4281.doc	32250	

Options

Priority:

Standard

Return Notification:

No

Reply Requested:

No

Sensitivity:

Normal

Expiration Date:

Recipients Received:

Request for Additional Information No. 4281 Revision 1

Vogle
Southern Nuclear Operating Co.
Docket No. 52-0025 and 52-0026
SRP Section: 06.04 - Control Room Habitability System
Application Section: 6.4

QUESTIONS for Containment and Ventilation Branch 1 (AP1000/EPR Projects) (SPCV)

06.04-***

1. Provide data to facilitate the staff's confirmatory analysis.

To assure the control room habitability per GDC 19 during a hypothetical accidental release of methoxypropylamine and ammonium bisulfite, the staff requests the following chemical data for confirmatory analysis with respect to these two chemicals (the applicant has specified these two chemicals as 60% aqueous solution):

Boiling Point, Critical Pressure, Critical Temperature, Density (gas), Flash Point, Freezing Point, Heat Capacity (gas, constant pressure), Heat Capacity (liquid, constant pressure), Molecular Weight, Specific Gravity, Heat of Vaporization

Provide references or bases (e.g. chemical specification from vendor, formula, etc.) to support the above chemical data and the 60% aqueous solution assumption.

06.04-***

1. Justify analysis methodology and information.

The applicant used the ALOHA and TOXDISP methodologies to perform the chemical release analysis. Provide the following for review:

- a. Information and data that links ALOHA and TOXDISP from chemical evaporation to concentration in control room,
- b. Justification of the TOXDISP results of $10E-37$ for stability class F, which the staff estimates to be greater when HABIT is used,
- c. The cross-sectional area of the building structure projected on a plane perpendicular to the wind direction,
- d. Justification of the "Urban or Forest" assumption for ground roughness as input in ALOHA (such as by reference to design features described in the FSAR).

2. Justify the data of air exchange per hour used in the analysis and correct it in the FSAR.

The data for air exchange per hour used in the analysis are not the same as the data shown in the FSAR (e.g. 0.391 in Section 2.2.3). Provide:

- a. Calculation details for the analysis data,

b. Revision of the data shown in the FSAR, so that it is consistent with the analysis data.