PMBeICOL PEmails

From: Joseph Sebrosky
Sent: Wednesday, May 28, 2008 8:36 AM
To: pmray@tva.gov
Cc: Ravindra Joshi; Nan Chien
Subject: draft 6_4 RAIs.doc
Attachments: draft 6_4 RAIs.doc

Phil,

Attached are draft RAIs associated with SRP section 6.4. Please let me know if you wish to have a phone call to discuss the RAIs.

Joe

Hearing Identifier: Bellefonte_COL_Public_EX
Email Number: 1028

Mail Envelope Properties (Joseph.Sebrosky@nrc.gov20080528083500)

Subject: draft 6_4 RAIs.doc
Sent Date: 5/28/2008 8:35:54 AM
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From: Joseph Sebrosky

Created By: Joseph.Sebrosky@nrc.gov

Recipients:
"Ravindra Joshi" <Ravindra.Joshi@nrc.gov>
Tracking Status: None
"Nan Chien" <Nan.Chien@nrc.gov>
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MESSAGE	158	5/28/2008 8:35:00 AM
draft 6_4 RAIs.doc	25710	

Options
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SRP Section: 06.04 - Control Room Habitability System
Application Section: 6.4

QUESTIONS from Containment and Ventilation Branch 1

ERAI 327, RAI 06.04-***

The application concludes that "as permitted by Regulatory Guide 1.78, toxic gas monitoring for chlorine is not included in the control room design." Regulatory Guide 1.78 states that "human detection, i.e., smell, may be appropriate when no detection instruments are available in the control room for given chemical types." According to the application, control room operators could sense the chlorine from the identified chlorine event only 5½ minutes before the concentration would reach the threshold for the onset of health effects (Immediately Dangerous to Life and Health or IDHL). Also according to the application, if it is assumed that the operators can don respirators in two minutes after the operators detect the smell of a chlorine gas release, there would be only 3.5 minutes following that assumed action before chlorine concentrations reach the IDHL level of 10 ppm. Please explain how the proposed Bellefonte procedures can achieve the necessary operator actions within these time frames, and elaborate on the basis for TVA's conclusion that chlorine monitors should not be included in the control room design.

06.04-***

Provide details of the analysis that generated Figure 6.4-201, including input conditions and assumptions, in sufficient detail to permit independent confirmatory analysis. These details should include the size of the spill, the wind conditions (speed and direction), the dilution of the chlorine, the normal air intake flow rate of the ventilation system, the size of the control room, and the control room in-leakage rate.

06.04-***

The capability of the control room habitability systems to maintain a suitable environment for prolonged occupancy throughout the toxic gas release, as well as during the other events identified in Chapter 15, is based on a maximum of 11 operators in the control room. Do Bellefonte's plant procedures specify the maximum number of operators allowed in the control room in circumstances when the habitability systems are intended to protect the control room occupants?

06.04-***

Table 6.4-201 of the COL, Input Values Used in Analyses of Chlorine, states that the value assumed for inleakage is 0.0023 m^3/sec. Will 0.0023 m^3/sec be confirmed in control room air tightness testing, and how will the effects of wind pressure and temperature differences (including expansion of outside cold air after entering the control room) be accounted for?