BellefonteRAIsPEm Resource

From: Joseph Sebrosky
Sent: Monday, June 09, 2008 12:35 PM
To: BellefonteRAIsPEm Resource
Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 036 RELATED TO SRP SECTION 2.2.3 FOR THE BELLEFONTE UNITS 3 and 4 COMBINED LICENSE APPLICATION
Attachments: BLN-RAI-LTR-036.doc

Hearing Identifier: Bellefonte_COL_RAI_Public
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Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 036 RELATED TO SRP SECTION 2.2.3 FOR THE BELLEFONTE UNITS 3 and 4 COMBINED LICENSE APPLICATION
Sent Date: 6/9/2008 12:35:08 PM
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From: Joseph Sebrosky

Created By: Joseph.Sebrosky@nrc.gov

Recipients:
"BellefonteRAIsPEm Resource" <BellefonteRAIsPEm.Resource@nrc.gov>
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June 9, 2008

Ms. Andrea L. Sterdis
Manager, Nuclear Licensing & Industry Affairs
Nuclear Generation Development & Construction
Tennessee Valley Authority
1101 Market Street
Chattanooga, Tennessee 37402-2801

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 036 RELATED TO SRP SECTION 2.2.3 FOR THE BELLEFONTE UNITS 3 and 4 COMBINED LICENSE APPLICATION

Dear Ms. Sterdis:

By letter dated September 30, 2007, as supplemented by letters dated November 2, 2007, January 8, 2008 and January 14, 2008, Tennessee Valley Authority (TVA) submitted its application to the U. S. Nuclear Regulatory Commission (NRC) for a combined license (COL) for two AP1000 advance passive pressurized water reactors pursuant to 10 CFR Part 52. The NRC staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed application.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter.

To support the review schedule, you are requested to respond within 30 days of the date of this letter. If changes are needed to the final safety analysis report, the staff requests that the RAI response include the proposed wording changes.

If you have any questions or comments concerning this matter, you may contact me at 301-415-1132.

Sincerely,

/RA/

Joseph M. Sebrosky, Senior Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-014
52-015
eRAI Tracking No. 339

Enclosure:
Request for Additional Information

CC: see next page

If you have any questions or comments concerning this matter, you may contact me at 301-415-1132.

Sincerely,

/RA/

Joseph M. Sebrosky, Senior Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-014
52-015
eRAI Tracking No. 339

Enclosure:
Request for Additional Information

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NAME	STammara	CCox		PMoulding*	JSebrosky*
DATE	5/21/08	5/21/08		5/27/08	5/23/08

*Approval captured electronically in the electronic RAI system.

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Request for Additional Information
Bellefonte Units 3 and 4
Tennessee Valley Authority
Docket No. 52-014 and 52-015
SRP Section: 02.02.03 - Evaluation of Potential Accidents
Application Section: SRP 2.2.3

QUESTIONS from Siting and Accident Consequences Branch (RSAC)

02.02.03-1
FSAR Tables 2.2-209, 2.2-210, and 2.2-211 identify commodities transported via the Tennessee River near the proposed site. The application mentions (page 2.2-13) that the applicant assessed potential hazards from explosive cargo transported past the proposed site via barge on the Guntersville Reservoir and that "initial screening of hazardous commodities eliminated all but two ….". Which of the commodities/chemicals listed in the above-referenced tables were considered for screening? (Relatedly, please clarify why the two chemicals selected for further analysis, styrene and ethanol, are not listed in the tables.) Please clarify what bases, bounding assumptions, amounts, release rates, frequencies, traffic statistics and other data TVA used in determining the safe standoff distances resulting from explosion, vapor cloud explosion and probability presented.

02.02.03-2
Please explain how the applicant determined (in Section 2.2.3.1.1.3) the gasoline vapor amounts for the Fuel Center storage in calculating the standoff distances resulting from confined and unconfined vapor explosions.

02.02.03-3
Please clarify the basis for the screening of chemicals stored at Maples Industries and the subsequent selection of three chemicals (isopropyl alcohol, gasoline, and cyclohexylamine) for further evaluation as discussed in Section 2.2.3.1.1.3. Please identify which chemicals were screened and what quantities of those chemicals are present. (Relatedly, please clarify why the three selected chemicals and their quantities are not presented in FSAR Table 2.2-203.) Please clarify how the safe standoff distances were calculated and presented.

02.02.03-4
In section 2.2.2.2.4 (page 2.2-5), with respect to Great Western Products, the application states that "no hazardous materials are listed as being stored at this location." However, in Section 2.2.3.1.1.3, on page 2.2-16, the application indicates that an assessment was performed to evaluate potential hazards of chemicals stored at the Great Western Products facility and that based on an initial screening, three chemicals needed further analysis with respect to potential adverse impacts to the proposed site from an accident at that facility. Please explain how these statements are consistent, explain the basis for the initial screening process used (including which chemicals and amounts were considered), and clarify how the three chemicals (isopropyl alcohol, Calfoam, and Glycol Ether PM) were selected for further analysis and evaluated. Please also explain how the resulting safe standoff distances were calculated.

02.02.03-5
Provide the tanker truck volume, rail car tanker volume and chemicals, and barge shipment volume used for flammable vapor cloud (delayed ignition) analysis in FSAR Section 2.2.3.1.2. Please explain why two rupture sizes were considered. (For example, an equivalent tank with volume of 184,500 gallons at the Fuel Center is used with rupture sizes of 53.8 and 10.7 sq.ft.). Please also provide the tank length, diameter or width and liquid height, and other input values used in the Areal Location Hazardous Atmospheres (ALOHA) modeling.

02.02.03-6
Section 2.2.3.1.3.2.2 of the FSAR states that a preliminary statistical analysis evaluated the general risk from mobile sources. The section states that preliminary risk analysis indicated a low risk, but not lower than $1x10^{-6}$ per year, and, therefore, that a wholly risk-based approach was not considered. Please clarify how the risk analysis was performed and identify the calculated preliminary risk.

02.02.03-7
Please explain in greater detail the chemicals screening analysis discussed in FSAR Section 2.2.3.1.3 and the basis for selecting only chlorine for further control room habitability analysis in Chapter 6.4.