

## NRR-PMDAPEm Resource

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**From:** Wilkins, Lynnea  
**Sent:** Monday, December 23, 2013 4:26 PM  
**To:** HANSHER, BILL R (bhansher@oppd.com)  
**Cc:** Sebrosky, Joseph; EDWARDS, MICHAEL L (medwards@oppd.com); Burkhardt, Janet  
**Subject:** Fort Calhoun Station RAIs Re: NFPA-805 (ME7244)

Bill,

By letter dated September 28, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML112760660), as supplemented by letters dated December 19 and 22, 2011, and March 20, 2012 (ADAMS Accession Nos. ML113540334, ML11363A077, and ML12083A147, respectively), Omaha Public Power District, (the Licensee), submitted a license amendment request (LAR) to transition their fire protection licensing basis at the Fort Calhoun Station, Unit 1, from Title 10 of the Code of Federal Regulations (CFR), Section 50.48(b), to 10CFR50.48(c), National Fire Protection Association Standard NFPA 805 (NFPA 805). A review team, consisting of U.S. Nuclear Regulatory Commission (NRC) staff and contractors from Pacific Northwest National Laboratory (PNNL) and the Center for Nuclear Waste Regulatory Analyses (CNWRA) participated in a regulatory audit of Fort Calhoun in Blair, NE from March 5 -9, 2012. By letter dated April 26, 2012, (ADAMS Accession No. ML12198A406) the NRC issued requests for additional information (RAIs). By letters dated July 24, 2012 (ADAMS Accession No. ML12208A131), August 24, 2012 (ADAMS Accession No. ML12240A151), and September 27, 2012 (ADAMS Accession No. ML12276A046) the licensee provided responses to the RAIs. The NRC staff reviewed the information provided by the licensee in response to the first set of RAIs and determined that additional information was needed for the staff to complete its evaluation. Consequently, the staff issued additional RAIs on February 22, 2013, (ADAMS Accession No. ML13053A226), June 27, 2013 (ADAMS Accession No. ML13178A035), August 14, 2013 (ADAMS Accession No. ML13226A122) and September 27, 2013 (ADAMS Accession No. ML13270A287). The licensee responded to these RAIs in letters dated April 23, 2013 (ADAMS Accession No. ML13116A015), May 21, 2013 (ADAMS Accession No. ML13144A814), July 29, 2013 (ADAMS Accession No. ML13211A055), September 12, 2013, October 11, 2013 (ADAMS Accession No. ML13288A139 ), November 4, 2013 (ADAMS Accession No. ML13309A634) and November 11, 2013.

The U.S. NRC staff has reviewed the information provided in your application and determined that additional information is required in order to complete its review. These RAIs can be found below. Please contact me if a clarifying call is needed. Additionally, please provide the expected response date.

Thanks  
Lynnea

*Lynnea Wilkins*, Project Manager  
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Cooper Nuclear Station  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation  
US Nuclear Regulatory Commission  
Phone: 301-415-1377

REQUEST FOR ADDITIONAL INFORMATION

VOLUNTARY FIRE PROTECTION RISK INITIATIVE

OMAHA PUBLIC POWER DISTRICT

## FORT CALHOUN STATION

### DOCKET NO. 50-285

#### **Probabilistic Risk Assessment (PRA) RAI 26.01**

In letter dated November 4, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13309A634), the licensee responded to PRA RAI 26 and indicated that Frequency Bins 11 (Cable Fires Caused by Welding and Cutting - Plant Wide) and 31 (Cable Fires Caused by Welding and Cutting - Turbine Building) are not relevant. Only a portion of the fire frequency bins identified in frequently asked questions (FAQ) 08-0048, "Fire Ignition Frequency," had sensitivity analyses performed. According to the documented panel decision accepted by NRC "Recent Fire PRA Methods Review Panel Decisions and EPRI 1022993, 'Evaluation of Peak Heat Release Rates in Electrical Cabinet Fires'" (ADAMS Accession No. ML12171A583), Bins 11 and 31 each have an alpha of 0.5, which meets the criteria from FAQ 08-0048 for a sensitivity study to the NUREG/CR-6850, "EPRI/NRC-RES Fire PRA Methodology for Nuclear Power Facilities," values. In addition, the panel decision for Bin 5 (Cable Fires Caused by Welding and Cutting - Control/Auxiliary/Reactor building) specifies an alpha of 0.5, adding this bin to the sensitivity study as well. The response to PRA RAI 26 indicated that the change in risk acceptance guidelines is exceeded in the required sensitivity evaluation even when including the reduced set of bin frequencies. FAQ 08-0048 indicates that defense-in-depth (DID) measures should be considered when the Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant Specific Changes to the Licensing Basis," guidelines are exceeded.

- a. Please include the missing bins in the sensitivity evaluation and identify any additional DID measures that arise from the results of this evaluation. If no additional DID measures are needed from assessing the results of these sensitivity studies, provide your justification.
- b. Please provide confidence that all the DID measures will be implemented and maintained consistent with their risk significance by developing e.g., an implementation item in Table S-3.

#### **PRA RAI 24.01**

In letter dated November 4, 2013 (ADAMS Accession No. ML13309A634), the licensee responded to PRA RAI 24 and estimated a total core damage frequency (CDF) from internal events, flooding, and fire to be  $9.99\text{E-}5$ . The total CDF from all hazards exceeds  $1\text{E-}4$  if the staff adds its estimated seismic CDF of  $1.3\text{E-}5$  from GI-199. If the total CDF exceeds  $1\text{E-}4/\text{yr}$ , RG 1.174 indicates that the acceptance guidelines for increases in CDF and large early release frequency (LERF) should be  $1\text{E-}6/\text{yr}$  and  $1\text{E-}7/\text{yr}$  respectively. These increases are greater than the increases proposed by the licensee. Provide an estimate of the total CDF and LERF at the site. If these values are greater than  $1\text{E-}4/\text{yr}$  or  $1\text{E-}5/\text{yr}$  respectively, please clarify how the proposal is consistent with RG 1.174 guidelines.

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**From:** Wilkins, Lynnea

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