

PMFermiCOLNPEm Resource

From: Olson, Bruce
Sent: Friday, February 12, 2010 11:17 AM
To: Randall D Westmoreland; Craig D Tylenda
Cc: Kirk LaGory; Roy Karimi; Lee, Jay; FermiCOL Resource
Subject: Status of AC RAI responses
Attachments: Status of AC RAI responses-2-12-10.doc

Attached are AC RAI response comments from the NRC, as agreed from the 2/11/2010 conference call.

We are planning a follow up phone call with you for clarification, if needed, on Wednesday, 2/17/2010, or later in the week, but not later than noon on Friday.

Thanks.....

Bruce Olson
Environmental Project Manager
NRO/DSER/RAP3
301-415-3731

Hearing Identifier: Fermi_COL_NonPublic
Email Number: 823

Mail Envelope Properties (AB7F52B9BFE4CE4EAFCD1B45F02BEA4F31B362D609)

Subject: Status of AC RAI responses
Sent Date: 2/12/2010 11:17:18 AM
Received Date: 2/12/2010 11:17:21 AM
From: Olson, Bruce

Created By: Bruce.Olson@nrc.gov

Recipients:

"Kirk LaGory" <lagory@anl.gov>
Tracking Status: None
"Roy Karimi" <rxk@eri-world.com>
Tracking Status: None
"Lee, Jay" <Jay.Lee@nrc.gov>
Tracking Status: None
"FermiCOL Resource" <FermiCOL.Resource@nrc.gov>
Tracking Status: None
"Randall D Westmoreland" <westmorelandr@dteenergy.com>
Tracking Status: None
"Craig D Tylenda" <tylendac@dteenergy.com>
Tracking Status: None

Post Office: HQCLSTR02.nrc.gov

Files	Size	Date & Time
MESSAGE	393	2/12/2010 11:17:21 AM
Status of AC RAI responses-2-12-10.doc		60922

Options

Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

Fermi 3 Accident RAIs
Updated February 12, 2010

Status of AC RAI responses-2-12-10.doc

RAI Number ¹	Response Date/ ADAMS Accession No.	Status of Response	Question Summary (RAI)	Full Text (supporting information)	Comments
AC7.1-1 ESRP 7.1 10 CFR 50.34 10 CFR 52.79	9/30/09 ML093350028	Not complete. Update needed prior to completion of the draft EIS.	Provide a reevaluation of the Design Basis Accidents (DBA) doses using the ESBWR Design Control Document (DCD) Revision 5 source terms and site-specific X/Q values for the Exclusion Area Boundary (EAB) and Low Population Zone (LPZ).	During the site audit, Detroit Edison presented new DBA doses using DCD Revision 5. The NRC staff will use the X/Q values and calculate the EAB And LPZ doses for the DBAs, and compare the results of its calculations with the results of Detroit Edison's calculations.	[2/12/10] Detroit Edison indicated that Section 7.1 of the ER is being revised to incorporate DCD Rev 6, and the revised short term X/Q values. [10/20/09] Response acceptable, however, the revised values provided are already out of date and must be updated. Detroit Edison provided changes to the ER, but indicated that further change may be needed in response to revisions to the ESBWR DCD and other revisions to the COL. The NRC should be provided with updated analyses based on ESBWR DCD Rev. 6, which is currently available.
AC7.2-1 ESRP 7.2 10 CFR 51.50(c)	9/30/09 ML093350028 1/29/10 ML100331451	Complete	Provide in electronic format the input and output files for the MACCS2 code used to evaluate the consequences of severe accidents in the ER. Include all files required to run the code for the base case calculation as well as sensitivities with respect to the release height, energy, meteorology, and precipitation assumptions.	During the site audit, Detroit Edison presented new severe accident consequence and risk estimates using DCD Revision 5, and Probabilistic Risk Assessment (PRA) Revision 3. The NRC staff will run the MACCS2 code and compare the results of its calculations with the results of Detroit Edison's calculations.	[2/11/10] Response acceptable. Updated values provided. [10/20/09] Response acceptable, however, the revised values provided are already out of date and must be updated. Detroit Edison provided changes to the ER, but indicated that further change may be needed in response to revisions to the

¹ RAI numbers follow a specific form. RAIs apply to a specific section from the Environmental Standard Review Plan (ESRP; U.S. Nuclear Regulatory Commission, 1999. *Standard Review Plans for Environmental Reviews for Nuclear Power Plants*. NUREG-1555. Office of Nuclear Reactor Regulation, Washington, D.C. October, 1999), and the RAI number consists of the relevant ESRP section number followed by a unique number (e.g., the first RAI related to ESRP Section 2.7 would be numbered 2.7-1). If the RAI applies to more than one section of the ESRP, then the next higher section number is used (e.g., if an RAI is applicable to Sections 3.3.4, 3.3.5, and 3.3.6, then the RAI is assigned to Section 3.3, such as 3.3-1).

RAI Number ¹	Response Date/ ADAMS Accession No.	Status of Response	Question Summary (RAI)	Full Text (supporting information)	Comments
					ESBWR DCD and other revisions to the COL. The NRC should be provided with updated analyses based on ESBWR DCD Rev. 6 and PRA Rev. 4, which are currently available.
AC7.2-2 ESRP 7.2 10 CFR 51.50(c)	9/30/09 ML093350028 1/29/10 ML100331451	Not complete	Provide the revised results for accident-specific impacts to population and land from the Fermi 3 severe accident analysis, similar to that provided in Table 7.2-1 in the ER.	Detroit Edison has revised the values in ER Table 7.2-1 based on new MACCS2 calculations using ESBWR DCD Rev 5 and PRA Rev 3. Therefore, revised values for the ER Table 7.2-1 are needed for review and confirmatory analysis.	<p>[2/12/10] Except for the values of cancer fatality risk in Column 3 of Table 7.2-2, response is acceptable. The values in this column are low by a factor 70. This was inferred by reviewing the post processor (READOUT.FOR) that was used to compile results from MACCS2 output. The cancer fatalities estimates already consider the latent effects. Therefore, these values need to be revised.</p> <p>[10/20/09] Response acceptable, however, the revised values provided are already out of date and must be updated. Detroit Edison provided changes to the ER, but indicated that further change may be needed in response to revisions to the ESBWR DCD and other revisions to the COL. The NRC should be provided with updated analyses based on ESBWR DCD Rev. 6 and PRA Rev. 4, which are currently available.</p>
AC7.3-1 10 CFR 51.50(c) 10 CFR	10/30/09 ML093090165 1/29/10	Not complete	Provide in electronic format the analysis and assumptions used in determining averted costs for SAMAs. Discuss the process for	Section 7.3.3 of the ER presents a discussion leading to the conclusion that no cost beneficial SAMDAs have been identified,	[2/12/10] Response unacceptable. The response does not correctly consider the modified approach in assigning

RAI Number ¹	Response Date/ ADAMS Accession No.	Status of Response	Question Summary (RAI)	Full Text (supporting information)	Comments
52.79(d)(3)	ML100331451		ensuring that SAMAs related to operating procedures and administrative controls will be evaluated prior to plant startup. Explain how completion of this analysis will be tracked. Also, evaluate the effect of changing the reported cost basis in NUREG/BR-184, which is in 1992-1993 dollars, to the current year, similar to the cost estimate process used in the MACCS2 analysis for determining offsite property losses resulting from severe accidents.	and states that evaluation of specific administrative control measures for the ESBWR will be considered for implementation when they are developed prior to fuel load. The current analysis is based on cost bases in 1992-1993 dollars as given in NUREG/BR-184. For new reactors that are expected to have a 60-year lifetime, there is a need to readjust the cost values. NUREG/BR-184 states that the averted costs dollar measures "should be present valued and expressed in terms of the same year." Considering that the potential operation date for Fermi 3 is 2016 and beyond, there is a need for adjusting these costs estimates to the current date, especially for the replacement power costs that contribute the most to the estimated averted costs.	<p>the external event accidents to release categories of internal events. This error results in underestimating the total benefits.</p> <p>The response uses a ratio method to estimate the offsite dose and cost risks for the total core damage frequency (CDF) based on the corresponding values from the Internal events CDF. PRA Rev. 4 provides a clear method in Table 10.3-3C for evaluating the potential consequences of other severe accidents using the at-power internal events. The use of this method results in about a factor of 10 increase in the offsite dose and cost risks for all CDF, leading to higher estimates of averted costs.</p> <p>[11/12/09] Response acceptable, however, the revised values provided are already out of date and must be updated by Detroit Edison in response to revisions to the ESBWR DCD and COL. NRC should be provided with updated analyses based on ESBWR DCD Rev. 6 and PRA Rev. 4 following methodologies consistent with the FSAR update.</p>