PMFermiCOLPEm Resource

From: Berrios, Ilka
Sent: Friday, March 12, 2010 9:11 AM
To: LaShawn G Green; Peter W Smith; petersonn@dteenergy.com
Cc: FermiCOL Resource; Patel, Chandu
Subject: DRAFT RAIs Section 3.7.2
Attachments: RAI 4496.doc

All,

Attached file is DRAFT RAI related to FSAR section 3.7.2. Please review it and let me know if a call is needed to clarify any of these questions. If we don't hear from you by Wednesday (03/17/2010), we'll assume that a call is not needed and the RAI letter will be issued.

Any questions, please let me know.

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Recipients:
"FermiCOL Resource" <FermiCOL.Resource@nrc.gov>
Tracking Status: None
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Request for Additional Information No. 4496 Revision 1

Fermi Unit 3
Detroit Edison
Docket No. 52-033
SRP Section: 03.07.02 - Seismic System Analysis
Application Section: 03.07.02.08

QUESTIONS for Structural Engineering Branch 2 (ESBWR/ABWR Projects) (SEB2)

03.07.02-***

In accordance with 10 CFR Part 50, General Design Criteria (GDC) 2, SSCs important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without loss of capability to perform their safety functions. The applicant provided some information on the physical dimensions, configuration, and location of the various safety-related and non-safety-related buildings on the Fermi site in FSAR Rev. 0, Section 02.03, Figure 2.3-261, “Onsite Release Points and Intake Locations.” In Rev. 1 of the FSAR, this figure was deleted.

In order for the staff to conclude that all SSCs important to safety will be designed to withstand the effects of natural phenomena without the loss of capability to perform their safety functions in accordance with GDC 2, the staff needs additional information. The staff requests that the applicant provide a plan view of all of the structures on the site along with the building dimensions and heights and the structures’ seismic category for the Fermi site. The applicant is also requested to include these details for all the structures associated with the PSWS and SWS. The staff needs this information to confirm that the seismic Category I structures are protected from failure of non-seismic category I structures as a result of seismic events.

Additionally, please clarify the following confusing statement from the response to RAI letter No.7, Tracking No. 2785, Question No. 03.07.02-1, “The Natural Draft Cooling Tower (NDCT) has a height of 600 feet, and is the tallest structure on the FERMI site. Any structure that is more than 600 feet from any seismic category I structure is acceptable and therefore not listed on the attached table. Only structures that are within 600 feet of Category I structure are listed, with the exception of the NDCT.” Also, explain why the NDCT natural draft cooling tower is not listed in the table of RAI response letter No. 7, eRAI Tracking No.2785, and why the NPHS cooling tower is not listed in site plan in Figure 2.1-4, Revision 1.

03.07.02-***

In accordance with 10 CFR Part 50, General Design Criteria (GDC) 2, SSCs important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without loss of capability to perform their safety functions. Section 2.4.2, "ITAAC FOR PLANT SERVICE WATER SYSTEM (PORTION OUTSIDE THE SCOPE OF THE CERTIFIED

DESIGN)" of Part 10 states that, “The Plant Service Water System (PSWS) is the heat sink for the Reactor Component Cooling Water System. The PSWS does not perform any safety-related function. There is no interface with any safety-related component.” The physical dimensions, configuration, and location of the PSWS structures were not discussed in Section 3.7.2 of the FSAR. Additionally, the interactions of PSWS structures with seismic category I structures were also not addressed by the applicant. Therefore, the staff requests that the applicant describe and confirm that postulated failures of the PSWS will not lead to adverse II/I interactions with any adjacent safety related SSCs. The staff needs this information to conclude that all SSCs important to safety will be designed to withstand the effects of natural phenomena without the loss of capability to perform their safety functions in accordance with GDC 2.

03.07.02-***

In accordance with 10 CFR Part 50, General Design Criteria (GDC) 2, SSCs important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without loss of capability to perform their safety functions. Section 2.4.3, "STATION WATER SYSTEM (SWS)" of Part 10 indicates that the SWS includes plant intake structures. The physical dimensions, configuration, and location of the SWS structures were not discussed in Section 3.7.2 of the FSAR. Additionally, the interactions of SWS structures with seismic category I structures were also not addressed by the applicant. The requests that the applicant describe and confirm that postulated failures of the SWS will not lead to adverse II/I interactions with any adjacent safety related SSCs. The staff needs this information to conclude that all SSCs important to safety will be designed to withstand the effects of natural phenomena without the loss of capability to perform their safety functions in accordance with GDC 2.