

## PMFermiCOLPEm Resource

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**From:** Chandu Patel  
**Sent:** Monday, January 12, 2009 1:26 PM  
**To:** LaShawn G Green  
**Cc:** FermiCOL Resource; Jerry Hale; Mark Tonacci  
**Subject:** FW: RAI 1944 - The RAI Document is Ready for Review  
**Attachments:** RAI 1944.doc

LaShawn,

We are ready to send these RAI this week. This an advanced copy for you to see if you like to have any discussion before we send it to you in a letter. Please call Jerry Hale if you like to have any phone call on this subject.

Chandu

-----Original Message-----

**From:** RAI\_Notifications@nrc.gov [mailto:RAI\_Notifications@nrc.gov]  
**Sent:** Monday, January 12, 2009 1:18 PM  
**To:** Chandu Patel  
**Subject:** RAI 1944 - The RAI Document is Ready for Review

RAI 1944 - The RAI Document is Ready for Review as attachment 'RAI 1944.doc' to this email.

**Hearing Identifier:** Fermi\_COL\_Public  
**Email Number:** 6

**Mail Envelope Properties** (DC2088DF7F51A8499309AA4A35D0C1E01C6B4FD13C)

**Subject:** FW: RAI 1944 - The RAI Document is Ready for Review  
**Sent Date:** 1/12/2009 1:25:43 PM  
**Received Date:** 1/12/2009 1:25:44 PM  
**From:** Chandu Patel

**Created By:** Chandu.Patel@nrc.gov

**Recipients:**

"FermiCOL Resource" <FermiCOL.Resource@nrc.gov>  
Tracking Status: None  
"Jerry Hale" <Jerry.Hale@nrc.gov>  
Tracking Status: None  
"Mark Tonacci" <Mark.Tonacci@nrc.gov>  
Tracking Status: None  
"LaShawn G Green" <greenl@dteenergy.com>  
Tracking Status: None

**Post Office:** HQCLSTR02.nrc.gov

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	564	1/12/2009 1:25:44 PM
RAI 1944.doc	29762	

**Options**

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

Request for Additional Information No. 1944 Revision 0

Fermi Unit 3  
Detroit Edison  
Docket No. 52-033

SRP Section: 02.04.13 - Accidental Releases of Radioactive Liquid Effluents in Ground and Surface Waters

Application Section: FSAR Chapter 2 Section 2.4

QUESTIONS for Hydrologic Engineering Branch (RHEB)

02.04.13-\*\*\*

Provide site specific measured hydrologic parameters necessary to perform radionuclide transport analysis under the assumed release scenario as required in 10 CFR 100.20(c). More specifically, provide data and discussions about the hydrologic characteristics of the bedrock aquifer (Bass Islands Group) and the glacial overburden near Fermi Unit 3, including their thickness, depths to water tables, hydraulic conductivities, distribution coefficients, porosities; bulk mass densities, and retardation factors; the vertical and horizontal groundwater velocities of the overburden; suction heads; and the groundwater velocity of the bedrock aquifer.

02.04.13-\*\*\*

Provide a description of the screening process used to determine the radioactive constituents in the drain collection tank considered for the failure analysis and how the inventory described in Table 12.2-13a of the ESBWR DCD was used to derive the radionuclide constituents for the subsequent radionuclide transport analysis.

02.04.13-\*\*\*

Provide a discussion on the presence or absence of chelating agents and other chemical agents that would modify the transport characteristics of radionuclides at the site. The discussion needs to include whether these chemicals are to be used anywhere at the site and not limited to the tanks.

02.04.13-\*\*\*

Provide a discussion on post-construction groundwater levels and their influence on the radionuclide pathways.

02.04.13-\*\*\*

Provide an explanation of the "two possible sources" mentioned in the discussion of "Transport Considering Radioactive Decay Only" portion of the supplemental information.

02.04.13-\*\*\*

Provide a description of the process followed to determine the conceptual models for surface and subsurface pathways and for site characteristics that affect transport of radioactive liquid effluents in ground and surface waters to ensure that the most conservative of plausible conceptual models has been identified pursuant to the guidance provided in SRP 2.4.13. Also provide analysis based on the most conservative of all the plausible models to demonstrate compliance with 10 CFR part 20 Appendix B Table 2 ECL limits. In the supplemental information that contained the analysis of radionuclide transport for an assumed failure, the results show exceedance of the ECL limits for 12 radionuclide isotopes for both assumed receptors (Lake Erie to the east and a receptor well to the west). The applicant also stated that even if the conservatism assumed in the analysis, more specifically the maximum groundwater velocity, dilution, assumption of continuous ingestion were to be relaxed, the resulting concentrations will still be above the ECL limits. Please include in the analysis the basis for the preceding conclusion of the applicant.