PMFermiCOLPEm Resource

From: Jerry Hale
Sent: Thursday, May 21, 2009 2:05 PM
To: Norman K Peterson; Peter W Smith; LaShawn G Green
Cc: FermiCOL Resource
Subject: FW: Draft Fermi 3 hydrology Safety Site Audit Information Needs_052109.doc
Attachments: Draft Fermi 3 hydrology Safety Site Audit Information Needs_052109.doc

Please see attached.

JRH

From: Jill Caverly
Sent: Thursday, May 21, 2009 1:29 PM
To: Jerry Hale; Mark Tonacci
Cc: Henry Jones; Mark McBride
Subject: Draft Fermi 3 hydrology Safety Site Audit Information Needs_052109.doc

Jerry/Mark:
I have attached the Fermi Site Audit Needs list for your use.
Let me know if you have any questions.
Best,
Jill Caverly

Hearing Identifier: Fermi_COL_Public
Email Number: 117

Mail Envelope Properties (D841D501B2C4D244B75AB897F70C149499FCBC1C3C)

Subject: FW: Draft Fermi 3 hydrology Safety Site Audit Information Needs_052109.doc
Sent Date: 5/21/2009 2:04:45 PM
Received Date: 5/21/2009 2:04:47 PM
From: Jerry Hale

Created By: Jerry.Hale@nrc.gov

Recipients:
"FermiCOL Resource" <FermiCOL.Resource@nrc.gov>
Tracking Status: None
"Norman K Peterson" <petersonn@dteenergy.com>
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Tracking Status: None
"LaShawn G Green" <greenl@dteenergy.com>
Tracking Status: None

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Files	**Size**	**Date & Time**
MESSAGE	394	5/21/2009 2:04:47 PM
Draft Fermi 3 hydrology Safety Site Audit Information Needs_052109.doc	63598	

Options
Priority: Standard
Return Notification: No
Reply Requested: Yes
Sensitivity: Normal
Expiration Date:
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Fermi Unit 3 Hydrology (Chapter 2.4)
Site Audit Information Needs

Serial No.	FSAR Section	Information Needs
1.	**Field Tour**	Provide a site tour to show the following features of the Fermi site: • Locations of safety related facilities and their drainage area for Fermi 3 • Existing drainage area for Fermi 2 power block facilities • The lower reach of Swan creek at 3 locations: near Dixie Highway, Lake Erie, and about midway between the above two locations • Shore of Lake Erie at three locations: the Fermi site, south of the site (Stony Point, end of Pointe aux Peaux Road), and north of the site (Lakeshore Drive) • Existing storm drainage system for Fermi 2 • Proposed storm drainage system for Fermi 3
2.	**Maps**	Provide the following during the site audit • Large-scale topographic maps of the site • 1:24,000 topographic maps of the Swan Creek watershed.
3.	**Electronic Datasets**	Provide the following electronic data • Electronic copy of topography map of the site. • Electronic copy of the topography map of the Swan Creek watershed. • Digital elevation of the site and surrounding area including watershed • Stream network of the Swan Creek watershed • Landuse/landcover of the Swan Creek watershed • Soil type of the Swan Creek watershed • HEC-RAS input/output used in Fermi 3 simulations • STWAVE input/output used in Fermi 3 simulations • Input/output for various modules used in ACES used in Fermi 3 simulations • Calculation packages

4.	**References**	Provide a hardcopy or an electronic copy of the references used in Chapter 2.4 (get a list) • Enrico Fermi, Unit 2 Updated Final Safety Analysis Report, Amendment 14. (2.4-258) • Bugliosi, E. F., 1999, The Midwestern Basins and Arches regional aquifer system in parts of Indiana, Ohio, Michigan, and Illinois-summary: U.S. Geological Survey Professional Paper 1423-A, 46 p. (2.4-265) • Casey, G. D., 1996, Hydrogeologic framework of the Midwestern Basins and Arches region in parts of Indiana, Ohio, Michigan, and illinois: U.S. Geological Survey Professional Paper 1423-B, 46 p., 2 pl. (2.4-266) • Nicholas, J.R.; G.L. Rowe, and J.R. Brannen, 1996, Hydrology, water quality, and effects of drought in Monroe County, Michigan: Water –Resources Investigations Report 94-4161 (2.4-277)
5.	**General**	Provide the grade levels of all proposed safety-related components and structures of Fermi 3.
6.	**2.4.2**	Provide a knowledgeable expert to discuss and make available information on historical flood and storm events associated with Lake Erie and Swan Creek.
7.	**2.4.2**	Provide a knowledgeable expert to discuss the assumptions and approaches used in calculating local runoff and flood, including topics as: • Local PMP • Proposed onsite drainage system for Fermi 3 • Peak runoff during the local intense precipitation • Time of concentration • On-site water surface elevations during the local intense precipitation

8.	**2.4.3**	Provide a knowledgeable expert to discuss the development of PMP estimation and the calculation of PMP for the Swan Creek watershed.
9.	**2.4.3**	Provide a knowledgeable expert to discuss the estimation of precipitation losses used for PMF determination for the Swan Creek watershed.
10.	**2.4.3**	Provide a knowledgeable expert to discuss the approach, methods, and inputs in determining the PMF flow for the Swan Creek watershed and to discuss the verification process of the runoff model used for the PMF flow estimation.
11.	**2.4.3**	Provide a knowledgeable expert to discuss the input data for HEC-RAS and output results in determining the water levels along the Swan Creek under 3 alternative scenarios.
12.	**2.4.3**	Provide a knowledgeable expert to discuss the certainty impacts of un-gauged Swan Creek data, ice jam conditions (if any), and snowmelt on the results of PMF runoff and stream course models.
13.	**2.4.4**	Provide the sources of information to confirm the absence of dam or water control structures in the Swan Creek watershed.
14.	**2.4.5**	Provide a knowledgeable expert to describe and make available information on historic storm surges, their characteristics, probable maximum winds, and associated meteorological parameters in Lake Erie.
15.	**2.4.5**	Provide a knowledgeable expert to discuss the method, data availability, and assumptions used to derive the 100-year lake level of Lake Erie.
16.	**2.4.5**	Provide a knowledgeable expert to discuss the methodology and processes used to simulate storm surge in Lake Erie and the inputs and outputs of STWAVE model.
17.	**2.4.5**	Provide a knowledgeable expert to discuss the approach, assumptions, input data, and output results of ACES model.

18.	**2.4.7**	Provide a knowledgeable expert to discuss an assessment of ice effects and snow melts on floods along Swan Creek.
19.	**2.4.9**	Provide a knowledgeable expert to discuss the possibility of channel diversion on Swan Creek.
20.	**2.4.11**	What is the minimum intake design basis water level (or the water depth above the elevation of the base of the intake bay at the location of the pump suction) for the cooling water pumps to supply sufficient water for Fermi 3 to operate?
21.	**2.4.11**	Provide a knowledgeable expert to discuss the ice conditions near the entrance of the intake canal that could affect water flow into the canal.
22.	**2.4.12**	Provide a knowledgeable expert to discuss the regional and local hydrogeology conditions.
23.	**2.4.12**	Provide a knowledgeable expert to discuss the assumed source and location, and the groundwater transport pathways of potential contaminants and existing and proposed monitoring programs.
24.	**2.4.13**	Provide a knowledgeable expert to discuss radionuclides screening, and their transport analysis in the event of accidental releases of radionuclides.