PMFermiCOLPEm Resource

From: Jerry Hale
Sent: Thursday, March 26, 2009 2:30 PM
To: FermiCOL Resource
Subject: FW: Fermi 3 RAI Letter #5
Attachments: Fermi 3 RAI Letter #5.pdf

From: LaShawn G Green [mailto:greenl@dteenergy.com]
Sent: Thursday, March 26, 2009 2:27 PM
To: Jerry Hale
Subject: Re: Fermi 3 RAI Letter #5

Thanks, Jerry for the RAI.

Thank you,

LaShawn Green
DTE Energy
Nuclear Development-Licensing
313-235-8459
greenl@dteenergy.com

-----Jerry Hale <Jerry.Hale@nrc.gov> wrote: -----

To: LaShawn G Green <greenl@dteenergy.com>, Peter W Smith <smithpw@dteenergy.com>
From: Jerry Hale <Jerry.Hale@nrc.gov>
Date: 03/26/2009 09:24AM
cc: FermiCOL Resource <FermiCOL.Resource@nrc.gov>, Chandu Patel <Chandu.Patel@nrc.gov>
Subject: Fermi 3 RAI Letter #5

LaShawn / Peter,

Attached is a courtsey copy of the Fermi 3 RAI Letter #5. Please verify receipt by return email.

Jerry Hale

Project Manager

U.S. Nuclear Regulatory Commission

Office of New Reactors

ESBWR/ABWR Branch 1

(301) 415-8148

Hearing Identifier: Fermi_COL_Public
Email Number: 59

Mail Envelope Properties (D841D501B2C4D244B75AB897F70C14948668A6F7FC)

Subject: FW: Fermi 3 RAI Letter #5
Sent Date: 3/26/2009 2:29:43 PM
Received Date: 3/26/2009 2:29:45 PM
From: Jerry Hale

Created By: Jerry.Hale@nrc.gov

Recipients:
"FermiCOL Resource" <FermiCOL.Resource@nrc.gov>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	951	3/26/2009 2:29:45 PM
Fermi 3 RAI Letter #5.pdf	87977	

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

March 25, 2009

Mr. Peter W. Smith
Director, Nuclear Development-Licensing 337 WCB
DTE Energy
One Energy Plaza
Detroit, MI 48226-1279

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 5 RELATED TO THE SRP SECTIONS 09.05.01, 02.01.02, 11.03, 14.02, 17.04, and 12.03-12.04 FOR THE FERMI 3 COMBINED LICENSE APPLICATION

Dear Mr. Smith:

By letter dated September 18, 2008, Detroit Edison Company (Detroit Edison) submitted for approval a combined license application pursuant to 10 CFR Part 52. The U.S. Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed application.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter. To support the review schedule, you are requested to respond within 30 days of the date of this letter. If changes are needed to the safety analysis report, the staff requests that the RAI response include the proposed wording changes.

If you have any questions or comments concerning this matter, I can be reached at 301-415-8148 or by e-mail at jerry.hale@nrc.gov.

Sincerely,

/RA/

Jerry Hale, Project Manager
ESBWR/ABWR Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 052-033

eRAI Tracking Nos. 1989, 2128, 2240, 2307, 2313, 2377, and 2378

Enclosure:
Request for Additional Information

March 25, 2009

Mr. Peter W. Smith
Director, Nuclear Development-Licensing 337 WCB
DTE Energy
One Energy Plaza
Detroit, MI 48226-1279

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 5 RELATED TO THE SRP SECTIONS 09.05.01, 02.01.02, 11.03, 14.02, 17.04, and 12.03-12.04 FOR THE FERMI 3 COMBINED LICENSE APPLICATION

Dear Mr. Smith:

By letter dated September 18, 2008, Detroit Edison Company (Detroit Edison) submitted for approval a combined license application pursuant to 10 CFR Part 52. The U.S. Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed application.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter. To support the review schedule, you are requested to respond within 30 days of the date of this letter. If changes are needed to the safety analysis report, the staff requests that the RAI response include the proposed wording changes.

If you have any questions or comments concerning this matter, I can be reached at 301-415-8148 or by e-mail at jerry.hale@nrc.gov.

Sincerely,

/RA/
Jerry Hale, Project Manager
ESBWR/ABWR Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 052-033
eRAI Tracking Nos. 1989, 2128, 2240, 2307, 2313, 2377, and 2378
Enclosure:
Request for Additional Information
Distribution:

PUBLIC	CPatel, NRO	RRadlinski	TFrye	HHamzehee
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ADAMS Accession No. ML090840227 NRO-002

OFFICE	SFPT/BC	RSAC/BC	CHPB/BC	EEB/BC	SPLP/BC	NGE1/PM	OGC	NGE1/LPM
NAME	R.Radlinski	C.Cox	T.Frye	R.Jenkins	H.Hamzehee	J. Hale	M. Carpentier	C. Patel
DATE	1/30/09	2/23/09	3/17/09	3/17/09	3/11/09	3/25/09	3/24/09	3/25/09

***Approval captured electronically in the electronic RAI system.**

OFFICIAL RECORD COPY

Request for Additional Information No. 1989 Revision 0
Fermi Unit 3
Detroit Edison
Docket No. 52-033
SRP Section: 09.05.01 - Fire Protection Program
Application Section: 09.05.01

09.05.01-1

Section 9.5.1.4 of the Fermi 3 SCOLA references Table 9.5-1 of the ESBWR regarding information on Fire Protection Water Supply. Table 9.5-2 should have been referenced. Table 9.5-1 lists applicable codes for fire prevention. Table 9.5-2 lists Fire Protection System component design characteristics.

Request for Additional Information No. 2128 Revision 0
SRP Section: 02.01.02 - Exclusion Area Authority and Control
Application Section: 2.1.2

02.01.02-1

NUREG 0800, Section 2.1.2(II) 1 states “To meet the requirements of 10 CFR Part 100, the applicant must demonstrate, before issuance of a CP or limited work authorization, that it has the authority within the exclusion area as defined in 10 CFR 100.3, or must provide reasonable assurance that it will have such authority before either the start of construction or commencing activities allowed by 10 CFR 52.25. NUREG 0800, Section 2.1.2(II) 1 also states that “Absolute ownership of all lands within the exclusion area, including mineral rights, is considered to carry with it the required authority to determine all activities on this land and is acceptable. Fermi 3 FSAR Section 2.1.2.1 states that for one small section, 0.88 acres, the mineral rights are owned by another party. The applicant states that this section is outside the plant construction area, but does not state whether or not it is within the exclusion area boundary. Please clarify that the mineral rights within the exclusion area are owned by the applicant or exactly where this un-owned section is located in relation to Fermi 3 so the NRC can perform its own evaluation of potential interference with plant operation by activation of mineral removal from the noted 0.88-acre section.

02.01.02-2

RG 1.206, Section C.1.2.1.3.6 and RG 4.7 state that the applicant should provide a plot out to at least 20 miles showing the cumulative resident populations (including the weighted transient population) at the time of the projected COL approval and within 5 years thereafter. For Fermi 3 FSAR Tables 2.1-216 and 2.1-217, the 0–10 mile population sum does not match the sums of the populations of the 16 1–10 mile quadrants plus the 0–1 population of Table 2.1-210. Please explain, and revise Fermi FSAR Tables 2.1- 216 and 2.1-217 as necessary.

Request for Additional Information No. 2240 Revision 0
SRP Section: 11.03 - Gaseous Waste Management System
Application Section: FSAR Section 11.3

11.03-1

Final Safety Analysis Report (FSAR) Section 11.3.1, EF3 SUP COL 11.3-1 incorporates by reference the current draft of NEI Template 07-11 as the basis of the cost-benefit analysis intended to justify the design of the Gaseous Waste Management System (GWMS). NEI, however, withdrew NEI Template 07-11 from further consideration. As a result, NEI Template 07-11 is no longer relevant. Accordingly, please provide an updated plant- and site-specific cost-benefit analysis in FSAR Section 11.3.1 for the GWMS. This cost/benefit analysis should provide sufficient information for the staff to evaluate the bases and assumptions used in the analysis and to conduct an independent confirmation of compliance with NRC regulations and guidance.

Request for Additional Information No. 2307 Revision 0
SRP Section: 14.02 - Initial Plant Test Program - Design Certification and New License Applicants
Application Section: 14.2.9

14.02-1

FSAR Section 14.2.9.1.4 states that "Performance is observed and recorded during a series of individual component and integrated system tests to demonstrate the following: (1) Proper operation of initiating, transfer, and trip devices (2) Proper operation of relaying and logic (3) Proper operation of equipment protective devices, including permissive and prohibit interlocks (4) Proper operation of instrumentation and alarms used to monitor system and equipment status (5) Proper operation and load carrying capability of breakers, switchgear, transformers, and cables (6) The capability of transfer between onsite and offsite power sources as per design."

Please address the following additional item or provide justification for exclusion: (a) Proper operation of the automatic transfer capability of normal preferred power source to the alternate preferred power source is verified.

Request for Additional Information No. 2313 Revision 0
SRP Section: 17.04 - Reliability Assurance Program (RAP)
Application Section: 17.4 Reliability Assurance Program During Design Phase

17.04-1

Regulatory Guide 1.206, Section C.III.1, Subsection C.I.17.4.4 states that the COL applicant should provide in Chapter 17 of the final safety analysis report (FSAR) in accordance with the provisions in SRP Section 17.4 the quality controls (organization, design control, procedures and instructions, records, corrective action, and audit plans) for developing and implementing the D-RAP. Section 17.4.5 ("GEH Organization for D-RAP") of the ESBWR Design Control Document (DCD) discusses the quality controls for developing and implementing the D-RAP that GEH imposed during the design certification phase. The Fermi FSAR incorporates Section 17.4.5 of the ESBWR DCD by reference. While the quality controls applied by the applicant for developing and implementing the D-RAP may be similar to that described in the

Section 17.4.5 of the ESBWR DCD, the applicant should impose its own quality controls for developing and implementing D-RAP.

The staff requests that the applicant include in the Fermi FSAR the description of the quality controls (organization, design control, procedures and instructions, records, corrective action, and audit plans) that will be applied by the applicant during all phases of design and construction prior to the initial fuel load.

Request for Additional Information No. 2377 Revision 0
SRP Section: 12.03-12.04 - Radiation Protection Design Features
Application Section: 1.2.2.12.15

12.03-12.04-2

STD CDI 1.2.2.12.15, Zinc Injection System, states that a Zinc Injection System will not be utilized by the applicant. One of the benefits of utilizing a Zinc Injection System to inject depleted zinc oxide (DZO) in the feedwater is to suppress cobalt plate-out on reactor building piping. Minimizing the plate-out of radioactive cobalt on reactor building piping can lead to potentially lower dose rates in the vicinity of this piping and result in correspondingly lower doses to personnel in this portion of the plant. Justify your decision to not utilize a Zinc Injection System in light of the requirement in 10 CFR 20.1101 which states that the licensee shall use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses that are ALARA.

Request for Additional Information No. 2378 Revision 0
SRP Section: 12.03-12.04 - Radiation Protection Design Features
Application Section: 12.4 Dose Assessment

12.03-12.04-1

A review of Construction Worker Dose as reported in Section 12.4 of the COLA refers to the EF3 Environmental report without explanation. Upon reviewing the Environmental report it was noted that the thermo luminescent dosimeters (TLDs) used as the basis for the dose calculation may not be conservative with regards to projected exposure. In addition, generic independent spent fuel storage installation (ISFSI) exposure data was provided as an input to this calculation. Since Fermi 2 is moving towards ISFSI construction, the actual expected exposure rates are needed. Accordingly, please provide a justification for the TLDs selected as a basis for the construction worker dose calculation and the expected ISFSI exposure rates. Also, include in Section 12.4 enough detail to explain the construction worker dose assessment methodology.

In addition, it has been noted the applicant uses total body dose and whole body dose interchangeably. Accordingly, please revise the COLA to use consistent terminology and provide justification for the terminology chosen.