PMFermiCOLPEm Resource

From: Govan, Tekia
Sent: Friday, March 08, 2013 12:32 PM
To: 'Michael K Brandon'
Cc: 'Ryan C Pratt'; Muniz, Adrian; FermiCOL Resource
Subject: DRAFT RAIs
Attachments: RAI_7046.doc; RAI_7051.doc

Mike/Ryan:

Please find attached the draft RAIs developed by the NRC staff in order continue their review of the Fermi 3 RCOL application in the areas of Fukushima Recommendation 4.2 and 7.1. Please let me know by Wednesday, March 13, 2013 if you need a clarification call to discuss these RAIs.

Thanks
Tekia

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Request for Additional Information

Issue Date:
Application Title: Fermi Unit 3 - Docket Number 52-033
Operating Company: Detroit Edison
Docket No. 52-033
Review Section: 01.05 - Other Regulatory Considerations
Application Section:

QUESTIONS

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Three-Phase Approach for Mitigating Beyond-Design-Basis External Events

For operating plants the NRC issued order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events. The order included a requirement to implement a three-phase approach that enables mitigation assuming loss of all AC power for an indefinite period. The first phase (initial phase) requires the use of installed equipment and resources to maintain or restore core cooling, containment, and spent fuel pool cooling. The second phase (transition phase) requires providing sufficient, portable, equipment and consumables to maintain or restore these functions on site until they can be accomplished with resources brought from off site. The third phase (final phase) allows for offsite assistance.

The new requirements were put into place to provide greater assurance that the plant could cope with the challenges posed by beyond-design-basis external events by incorporating into the plant design and operation greater mitigation capabilities consistent with the overall defense-in-depth philosophy.

1. Describe how the initial and transition phase mitigation is accomplished for Fermi 3. Include a discussion of how installed equipment and resources are used for core, containment, and spent fuel cooling to provide Fermi 3 the ability to cope without power until offsite resources and assistance are available (final phase).
2. Define the site-specific FLEX capabilities, identify what type of FLEX equipment will be used and when it will be required. Also discuss the connection points incorporated in the Fermi 3 design that will allow for use of the FLEX equipment.
3. Revise the FSAR to provide a summary of how Fermi 3 accomplishes core, containment, and spent fuel cooling prior to availability of offsite assistance without any AC power or makeup to the UHS (Initial and transition phase), and how Fermi 3 will maintain core, containment, and spent fuel cooling for an indefinite period of time (final phase).

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For operating plants the NRC issued order EA-12-051, "*Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation"* (ML12054A679). The order included a requirement to provide safety enhancements in the form of reliable spent fuel pool instrumentation for beyond-design-basis external events. On August 29, 2012 the staff published Interim Staff Guidance JLD-ISG-2012-03, "Compliance with Order EA-12-051, Reliable Spent Fuel Pool Instrumentation." This ISG endorses, with exceptions, the methodologies described in the industry guidance document, Nuclear Energy Institute (NEI) 12-02, Industry Guidance for Compliance with NRC Order EA-12-051, "To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation" (NEI 12-02), Revision 1 dated August, 2012.

In response to the staff's RAI 1.5-4, the applicant proposed to create a license condition to address the instruments requirements that were not explicitly addressed by the ESBWR DCD. The staff determined that compliance with Order EA-12-051 must be addressed in greater detail prior to licensing to determine how each of the Order's instrument requirements are addressed or not addressed by the existing ESBWR DCD information, and to propose changes to the FERMI COL FSAR that address the required instrument design information that is not explicitly addressed in the ESBWR DCD.

Therefore, the staff requests the applicant to:

a. provide a description of how the SFP level instruments design information provided in the ESBWR DCD addresses or does not address the design criteria requirements described in Order EA-12-051, for reliable instrumentation able to withstand design-basis natural phenomena and monitor spent fuel pool water level, and
b. provide a description, including proposed FSAR changes, explaining how the FERMI COL FSAR will address the design criteria requirements for SFP instrumentation described in Order EA-12-051, for reliable instrumentation able to withstand design-basis natural phenomena and monitor spent fuel pool water level, that were not completely addressed by the ESBWR DCD design information.