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May 10, 1996
NRC-96-0051

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

- References:
- 1) Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43
 - 2) NRC Bulletin 96-02, dated April 11, 1996, Movement of Heavy Loads Over Spent Fuel, Over Fueling the Reactor, or Over Safety-Related Equipment
 - 3) NUREG-0612, July, 1980, Control of Heavy Loads at Nuclear Power Plants
 - 4) NRC Unnumbered Generic Letter, dated December 22, 1980, Control of Heavy Loads, (as clarified by NRC Generic Letter 81-07, dated February 3, 1981, Control of Heavy Loads)
 - 5) NUREG-0798, Safety Evaluation Report Related to the Operation of Fermi-2, Supplement 5 (SSER5), March 1985
 - 6) NRC Generic Letter 85-11, dated June 26, 1985, Completion of Heavy Loads Phase II
 - 7) DECo Letter to the NRC, VP-NO-87-0001, 1/30/87, Heavy Loads Handling Report - Revision A
 - 8) NRC Letter to DECo, dated April 21, 1987, Control of Heavy Loads Handling at Fermi-2 - Revision A

Subject: Detroit Edison Response to NRC Bulletin 96-02, Movement of Heavy Loads

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This letter provides the 30-day response to the Requested Actions and Required Responses described in NRC Bulletin 96-02 (Reference 2) on the subject of movement of heavy loads. The response generally follows the format and structure of the bulletin to facilitate NRC review.

Response to Requested Actions

NRC Bulletin 96-02 requested the following actions to ensure that the handling of heavy loads is performed safely and within the conditions and requirements specified in the applicable regulations:

Review plans and capabilities for handling heavy loads while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) in accordance with existing regulatory guidelines. Determine whether the activities are within the licensing basis and, if necessary, submit a license amendment request. Determine whether changes to Technical Specifications will be required in order to allow the handling of heavy loads (e.g., the dry storage canister shield plug and associated lifting devices) over fuel assemblies in the spent fuel pool.

Upon receipt of Bulletin 96-02, Fermi 2 suspended all heavy load lifting activities while the evaluation described in the requested action was performed. Activities suspended included the fuel pool cleanup project, which involved transfer of loads between floors of the Reactor Building via the equipment hatch, and lifts on the turbine deck in preparation for the RFO5 turbine replacement. The evaluation identified applicable regulatory guidance, defined the Fermi 2 licensing basis relative to the movement of heavy loads, and reviewed the design features and administrative controls in place to assure that movement of heavy loads at Fermi 2 meets the current licensing basis (References 3 through 8). The evaluation concluded that, with one exception, the lifting equipment and associated administrative controls assure that heavy load movement is in strict compliance with the Fermi 2 licensing basis, which is in turn, based on applicable regulatory guidance. The single exception identified is described in the following two paragraphs.

The evaluation identified one discrepancy involving the use of the Reactor Building Overhead Crane (RBOC) auxiliary hoist over the Reactor Building equipment hatch for lifts between 2000 and 5000 lbs. The RBOC auxiliary hoist is not single failure proof. The most recent report that was reviewed and evaluated by the NRC (References 7 & 8) states that heavy lifts will be performed either using the single-failure-proof RBOC main hoist or using the auxiliary hoist in conjunction with a collision mat when necessary. In March 1987, the Fermi 2 Heavy Load Rigging

Manual was revised to allow the RBOC auxiliary hoist to be used for up to 5000 lbs. without collision mats. This 5000 lbs. load is 50% of the safe load rating of the auxiliary hoist. The reduced load rating provided double the normal safety factor in the hoist components.

Although the reduced rating provides additional margin to the load-handling components, the difference between the existing procedures and docketed commitment was not specifically reviewed and approved by the NRC. Therefore, administrative controls have been changed for the fuel pool cleanup project to require the use of the approved main (single-failure-proof) RBOC hoist for this category of lifts pending addition of guidance in the procedure for controlling certain auxiliary hoist load lifts analyzed in accordance with NUREG-0612.

Lifts associated with the fuel pool cleanup project have resumed using the revised administrative controls, and the turbine building lifts resumed after confirming that they comply with the Fermi 2 licensing basis.

Bulletin 96-02 also specifically mentions reactor cavity shield plug movement as an activity to review. At Fermi 2, two out of three layers of reactor cavity shield plugs are removed prior to plant shutdown. Reactor cavity shield removal has been evaluated in Reference 7 and meets NUREG-0612 Section 5.1 evaluation criterion IV. This lift, using the single-failure-proof Reactor Building Overhead Crane main hoist is within the current licensing basis for Fermi 2.

In summary, the existing plant hardware and associated administrative controls assure that movement of heavy loads is done in accordance with the licensing basis for the Fermi 2 plant. Technical Specifications presently do not allow handling loads exceeding 1100 lbs over spent fuel, and no changes to this are planned. Spent fuel casks can be installed and removed from the pool without lifting over the fuel.

Required Responses

In addition to the more general requested actions, the bulletin defined four required responses. Each of these are repeated in italics below, followed by the Fermi 2 response.

- (1) *For licensees planning to implement activities involving the handling of heavy loads over spent fuel, fuel in the reactor core, or safety-related equipment within the next 2 years from the date of this bulletin, provide the following:*

- *A report, within 30 days of the date of this bulletin, that addresses the licensee's review of its plans and capabilities to handle heavy loads while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) in accordance with existing regulatory guidelines. The report should also indicate whether the activities are within the licensing basis and should include, if necessary, a schedule for submission of a license amendment request. Additionally, the report should indicate whether changes to Technical Specifications will be required.*

Response

This letter provides the 30-day response for this required action. Fermi 2 plans to handle heavy loads during various operating modes, including while the reactor is at power, in accordance with the Fermi 2 licensing basis, as documented in References 7 and 8. The licensing basis allows lifts using the single-failure-proof Reactor Building Overhead Crane, lifts analyzed in the Reference 7 report using other cranes and hoists, and lifts in areas designated in Reference 7 above where there is no equipment required for safe shutdown. Specific plans for lifts to be performed while the reactor is operating include completing a fuel pool cleanout project involving lifts in the Reactor Building, removal of reactor cavity shield plug upper layers as described above, and lifts in the turbine building to stage certain equipment for the turbine replacement during RFO5.

No revisions to the license or Technical Specifications are required to support these activities.

- (2) *For licensees planning to perform activities involving the handling of heavy loads over spent fuel, fuel in the reactor core, or safety-related equipment while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) and that involve a potential load drop accident that has not previously been evaluated in the FSAR, submit a license amendment request in advance (6-9 months) of the planned movement of the loads so as to afford the staff sufficient time to perform an appropriate review.*

Response

Planned activities involving the handling of heavy loads over spent fuel, fuel in the reactor core, or safety-related equipment while the reactor is at power are bounded by the analysis as documented in References 7 and 8. In the event that Fermi 2 identifies any activity that would not be bounded by the analysis,

procedure changes to perform this activity would be required. These changes will be considered to be "changes to procedures as described in the safety analysis report," and a safety evaluation would be performed. If an Unreviewed Safety Question is identified per 10 CFR 50.59, a license amendment will be requested in advance.

- (3) *For licensees planning to move dry storage casks over spent fuel, fuel in the reactor core, or safety-related equipment while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) include in item 2 above, a statement of the capability of performing the actions necessary for safe shutdown in the presence of radiological source term that may result from a breach of the dry storage cask, damage to the fuel, and damage to safety-related equipment as a result of a load drop inside the facility.*

Response

Operations involving dry storage casks at the Fermi 2 plant are not presently planned.

- (4) *For licensees planning to perform activities involving the handling of heavy loads over spent fuel, fuel in the reactor core, or safety-related equipment while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled), determine whether changes to Technical Specifications will be required in order to allow the handling of heavy loads (e.g., the dry storage canister shield plug) over fuel assemblies in the spent fuel pool and submit the appropriate information in advance (6-9 months) of the planned movement of the loads for NRC review and approval.*

Response

As described in the response to Required Response 1 above, planned heavy load movements in all operating modes are in accordance with the Fermi 2 licensing basis, and no license or Technical Specification changes are required for these activities. In the event that Fermi 2 identifies any new activity that would not be bounded by the analysis documented in References 7 and 8, a safety evaluation would be performed as discussed in Response (2) above.

The following commitments are made in this letter:

1. Heavy load movement activities not bounded by existing Fermi 2 licensing basis will be considered "changes to procedures described in the safety analysis report," and would be subject to a safety evaluation in accordance

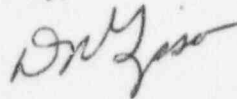
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with 10 CFR 50.59. In the event that an Unreviewed Safety Question is identified, a license amendment will be requested in advance as specified in Required Actions 2 and 4.

2. Revise plant procedures associated with the use of the Reactor Building Overhead Crane auxiliary hoist to describe restrictions imposed by the Reference 7 Fermi 2 licensing basis analysis report.

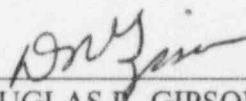
Should you have any questions regarding this response, please contact Mr. Robert Newkirk at (313) 586-4211.

Sincerely,



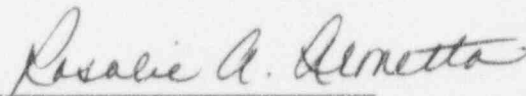
cc: T. G. Colburn
M. J. Jordan
H. J. Miller
A. Vogel

I, DOUGLAS R. GIPSON, do hereby affirm that the foregoing statements are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.



DOUGLAS R. GIPSON
Senior Vice President

On this 10th day of May, 1996 before me
personally appeared Douglas R. Gipson, being first duly sworn and says that he
executed the foregoing as his free act and deed.



Notary Public

ROSALIE A. ARMETTA
NOTARY PUBLIC - MONROE COUNTY, MI
MY COMMISSION EXPIRES 10/11/99