



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

ENCLOSURE 1

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

EVALUATION OF INDIANA MICHIGAN POWER COMPANY'S

120-DAY RESPONSE TO SUPPLEMENT NO. 1

TO GENERIC LETTER 87-02

FOR D. C. COOK NUCLEAR PLANT UNITS 1 AND 2

DOCKET NOS. 50-315 AND 50-316

BACKGROUND

By letter dated September 21, 1992, the Indiana Michigan Power Company, the licensee, submitted its response to Supplement No. 1 to Generic Letter 87-02 (GL 87-02), "Verification of Seismic Adequacy of Mechanical and Electrical Equipment in Operating Reactors, Unresolved Safety Issue (USI) A-46," dated May 22, 1992, for the D. C. Cook Nuclear Plant, Units 1 and 2. In this supplement, the staff requested that affected licensees submit the following information within 120 days of the issue date of the supplement:

1. A statement whether you commit to use both the Seismic Qualification Utility Group (SQUG) commitments and the implementation guidance provided in the Generic Implementation Procedure, Revision 2 (GIP-2) as supplemented by the staff's Supplemental Safety Evaluation Report No. 2 (SSER No. 2) for the resolution of USI A-46. In this case, any deviation from GIP-2, as supplemented by the SSER No. 2, must be identified, justified, and documented. If you do not make such a commitment, you must provide your alternative for responding to GL 87-02.
2. A plant-specific schedule for the implementation of the GIP and submission of a report to the staff that summarizes the results of the USI A-46 review, if you are committing to implement GIP-2. This schedule shall be such that each affected plant will complete its implementation and submit the summary report within three years after the issuance of the SSER No. 2, unless otherwise justified.
3. The detailed information as to what procedures and criteria were used to generate the in-structure response spectra to be used for USI A-46 as requested in the SSER No. 2. The licensee's in-structure response spectra are considered acceptable for USI A-46 unless the staff indicates otherwise during a 60-day review period.

In addition, the staff requested in SSER No. 2 that the licensee inform the staff in the 120-day response if it intends to change its licensing basis to reflect a commitment to the USI A-46 (GIP-2) methodology for verifying the seismic adequacy of mechanical and electrical equipment, prior to receipt of

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the staff's plant-specific safety evaluation (SE) resolving USI A-46. This report provides the staff's evaluation of the licensee's response.

EVALUATION

With regard to Item 1, the licensee stated that, "Specifically, Indiana Michigan Power Company hereby commits to the SQUG commitments set forth in the GIP in their entirety, including the clarifications, interpretations, and exceptions identified in SSER-2 as clarified by the August 21, 1992, SQUG letter responding to SSER-2." The licensee also stated that it "... generally will be guided by the remaining (non-commitment) sections of the GIP, i.e., GIP implementation guidance, which comprises suggested methods for implementing the applicable commitments." In addition, the licensee described its plans for inspecting and evaluating cable trays and conduits, and for developing a unique seismic safe shutdown operating procedure. The licensee stated that it does not consider these approaches to be deviations to the GIP.

The licensee's response is unclear as to whether or not the licensee intends to implement both the SQUG commitments and the implementation guidance. In accepting GIP-2 as a method for resolving USI A-46, it was the staff's understanding that the SQUG members who chose to implement GIP-2 would essentially use the entire procedure, including the SQUG commitments, which contain the general programmatic objectives and goals, and the implementation guidance, which contains the specific criteria and procedures to be used for the resolution of USI A-46. This understanding was the basis for the staff's position, which was stated in SSER No. 2, that if the licensee commits to use GIP-2 for the implementation of USI A-46, it must commit to both the SQUG commitments and the use of the entire implementation guidance provided in GIP-2, unless otherwise justified to the staff. In order to allow some flexibility in implementing GIP-2, the staff acknowledged in the supplement to GL 87-02 that SQUG members who commit to GIP-2 (both the SQUG commitments and the implementation guidance) may deviate from it provided that such deviations are identified, documented and justified. However, it was also indicated in SSER No. 2 that if a licensee uses methods that deviate from the criteria and procedures described in the SQUG commitments and in the implementation guidance of GIP-2 without prior NRC approval, the staff may find the use of such methods unacceptable with regard to satisfying the provisions of GL 87-02.

During phone conversations with the NRC Project Manager on November 18, 1992, the licensee confirmed that it commits to implement the entire GIP-2, including both the SQUG commitments and the implementation guidance. Consequently, with regard to Item 1 above, the staff finds the licensee's response acceptable with the possible exception of the licensee's plan for inspecting and evaluating cable tray and conduit supports which is discussed below.

The licensee provided a brief description of its plan for inspecting and evaluating cable tray and conduit supports, and stated its belief that this approach is not a deviation from the GIP-2, Section 8, implementation guidance. However, the licensee's description of this approach indicated otherwise (e.g., the licensee does not intend to inspect or evaluate inaccessible or obstructed supports, and the licensee has developed unique

screening criteria for performing capacity versus demand evaluations). Consequently, it is not clear to the staff the extent to which the licensee intends to implement GIP-2, Section 8. Therefore, the licensee should clearly state whether or not it intends to commit to use the entire SQUG methodology as delineated in GIP-2, Section 8, for inspecting and evaluating cable tray and conduit supports. If the licensee intends to deviate from GIP-2 for this area of its implementation program, then it should, as soon as practicable, identify, justify, and document the proposed deviations for staff review prior to implementation.

With regard to the licensee's plans for developing a unique seismic safe shutdown off-normal operating procedure, the staff concurs with the general approach, and will review the details of the procedure when it is completed.

In addition, Enclosure 2 provides the staff's response, dated October 2, 1992, to the August 21, 1992, SQUG letter. The staff does not concur with all of the SQUG's clarifications and positions stated in that letter and thus, the licensee should not use the August 21, 1992, letter as guidance in responding to Supplement No. 1 to GL 87-02. The licensee should refer to Enclosure 2 for the staff's position on the SQUG letter.

With regard to Item 2, the licensee stated that it will submit a summary report to the NRC summarizing the results of the USI A-46 program at D. C. Cook Nuclear Plant, Units 1 and 2, by the end of 1994 or early 1995. This schedule is within the 3-year response period requested by the staff and is therefore, acceptable.

With regard to Item 3, the licensee provided information which indicated that there was some evidence of peak broadening of floor response spectra. However, there was no discussion as to what procedure is followed in broadening the peak responses. Also, no information was provided for the structural damping values used in the structural dynamic analyses and the submittal did not state for the structural analysis input whether only one component of the horizontal earthquake motion or two orthogonal components were used.

Based on the staff's review, the licensee's response is considered to be acceptable. As noted above, some information was not provided. Therefore, contrary to the licensee's conclusion that the licensing basis in-structure response spectra are considered to be "conservative, design" in-structure response spectra, the staff concluded that the in-structure response spectra be classified as "median-centered" response spectra for the purpose of USI A-46 issue resolution. However, the staff believes that if the additional information were provided and found to be acceptable, the licensee's in-structure response spectra would be classified as "conservative, design". This conclusion is based on an assumption by the staff that the statements made in the licensee's submittal correctly reflect the FSAR and other licensing basis. The staff may audit the process by which the in-structure response spectra were generated.

It is noted that the licensee did not indicate that it intends to change its licensing basis methodology to reflect a commitment to the USI A-46 methodology prior to receipt of the staff's plant-specific SER.

CONCLUSIONS

Based on the licensee's September 21, 1992, response to Supplement No. 1 to GL 87-02, the staff concluded that the response was unclear as to whether or not the licensee intends to implement both the SQUG commitments and the implementation guidance. However, during phone conversations with the NRC Project Manager on November 18, 1992, the licensee confirmed that it commits to implement the entire GIP-2, including both the SQUG commitments and the implementation guidance. Consequently, the staff finds the licensee's response acceptable with the possible exception of the licensee's plan for inspecting and evaluating cable tray and conduit supports. Additionally, the licensee should not merely follow the August 21, 1992, SQUG letter for implementing GIP-2, but should refer to Enclosure 2 for the staff's response to the SQUG letter.

With regard to the licensee's plan for inspecting and evaluating cable tray and conduit supports, the licensee needs to clearly state whether it intends to implement the entire SQUG methodology as delineated in GIP-2, Section 8, for this area of its USI A-46 program. If the licensee intends to deviate from GIP-2 for this area of its USI A-46 program, then the licensee should clearly identify, justify, and document the proposed exceptions for staff review prior to implementation as soon as practicable.

With regard to the licensee's plan for developing a unique seismic safe shutdown off-normal operating procedure, the staff concurs with your general approach, and will review the details of this procedure when they are completed.

The staff finds the licensee's response regarding in-structure response spectra adequate and acceptable. The licensing-basis in-structure response spectra as described in the submittals are considered to be "median-centered" in-structure response spectra. However, additional information, if provided to the staff and found to be satisfactory, could result in classifying the spectra as "conservative, design", vice "median-centered".

The implementation schedule proposed by the licensee is within the three year response period requested by the staff in Supplement No. 1 to GL 87-02 and is, therefore, acceptable.

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Dated: