



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

EVALUATION OF WISCONSIN ELECTRIC POWER COMPANY'S

120-DAY RESPONSE TO SUPPLEMENT NO. 1

TO GENERIC LETTER 87-02

FOR POINT BEACH NUCLEAR PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-266 AND 50-301

INTRODUCTION

By letter dated September 21, 1992, the Wisconsin Electric Power Company, the licensee for the Point Beach Nuclear Plant (PBNP), Units 1 and 2, submitted its response to Supplement No. 1 to Generic Letter (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 PBNP. In Supplement 1, the staff requested that the licensee submit the following information within 120 days of the issue date of the supplement:

1. A statement whether the licensee commits 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 SSER No. 2, must be identified, justified, and documented. If the licensee does not make such a commitment, an alternative response to GL 87-02 must be provided.
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 the licensee is committing to implement GIP-2. This schedule shall be such that each affected plant will complete its implementation and submit the summary report within 3 years after the issuance of SSER No. 2, unless otherwise justified.
3. 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 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 the staff's plant-specific safety evaluation resolving USI A-46.

EVALUATION

With regard to Item 1, the licensee stated that "Wisconsin Electric commits to the SQUG commitments set forth in the GIP in their entirety, where 'GIP' refers to GIP Revision 2, corrected on February 14, 1992, to resolve USI A-46 at Point Beach Nuclear Plant (PBNP), Units 1 and 2. This commitment includes 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 "Wisconsin Electric generally will be guided by the remaining (non-commitment) sections of the GIP, i.e., implementation guidance, which comprises suggested methods for implementing the applicable commitments."

In a conference call on January 15, 1993, regarding the installation of emergency diesel generators 3 and 4, the licensee clarified its intent to adhere to the GIP-2 implementation procedures for its USI A-46 implementation program. On the basis of the licensee's commitment to the entire GIP-2, including both the SQUG commitments and the implementation guidance, the staff considers their response to Item 1 acceptable.

The attached letter dated October 2, 1992, provides the staff's response 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 the attached letter for the staff's position on the SQUG letter.

With regard to Item 2, the licensee stated that it will submit a report to the NRC summarizing the results of the USI A-46 program at the PBNP, Units 1 and 2, by June of 1995. This submittal date is within the 3-year response period requested by the staff in Supplement No. 1 to GL 87-02 and is, therefore, acceptable.

With regard to Item 3, the acceptability of the licensee's response to items II.4.2.3 of the SSER No. 2 was evaluated. The plant SSE peak ground acceleration (PGA) is 0.12g. The licensee has developed in-structure response spectra (IRS) using 1949 Olympia, Washington, time-history normalized to .06g. The resulting IRS are multiplied by two to arrive at the SSE-IRS. A comparison of the 5% damped ground response spectrum (RS1) developed from the normalized Olympia earthquake time record and 5% damped Housner spectrum (RS2) indicates that, within the structural frequencies of interest (i.e., 1.5 to 10 Hz.), the RS1 envelopes the RS2. This is considered as a relatively conservative procedure in developing the SSE-IRS. The licensee states that the IRS are "conservative, design" spectra for verifying the plant equipment. The two parameters that the staff believes are not in favor of such acceptance are non-conservatism associated with the use of Housner spectra and soil property variations not treated according to the NRC Standard Review Plan. On the other hand, the parameters such as time-history, damping values, in-structure spectra peak broadening, and application of the motion at the foundation of the structures, are considered as conservative considerations in the development and usage of the IRS. Also, a review of the IRS, provided by the licensee, indicates reasonable amplifications at various elevations of the structures.

Based on the staff's review of the licensee response and staff positions delineated in SSER No. 2, the staff concludes that the licensee's response is adequate and acceptable, and the staff considers the IRS developed by the licensee as "conservative, design" in-structure response spectra. This conclusion is based on the assumption that the statements made in the submittal, including the procedures used in generating the IRS, correctly reflect the Final Safety Analysis Report (FSAR) and other licensing bases where applicable. The staff may audit the process by which the IRS were generated.

CONCLUSIONS

On the basis of the licensee's commitment to the entire GIP-2, including both the SQUG commitments and the implementation guidance, the staff considers their 120-day response to Supplement No. 1 to Generic Letter 87-02 acceptable. In addition to the August 21, 1992, SQUG letter for responding to the supplement, the licensee should refer to the attached letter for the staff's response to the SQUG letter.

The implementation schedule proposed by the licensee is within the 3-year response period requested by the staff in Supplement No. 1 to GL 87-02 and is, therefore, acceptable.

The licensee's response concerning the in-structure response spectra to be used for USI A-46 has been determined by the staff to be adequate and acceptable. In addition, the staff agrees with the licensee that the in-structure response spectra generated using the procedures and criteria described in the submittal can be used as "conservative, design" spectra for comparing seismic capacity to seismic demand at Point Beach. The staff recognizes that the licensee may revise its licensing basis in accordance with 10 CFR 50.59 to reflect the acceptability of the USI A-46 methodology for verifying the seismic adequacy of electrical and mechanical equipment covered by GIP. This should be done in a manner consistent with SQUG commitments and the implementation guidance.

Attachment: Ltr. from J. Partlow, NRC, to
N. Smith, SQUG, dated October 2, 1992

Principal Contributors: P.Y. Chen
M. McBrearty
J.S. Ma
H. Ashar

Date: February 22, 1993



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

ENCLOSURE 2

OCT 02 1992

Mr. Neil Smith, Chairman
Seismic Qualification Utility Group
c/o EPRI
1019 19th Street, N.W.
Washington, DC 20036

SUBJECT: NRC RESPONSE TO SEISMIC QUALIFICATION UTILITY GROUP (SQUG)

Re: Letter, N. Smith, EPRI, To J. Partlow, NRR, dated August 21, 1992,
concerning USI A-46 Issues.

Dear Mr. Smith:

This is to acknowledge the receipt of the SQUG response to Supplement No. 1 to Generic Letter (GL) 87-02, and Supplemental Safety Evaluation (SSER) No. 2, on the SQUG Generic Implementation Procedure for Seismic Verification of Nuclear Plant Equipment, Revision 2, as corrected February 14, 1992 (GIP-2). The NRC staff believes that successful implementation of the entire GIP-2, supplemented by the staff's SSER No. 2, by each SQUG licensee will result in cost-effective plant safety enhancement for their USI A-46 plants.

The staff also believes that the positions delineated in Supplement No. 1 to GL 87-02 and SSER No. 2 are clear and correct, and should not be misinterpreted. The staff's comments on SQUG's August 21, 1992, letter and attachment are provided in the enclosure to this letter. If you need further clarification concerning our response, please contact Mr. James Norberg at 504-3288.

Sincerely,

James G. Partlow
Associate Director for Projects
Office of Nuclear Reactor Regulation

Enclosure:
As stated

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ENCLOSURE

I. NRC's Comments on the SQUG Letter of August 21, 1992:

1. In regard to the issue of seismic qualification, the staff reiterates the position stated in the SSER No. 2, in that the GIP-2 methodology is not considered to be a seismic qualification method, rather, it is an acceptable evaluation method, for USI A-46 plants only, to verify the seismic adequacy of the safe-shutdown equipment and to ensure that the pertinent equipment seismic requirements of General Design Criterion 2 and the purpose of the NRC regulations relevant to equipment seismic adequacy including 10 CFR Part 100 are satisfied.
2. The second paragraph on page 2 of your letter addressed the issue of timing of staff response to additional information requested from a licensee. Although you are correct in your statement regarding the sixty-day period for response to initial submittal of in-structure response spectra (ISRS) information, we do not agree that the same concept applies to a licensee's submittal of additional information received following a rejection or a question from the staff. To eliminate any potential misunderstanding in this regard, the staff has determined that it will respond to any submittal of additional information received from a licensee within 60 days. However, in this response, the staff will either state its approval (or rejection) of the information provided, or indicate the time duration needed for the review of such information, prior to transmitting a follow-up response of acceptance (or rejection) to the licensee. This time duration will vary depending on the complexity of the submittal.
3. Regarding the EBAC and ANCHOR computer codes, the staff's evaluations and concerns stated in the SSER No. 2 are correct and valid. The ANCHOR code does not consider the effects of base plate flexibility on the anchorage capacity.
4. With respect to transfer of knowledge regarding major problems identified, and lessons learned, in the USI A-46 plant walkdowns and third-party reviews, we request that you include the NRC in the distribution of written communications to all member utilities in this regard, and inform the NRC staff of any planned workshops on A-46 implementation for possible staff participation.

II. NRC's Comments on the Procedure for Reviewing the GIP

1. The staff supports SQUG's establishment of a Peer Review Panel composed of seismic experts since it should serve to enhance the review process of substantive changes to the technical requirements in the GIP, prior to its submittal to NRC for approval. However, since the NRC no longer intends to help finance a Peer Review Panel, the staff does not believe it

is appropriate to participate in the selection of the Peer Review members, who will be financed by SQUG/EPRI. We would like to emphasize that staff's review of a proposed GIP change will receive thorough independent NRC evaluation and will be assessed on its merits.

2. With respect to the NRC review and approval of the changes to the GIP (Item 5, page 3 of the procedure), the staff's position on the issue of its response timing is identical to that delineated in the response to a licensee submittal of additional information (refer to item 2 of NRC's Comments on the SQUG letter in this enclosure). This comment also applies to the section "LICENSING CONSIDERATIONS" on page 5 of the Attachment to the SQUG letter.
3. With respect to item 4, "Additional Restrictions," the text should be expanded to reflect that new information which indicates that existing GIP criteria and guidelines may be unconservative should be evaluated for potential 10 CFR Part 21 implications.

Mr. Robert E. Link

-2-

February 22, 1993

In addition to responding to the generic letter, your September 21, 1992 letter indicated that you intend to change the licensing basis methodology for verifying the seismic adequacy of new and replacement electrical and mechanical equipment prior to receipt of a final plant-specific SER resolving USI A-46. This would be done in accordance with 10 CFR 50.59. You also indicated that you plan to use GIP seismic verification methodology in the near future for the installation of two additional emergency diesel generators. The staff recognizes that you may revise the licensing basis in accordance with 10 CFR 50.59 to reflect the acceptability of the USI A-46 (GIP) methodology for verifying the seismic adequacy of electrical and mechanical equipment covered by the GIP. This should be done consistently with the SQUG commitments and implementation guidance.

If you have any questions regarding this issue, please contact me at (301) 504-1387.

Sincerely,

Original Signed By.

Anthony T. Gody, Jr., Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:

See next page

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