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U.S. NUCLEAR REGULATORY COMMISSION  
Mail Station P1-137  
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Gentlemen:

DOCKET NOS. 50-266 AND 50-301  
RESPONSE TO GENERIC LETTER 87-02, SUPPLEMENT 1  
ON SQUG RESOLUTION OF USI A-46  
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

#### INTRODUCTION

On February 19, 1987, the NRC issued Generic Letter 87-02, "Verification of Seismic Adequacy of Mechanical and Electrical Equipment in Operating Reactors, Unresolved Safety Issue (USI) A-46." This Generic Letter encouraged utilities to participate in a generic program to resolve the seismic verification issues associated with USI A-46. As a result, the Seismic Qualification Utility Group (SQUG), of which Wisconsin Electric is a member, developed the "Generic Implementation Procedure (GIP) for Seismic Verification of Nuclear Plant Equipment." On May 22, 1992, the NRC Staff issued Generic Letter 87-02, Supplement 1. This letter constituted the NRC Staff's review of the GIP and included Supplemental Safety Evaluation Report Number 2 (SSER-2) on the GIP, Revision 2, corrected on February 14, 1992. In Generic Letter 87-02, Supplement 1, the NRC requests that SQUG member utilities provide, within 120 days, the following information:

1. A statement of commitment to use both the SQUG commitments and the implementation guidance provided in the GIP as supplemented by SSER-2 for the resolution of USI A-46.
2. A plant-specific schedule for implementing the GIP and submission of a report to the staff summarizing the A-46 review.
3. The detailed information as to procedures and criteria used to generate the in-structure response spectra to be used for USI A-46.

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By letter dated August 21, 1992, to Mr. James G. Partlow, NRR-NRC, the SQUG clarified that the 120 day response period expires on September 21, 1992. This letter responds to the Staff's request for Point Beach Nuclear Plant.

#### COMMITMENT TO GIP

##### GIP Commitments

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 & 2. This commitment includes the clarifications, interpretations, and exceptions identified in SSER-2 and clarified by the August 21, 1992, SQUG letter responding to SSER-2. This letter is included as Attachment A. The GIP, as evaluated by the Staff, permits licensees to deviate from the SQUG commitments embodied in the commitment sections, provided the Staff is notified of substantial deviations prior to implementation. Wisconsin Electric recognizes that the Staff's position in SSER-2 is that if licensees use other methods that deviate from the criteria and procedures as described in SQUG commitments and in the implementation guidance of the GIP without prior NRC Staff approval, the method may not be acceptable to the staff and, therefore, may result in a deviation from the provisions of Generic Letter 87-02.

##### GIP Guidance

Wisconsin Electric 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. Wisconsin Electric will notify the NRC as soon as practicable, but no later than the final USI A-46 Summary Report, of significant or programmatic deviations from the guidance portions of the GIP, if any. Justification for any such deviations will be retained on-site for NRC review. At this time, no significant or programmatic deviations are anticipated during the implementation of the GIP guidance.

#### IN-STRUCTURE RESPONSE SPECTRA

For defining seismic demand, Wisconsin Electric will use the options provided in the GIP, as appropriate, depending on the building, the location of equipment in the building, and the equipment characteristics. The licensing-basis Safe-Shutdown Earthquake (SSE) in-structure response spectra (ISRS) may be used

as one of the options provided in the GIP for defining seismic demand. For this option, the licensing basis response spectra as described below will be used and are considered to be conservative design response spectra.

The in-structure response spectra curves for the design of equipment inside the buildings at Point Beach, are generated by the time history technique of seismic analysis. The sample earthquake used is that recorded at Olympia, Washington, N80E, April 13, 1949 scaled to 0.06g (operating basis earthquake, OBE) peak horizontal ground acceleration. The resultant in-structure response spectra are multiplied by a factor of 2 for seismic analysis with respect to the SSE. Attachment B provides a detailed explanation of the spectra development. For the design of Seismic Class 1 structures at Point Beach, the input design ground motion is the Housner ground response spectrum scaled to 0.12g (hypothetical or safe shutdown earthquake, SSE) peak horizontal ground acceleration.

Section II.4.2.4 of the GIP states that "conservative design in-structure response spectra are defined as response spectra which have been computed roughly in accordance with the conservatism of current NRC Regulatory Guidelines (such as Reg. Guide 1.61 for structural damping) and the Standard Review Plan (SRP)." The GIP also states that "those plants which have been designed with Housner ground motion spectra provide a suitable level of safety in the calculation of the resulting structural response. The adequacy of such existing design basis is not in question." Figure B.1 shows that the scaled Olympia, Washington earthquake time history spectrum conservatively bounds the Housner ground response spectrum for frequencies  $>1.5$  Hz. At important structural frequencies between 2 Hz and 4 Hz, the Olympia spectral amplitudes are nearly double the required Housner spectral amplitudes. The Olympia, Washington earthquake time history is slightly lower than the Housner ground response spectrum for frequencies  $<1.5$  Hz. However, there are no building natural frequencies below 1.5 Hz, therefore this has no affect on the seismic capacity of structures or equipment at Point Beach. The Olympia, Washington earthquake time history spectrum and the Housner ground response spectrum are scaled to 0.01g peak horizontal acceleration for comparison purposes only. For determining seismic demand using the ground response spectrum, the Housner ground response spectrum scaled to 0.12g SSE peak horizontal acceleration will be used. Based on the fact that the scaled Olympia earthquake time history spectra bounds the Housner ground response spectra for frequencies  $>1.5$  Hz, that the structural damping values are generally lower than those specified in Regulatory Guide 1.61 (see Table B.2), and that the Housner ground response spectra is not in question, Wisconsin Electric considers the in-structure response spectra, described in

Attachment B, to be "conservative design" spectra for use in the implementation of GIP to resolve USI A-46.

#### PLANT SEISMIC LICENSING BASIS

Wisconsin Electric intends to change its 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. Wisconsin Electric will be installing two additional emergency diesel generators. It is our intention to utilize the seismic verification methodology provided in the SQUG GIP, where appropriate, for this project. This licensing basis change will be conducted under 10 C.F.R. 50.59 and will be consistent with the guidance in section 2.3.3 of Part I of the GIP, and with the clarifications, interpretations and exceptions identified in SSER-2 as clarified by the August 21, 1992, SQUG letter responding to SSER-2 (Attachment A). Any necessary changes to the FSAR will be provided in accordance with 10 C.F.R. 50.71(e).

#### SCHEDULE

Given the magnitude of the effort required to achieve resolution of USI A-46, final implementation must be carefully integrated with the SQUG training schedules, plant outage schedules and the seismic IPEEE response. The completion of the seismic IPEEE may be affected by the A-46 implementation start date. Our plant-specific schedule for resolution of USI A-46 at Point Beach is included as follows:

<u>MILESTONE</u>	<u>ESTIMATED MILESTONE COMPLETION DATE</u>
SSEL/WALKDOWN PREPARATION	AUGUST 1993
WALKDOWN PHASE	NOVEMBER 1994
ANALYSIS and DOCUMENTATION PHASE	MAY 1995
A-46/IPEEE SUMMARY REPORTS SUBMITTAL TO NRC	JUNE 1995

In accordance with Part II, Section 9 of the GIP, the A-46 Summary Report, consisting of a Relay Evaluation Report and a Seismic

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Evaluation Report, will provide the results of the A-46 program implementation at Point Beach.

Our A-46 program completion schedule is dependent on our coordination with the seismic IPEEE activities, the availability and schedule for completing the necessary SQUG training, the availability of industry resources which may be limited because of the large number of licensees implementing this program, and the timing of NRC approval of the Point Beach in-structure response spectra submitted with this letter. Since we are utilizing the available training provided by SQUG and NUMARC and have already contracted for assistance with the USI A-46/IPEEE project, we do not anticipate that these factors will cause any schedule delays.

We understand that, as stated in SSER-2 and clarified in the August 21, 1992, SQUG letter responding to SSER-2 (Attachment A), our in-structure response spectra are considered acceptable for USI A-46 unless the staff indicates otherwise during a 60-day review period. If resolution of any NRC questions concerning the in-structure response spectra result in a change to the project schedule, we will notify you.

Sincerely,



Bob Link  
Vice President  
Nuclear Power

Attachments

cc: NRC Resident Inspector  
NRC Regional Administrator

Subscribed and sworn to before me  
this 22<sup>nd</sup> day of September 1992.

Patricia Brzozowski  
Notary Public, State of Wisconsin  
My Commission expires May 19, 1996.

TJD/hjo