

NRR-PMDAPEm Resource

From: Drake, Richard S [RDrake@entergy.com]
Sent: Thursday, April 09, 2015 11:49 AM
To: Wyman, Stephen
Subject: FW: Feedback --- RE: Pilgrim ESEP Report Clarification Questions

[here the resent official email](#)

From: Drake, Richard S [<mailto:RDrake@entergy.com>]
Sent: Thursday, March 12, 2015 12:11 PM
To: DiFrancesco, Nicholas
Cc: Morgan, Nadiyah; Wyman, Stephen; Devlin-Gill, Stephanie; Ford, Bryan
Subject: RE: Inquiry RE: Pilgrim ESEP Report Clarification Questions

Nick,

Here are the Responses to the Clarification Questions from Pilgrim

Question 1

ESEP Report Section 6.2 describes ESEL component screening using Table 2-4 of EPRI NP-6041-SL. This table is applicable to components located up to 40 ft above grade. The ESEP report is silent concerning screening or HCLPF calculations at elevations beyond 40 ft above grade. Please describe how ESEL components located at elevations beyond 40 ft above grade either were screened or had their HCLPF capacities calculated, including specific references for the applicable guidance utilized.

Response: The Pilgrim ESEL contains two components located more than 40 ft above grade (above elevation 62.5 ft); C129B Containment Pressure Switch Instrument Rack and PT-1001-89A Drywell Pressure Transmitter. These components are located at elevation 74' and were screened in accordance with section 4 of EPRI 1019200 "Seismic Fragility Applications Guide Update". A HCLPF capacity of 1.5*reference spectrum was compared to demand from review level ground motion in-structure response spectra at elevation 74'. The screening and evaluation sheets from the walkdowns show the components as flagged to be 40 ft above grade and evaluated using the appropriate criteria.

Question 2

In ESEP Report Section 5.2, it states "The vertical direction RLGM ISRS is obtained by scaling the vertical amplified ground response spectrum." The statement implies that the vertical ground spectrum, scaled by a factor of 2, is used at all elevations. Describe in more detail the scaling procedure used to obtain the vertical RLGM ISRS. Please provide the technical basis.

Response: The factor of 2 used for scaling the vertical direction is based on using the maximum scaling factor for the GMRS/SSE ratio in accordance with Section 4 of EPRI 3002000704. The scaled vertical ground spectrum is considered for all elevations within the plant. This approach is consistent with Pilgrim's seismic design basis as described in UFSAR Section 12.2.3.5.1, Seismic Design Basis Document TDBD-118, and Seismic Response Spectra Specification C114ERQE0. See excerpt below from TDBD-118:

3.1.2.3 Vertical Response

UFSAR Section 12.2.3.5.1 states "The vertical acceleration is equal to two-thirds of the horizontal ground acceleration". This statement applies to seismic design of the building structures, and to equipment supported by the building structures. Building structures were assumed to exhibit rigid range response when subjected to vertical ground motion, and vertical floor spectra were not calculated, This approach was derived from guidance contained in TID-7024, Section

1.3. (References 5.4.8.3 and 5.5.1.4.1). Although different from current practice, it is considered to be an approved part of the PNPS design basis.

If you have further questions please contact me by email or we can set up a conference call.

Richard S. Drake, PE

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Email: rdrake@entergy.com

From: DiFrancesco, Nicholas [<mailto:Nicholas.DiFrancesco@nrc.gov>]

Sent: Tuesday, March 03, 2015 3:10 PM

To: Drake, Richard S

Cc: Morgan, Nadiyah; Wyman, Stephen; Devlin-Gill, Stephanie; Ford, Bryan

Subject: Inquiry RE: Pilgrim ESEP Report Clarification Questions

Mr. Drake,

In follow-up to an afternoon voicemail, as part of the NRC review of the Pilgrim ESEP report, the staff would appreciate clarification on the following technical items:

Question 1

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Question 2

In ESEP Report Section 5.2, it states "The vertical direction RLGM ISRS is obtained by scaling the vertical amplified ground response spectrum." The statement implies that the vertical ground spectrum, scaled by a factor of 2, is used at all elevations. Describe in more detail the scaling procedure used to obtain the vertical RLGM ISRS. Please provide the technical basis.

An email response will likely be sufficient to support the ESEP report review. A response around March 18, if practicable, would be greatly appreciated to support the established review schedule.

Please let me or Steve Wyman (at 301-415-3041) know if you would like to schedule a clarification call or any have questions and concerns.

Thanks,

Nick

Senior Project Manager - Seismic Reevaluation Activities
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Japan Lesson Learned Project Division

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"Wyman, Stephen" <Stephen.Wyman@nrc.gov>
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