



General Electric Company  
175 Curtner Avenue, San Jose, CA 95128

April 16, 1993

Docket No. STN 52-001

Chet Poslusny, Senior Project Manager  
Standardization Project Directorate  
Associate Directorate for Advanced Reactors  
and License Renewal  
Office of the Nuclear Reactor Regulation

Subject: Submittal Supporting Accelerated ABWR Review Schedule - DFSER Open  
Item 2.6-1

Dear Chet:

Enclosed in a SSAR markup addressing DFSER Open Item 2.601. This markup includes consideration of the issues identified in Section 1.4 of the EPRI Evolutionary Plant SER. In revising the enclosed Table 2.0-1, GE made the changes requested by the DFSER except for the following:

1. It has been agreed with NRC management that the SSAR will utilize only Japanese metric units.
2. The suggested note (10) does not belong in Table 2.0-1 as a site design parameter. Note (10) information is already included in Section 3.7.

Sincerely,

Jack Fox  
Advanced Reactor Programs

cc: Norman Fletcher (DOE)  
Roy Louison (GE)

*See attached dist*  
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TABLE 2.0-1

ENVELOPE OF ABWR STANDARD PLANT SITE DESIGN PARAMETERS

Maximum Ground Water Level:  
61.0 cm below grade

Extreme Wind: Basic Wind Speed:  
177 km/hr<sup>(1)</sup>/209 km/hr<sup>(2)</sup>

Maximum Flood (or Tsunami) Level:<sup>(3)</sup>  
30.5 cm below grade

Tornado:<sup>(4)</sup>  
- Maximum tornado wind speed: 483 km/hr  
- Maximum Rotational Speed: 386 km/hr  
- Translational velocity: 97 km/hr  
- Radius: 45.7 m  
- Maximum pressure drop: 0.141 kg/cm<sup>2</sup>  
- Rate of pressure drop: 0.0846 kg/cm<sup>2</sup>/sec  
- Missile Spectra: Per SRP 3.5.1.4 Spectrum I

Precipitation (for Roof Design):  
- Maximum rainfall rate: 49.3 cm/hr<sup>(8)</sup>  
- Maximum snow load: 0.024 kg/cm<sup>2</sup>

Design Temperatures:  
- Ambient  
1% Exceedance Values  
- Maximum: 37.8°C dry bulb/25°C wet bulb (coincident), 26.6°C wet bulb (non-coincident)  
- Minimum: -23.3°C

Soil Properties:  
- Minimum Static Bearing Capacity: 7.32 kg/cm<sup>2</sup>  
- Minimum Shear Wave Velocity: 305 m/sec<sup>(9)</sup>  
- Liquefaction Potential: None at plant site resulting from SSE<sup>(7)</sup>

0% Exceedance Values (Historical limit)  
- Maximum 46.1°C dry bulb/26.7°C wet bulb (coincident), 27.2°C wet bulb (non-coincident)  
- Minimum: -40°C

Seismology:  
- SSE Peak Ground Acceleration: 0.30g<sup>(5)</sup>  
- SSE Response Spectra: per Reg. Guide 1.60  
- SSE Time History: Envelope SSE Response Spectra

(1) 50-year recurrence interval; value to be utilized for design of non-safety-related structures only.

(2) 100-year recurrence interval; value to be utilized for design for safety-related structures only.

(3) Probable maximum flood level (PMF), as defined in ANSI/ANS-2.8, "Determining Design Basis Flooding at Power Reactor Sites."

(4) 10,000,000-year tornado recurrence interval.

(5) Free-field, at plant grade elevation.

(6) Deleted

(7) See item 3 in Section 3A.1 for additional information.

(8) Maximum value for 1 hour over 2.6 km<sup>2</sup> probable maximum precipitation (PMP) with ratio of 5 minutes to 1 hour PMP of 0.32 as found in National Weather Service Publication HMR No. 52. Maximum short term rate: 15.7 cm/5 min.

(9) This is the minimum shear wave velocity at low strains after the soil property uncertainties have been applied.

Hazards in Site Vicinity

- Site Proximity Missiles and Aircraft: 5x10<sup>-7</sup> per year  
- Toxic Gases: None  
- Volcanic Activity: None