PMSTPCOL PEmails

From: Govan, Tekia
Sent: Wednesday, May 12, 2010 1:16 PM
To: STPCOL
Subject: FW: STP Handouts for GMRS Sensitivity Study for this afternoon's Teleconference
Attachments: GMRS Sensitivity Study.pdf

Tekia V. Govan, Project Manager
U.S. Nuclear Regulatory Commission
Office of New Reactors
MS T-6-D48
Washington DC 20555-0001
301-415-6197
Tekia.Govan@nrc.gov

From: Bense, Richard [mailto:rhbense@STPEGS.COM]
Sent: Wednesday, May 12, 2010 12:52 PM
To: Govan, Tekia
Subject: STP Handouts for GMRS Sensitivity Study for this afternoon's Teleconference

Tekia,

Attached is the handout for this afternoon's teleconference regarding "Results of the sensitivity analysis for GMRS based on alternate weightings seismic source parameters (SSHAC)."

Dick Bense
Licensing Engineer, STP 3 & 4
RHBense@STPEGS.Com
RHBense@MSN.Com

(361) 972 4802 (Bay City Office)
(215) 353-8857 (mobile)
(215) 362-2552 (home office)

Hearing Identifier: SouthTexas34Public_EX
Email Number: 2207

Mail Envelope Properties (F5A4366DF596BF458646C9D433EA37D7292F56A513)

Subject: FW: STP Handouts for GMRS Sensitivity Study for this afternoon's Teleconference
Sent Date: 5/12/2010 1:15:33 PM
Received Date: 5/12/2010 1:15:35 PM
From: Govan, Tekia

Created By: Tekia.Govan@nrc.gov

Recipients:
"STPCOL" <STP.COL@nrc.gov>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	**Size**	**Date & Time**
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Expiration Date:
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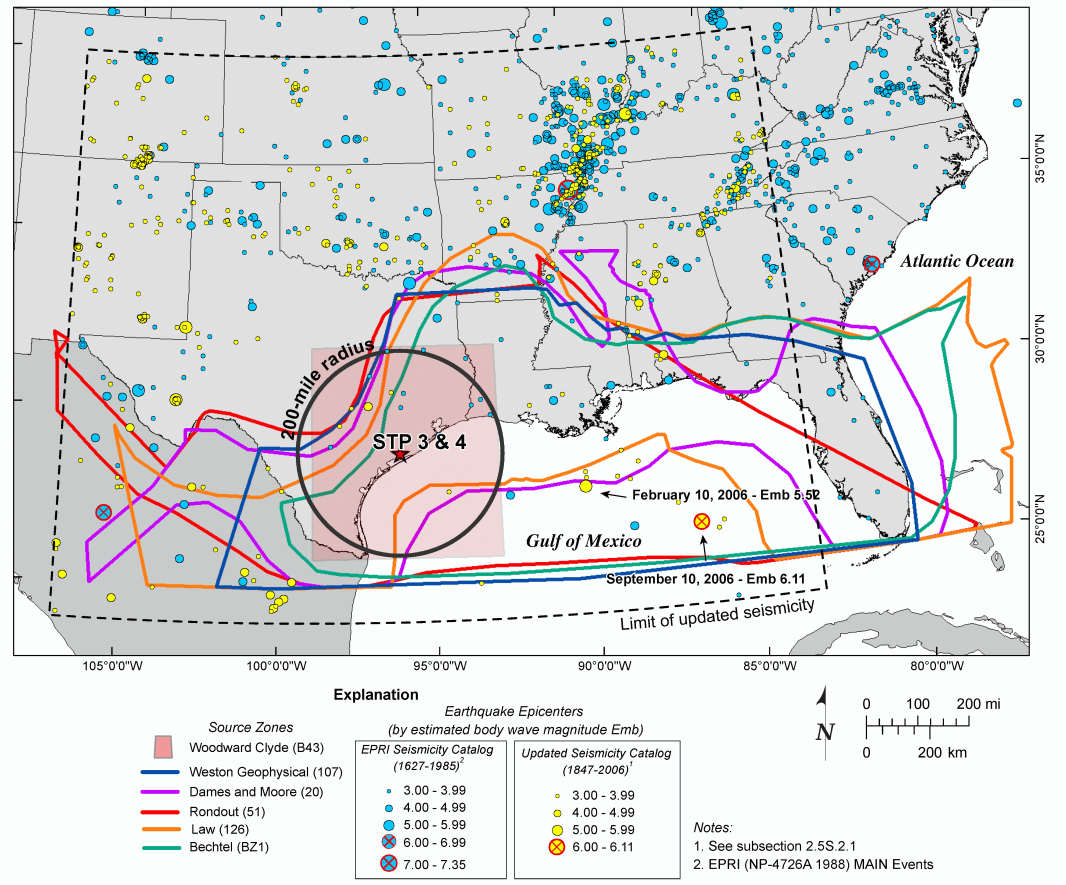

Figure 2.5S.2-8 EPRI EST Gulf Coast Background Source Zones

STP GMRS Sensitivity Study

Table 1 shows the original STP COLA Gulf Coast source maximum magnitude (Mmax) distributions for the six Earth Science Teams (ESTs) and Hypothetical Mmax distribution used in sensitivity analyses to address NRC concerns raised in STP RAI 02.05.02-28.

Table 1. Gulf Coast source maximum magnitude distributions

Gulf Coast Source Zones (GCSZs)	Maximum Magnitude Distributions (mb [weight])	
	Original COLA	Hypothetical
BEC-BZ1	6.1 [0.10], 6.4 [0.40], 6.6 [0.50]	6.1 [0.1] 6.6 [0.4] 6.9 [0.4] 7.2 [0.1]
DAM-20	5.5 [0.80], 7.2 [0.20]	
LAW-126	5.5 [0.90], 5.7 [0.10]	
RND-51	6.1 [0.30], 6.3 [0.55], 6.5 [0.15]	
WCC-B43	4.9 [0.17], 5.4 [0.28], 5.8 [0.27], 6.5 [0.28]	
WGC-107	6.6 [0.89], 7.2 [0.11]	

Table 2 shows comparisons of the Base (Original COLA) Mmax distribution GMRS versus the results of implementing the Hypothetical Mmax distribution for, respectively, three GCSZs (BEC, RND, and WGC); five GCSZs (BEC, DAM, LAW, RND, and WGC); and all six GCSZs.

Mmax Sensitivity Study
Table 2. "Soil GMRS" (in g) Base vs. Hypothetical Mmax Sensitivity Study Comparison for STP

	Original [FSAR] Soil GMRS	**GMRS for Several Hypothetical Mmax Distributions**			**% Diffs of Hypothetical GMRS from Original GMRS**		
Frequency (Hz)	**Sa(g)**	**#1 Sa(g)**	**#2 Sa(g)**	**#3 Sa(g)**	**#1 %**	**#2 %**	**#3 %**
100	0.0975	0.1003	0.1077	0.1143	3%	10%	17%
25	0.1024	0.1054	0.1138	0.1212	3%	11%	18%
10	0.1374	0.1413	0.1508	0.1593	3%	10%	16%
5	0.1887	0.1933	0.2032	0.2123	2%	8%	13%
2.5	0.2059	0.2094	0.2155	0.2213	2%	5%	7%
1	0.1705	0.1723	0.1742	0.1763	1%	2%	3%
0.5	0.1633	0.1639	0.1643	0.1649	0%	1%	1%

These values are plotted in Figure 1 below.

DRAFT

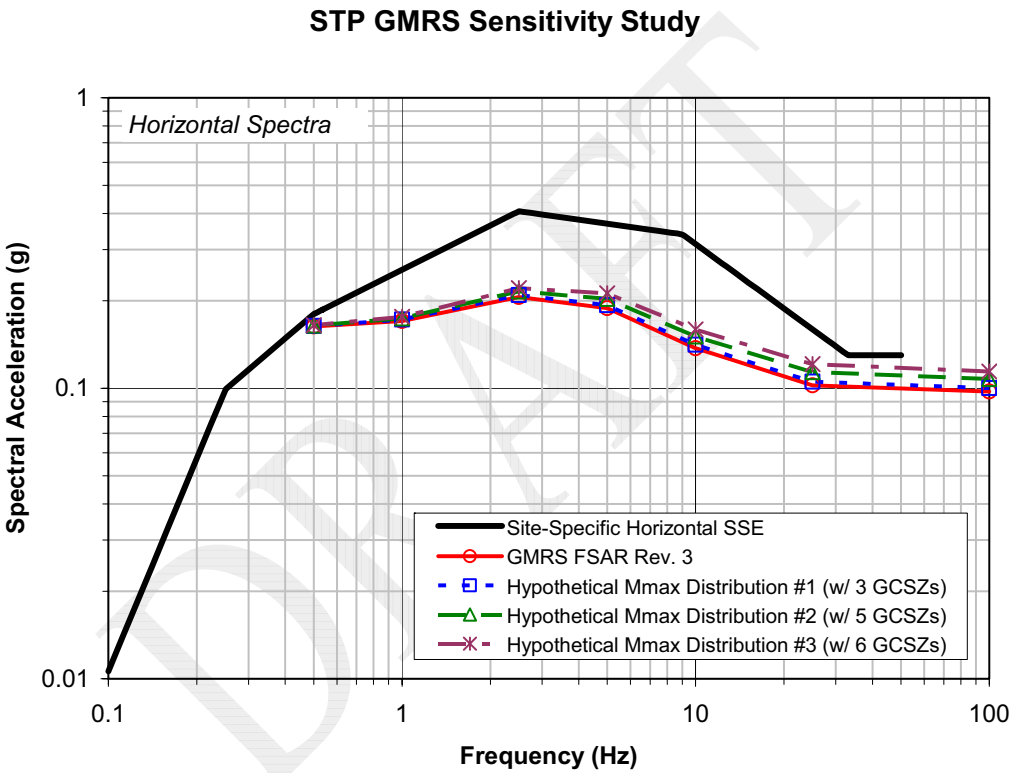

Figure 1. Sketch of the original and hypothetical GMRS corresponding to the values taken from Table 2. Also shown is the horizontal site-specific SSE spectrum (see STP FSAR Figure 3H.6-1). (All spectral accelerations are for 5% critical damping.)