

Brian H. Whitley
Regulatory Affairs Director
Nuclear Development

Southern Nuclear
Operating Company, Inc.
40 Inverness Center Parkway
Post Office Box 1295
Birmingham, AL 35242

Tel 205.992.7079
Fax 205.992.5296



December 5, 2014

Docket Nos.: 52-025
52-026

ND-14-1863

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Vogtle Electric Generating Plant – Units 3 and 4
Response to Request for Submittal of
Updated Ground Motion Spectra and Foundation Input Response Spectra

References:

1. NRC Letter, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 10 CFR 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Daiichi Accident," dated March 12, 2012.
2. Letter to NRC, "Vogtle Electric Generating Plant Units 3 and 4, 30 Day Response to March 12, 2012 Information Request," dated April 4, 2012.
3. Letter to NRC, "Vogtle Electric Generating Plant – Units 1 and 2, Seismic Hazard and Screening Report for CEUS Sites," dated March 31, 2014.
4. NRC Letter, "Request for Submittal of Updated Ground Motion Spectra and Foundation Input Response Spectra," dated November 5, 2014.

Ladies and Gentlemen:

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Daiichi Accident" (Reference 1) to all NRC power reactor licensees, holders of construction permits in active or deferred status and COL licensees. In addition to requiring detailed information, the 10 CFR 50.54(f) letter required recipients to confirm receipt in writing within 30 days.

On April 4, 2012, Southern Nuclear Operating Company (SNC) submitted the required confirmation on behalf of Vogtle Electric Generating Plant Units 3 and 4 (VEGP 3&4). Within that letter (Reference 2), SNC acknowledged that Enclosures 1 through 4 of the Reference 1 were not applicable to VEGP 3&4.

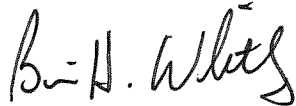
SNC performed a re-assessment of the seismic response related to Vogtle Electric Generating Plant Units 1 and 2 (VEGP 1&2) and provided Reference 3 to the NRC on March 31, 2014. Because VEGP 3&4 site is contiguous to VEGP 1&2, this re-assessment is applicable to the entire site. On November 11, 2014, SNC received a request from the NRC for additional seismic information (Reference 4). The enclosure provides the information requested.

In summary, the VEGP 1&2 Ground Motion Response Spectrum (GMRS) submitted as part of Enclosure 3 did exceed the VEGP 3&4 GMRS (VEGP 3&4 Early Site Permit Part 2 Section 2.5.2, Figure 2.5.2-44b). As a result of the noted exceedance, SNC performed a re-assessment of the seismic response of the VEGP 3&4 Nuclear Island similar to that provided in the VEGP 3&4 Combined Operating License Application (COLA) Part 2 Appendix 3G, based on using the GMRS from VEGP 1&2. The results of this re-assessment continues to support the conclusion provided in the COLA that the seismic demand used for the standard AP1000 design bounds the VEGP 3&4 site specific seismic demand and thus still maintains the significant design margin. Although the latest Central and Eastern United States (CEUS) methodology was used in this re-assessment, it is not the design basis of either VEGP 1&2 or VEGP 3&4. The in-structure response analysis that was performed did not provide any basis to change the design basis for VEGP 3&4.

Therefore, it is concluded that the VEGP 1&2 site hazard provided in the 2.1 seismic submittal does not impact the conclusions regarding seismic as provided in the VEGP 3&4 COLA.

This letter contains no new NRC commitments. If you have any questions, please contact John Giddens at 205.992.7924.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "B. H. Whitley". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

B. H. Whitley
Regulatory Affairs Director
Nuclear Development

BHW/JMG

Enclosure: Vogtle Electric Generating Plant – Units 3 & 4 Seismic Information

cc:

Southern Nuclear Operating Company/ Georgia Power Company

Mr. S. E. Kuczynski (w/o enclosure)

Mr. J. A. Miller

Mr. D. A. Bost (w/o enclosure)

Mr. B. L. Ivey

Mr. M. D. Meier

Mr. M. D. Rauckhorst (w/o enclosure)

Mr. J. T. Gasser (w/o enclosure)

Mr. D. H. Jones (w/o enclosure)

Mr. J. R. Johnson (w/o enclosure)

Mr. D. R. Madison

Mr. D. M. Lloyd

Mr. B. H. Whitley

Mr. C. R. Pierce

Mr. D. L. Fulton

Mr. M. J. Yox

Mr. J. C. Harrelson

Mr. W. A. Sparkman

Mr. J. P. Redd

Document Services RTYPE: VND.LI.L00

File AR.01.02.06

Nuclear Regulatory Commission

Mr. V. M. McCree (w/o enclosure)

Mr. M. Delligatti (w/o enclosure)

Mr. L. Burkhardt (w/o enclosure)

Mr. D. H. Jaffe

Ms. D. L. McGovern

Mr. B. M. Bovol

Ms. R. Reyes

Ms. M. A. Sutton

Mr. M. E. Ernestes

Mr. G. Khouri

Mr. L. M. Cain

Mr. J. D. Fuller

Mr. C. B. Abbott

Mr. C. Huffman

Ms. S. Temple

Oglethorpe Power Corporation

Mr. M. W. Price

Mr. K. T. Haynes

Ms. A. Whaley

Municipal Electric Authority of Georgia

Mr. J. E. Fuller

Mr. S. M. Jackson

Dalton Utilities

Mr. D. Cope

CB&I

Mr. J. Simmons (w/o enclosures)

Ms. K. Stoner (w/o enclosures)

Mr. C. A. Castell

Westinghouse Electric Company, LLC

Mr. T. C. Geer (w/o enclosures)

Mr. S. W. Gray (w/o enclosures)

Mr. L. Woodcock

Mr. P. A. Russ

Mr. G. F. Couture

Mr. M. Y. Shaqqo

Other

Mr. R. W. Prunty, Bechtel Power Corporation

Ms. K. K. Patterson, Tetra Tech NUS, Inc.

Dr. W. R. Jacobs, Jr., Ph.D., GDS Associates, Inc.

Mr. S. Roetger, Georgia Public Service Commission

Ms. S. W. Kernizan, Georgia Public Service Commission

Mr. K. C. Greene, Troutman Sanders

Mr. S. Blanton, Balch Bingham

In response to the request for an updated Ground Motion Response Spectra and Foundation Input Response Spectra for the Vogtle Electric Generating Plant Units 3 & 4 (VEGP 3&4), Southern Nuclear Operating Company (SNC) provides the following:

The seismic submittal dated March 31, 2014 (Reference 1) provides a VEGP1&2 site GMRS based on updated seismic hazard models which for this enclosure is identified as the 2.1 GMRS. This 2.1 GMRS is applicable to VEGP 3&4 site since the soil profiles for each are essentially the same and were fully accounted for in the site hazard development to determine the VEGP 2.1 GMRS. Table 1 of this Enclosure provides the tabulation of the 2.1 GMRS spectral acceleration versus oscillator natural frequency for 5% damping; this is the same as Table 2.4-1 of Reference 1. The site seismic hazard analysis that produced the 2.1 GMRS is fully described in Reference 1. That site hazard analysis properly accounted for uncertainties in subsurface layers and the rock hazard. The location of 2.1 GMRS is at plant grade for all units (EL 220'). The VEGP site rock seismic hazard; i.e., probabilistic seismic hazard analysis (PSHA), is based on the CEUS SSC (NUREG-2115) Reference 2, and the 2013 EPRI ground motion attenuation model, Reference 3.

Foundation Input Response Spectra (FIRS) for the horizontal direction was calculated as an outcrop motion at 40' depth (EL 180'). This elevation corresponds to the bottom of the foundation of the AP1000 Nuclear Islands at VEGP 3&4. The development of the horizontal FIRS is based on the same soil column characterization and rock PSHA used for the 2.1 GMRS. The vertical FIRS is based on V/H ratio developed for the site conditions. Table 2 of this Enclosure provides the tabulation of the horizontal and vertical FIRS spectral acceleration versus oscillator natural frequency for 5% damping.

Regarding the description of the assessment of the 2.1-seismic hazard on the VEGP 3&4 seismic design margin, SNC provides the following:

Verification of the adequacy of the AP1000 seismic design for VEGP 3&4 is provided in the COLA FSAR section 3.7 Appendix 3G (Reference 4). This verification was a site-specific seismic soil-structure interaction analysis of the AP1000 Nuclear Island using the VEGP site soil properties with a seismic ground motion input associated with the VEGP ESP/COLA GMRS. This analysis calculated in-structure response spectra (ISRS) at six key locations. A comparison was made of these ISRS to the AP1000 standard design ISRS at the same locations. These comparisons are provided in Reference 4. These ISRS comparisons showed that the VEGP ISRS were essentially enveloped by the AP1000 standard design ISRS; therefore, demonstrating significant seismic design margin.

SNC recently evaluated the impact on the seismic design margin for VEGP 3&4 due to the VEGP Units 1&2 2.1 site hazard provided in the 2.1-Seismic submittal (Reference 1). This evaluation followed the same analysis approach described in Reference 4. The Figures from this evaluation are provided in this Enclosure. These Figures are the ISRS comparisons at the six key locations based on the VEGP Units 1&2 2.1-site seismic hazard. These Figures show that the VEGP 3&4 ISRS are, for all practical purposes, enveloped by the AP1000 standard design ISRS. Therefore, it is concluded that the VEGP Units 1&2 site hazard provided in the 2.1 seismic submittal does not impact the conclusions regarding seismic as described in the VEGP 3&4 COLA.

Table 1: GMRS at Control Point for VEGP

Freq. (Hz)	GMRS (g)
100	4.36E-01
90	4.38E-01
80	4.41E-01
70	4.47E-01
60	4.58E-01
50	4.80E-01
40	5.34E-01
35	5.83E-01
30	6.51E-01
25	7.48E-01
20	8.83E-01
15	1.02E+00
12.5	1.07E+00
10	1.09E+00
9	1.09E+00
8	1.07E+00
7	1.03E+00
6	9.64E-01
5	9.21E-01
4	9.39E-01
3.5	9.09E-01
3	8.55E-01
2.5	7.31E-01
2	5.87E-01
1.5	4.49E-01
1.25	4.60E-01
1	2.76E-01
0.9	2.42E-01
0.8	2.33E-01
0.7	2.47E-01
0.6	2.76E-01
0.5	2.62E-01
0.4	2.10E-01
0.35	1.84E-01
0.3	1.57E-01
0.25	1.31E-01
0.2	1.05E-01
0.15	7.87E-02
0.125	6.56E-02
0.1	4.20E-02

Vogtle Electric Generating Plant – Units 3 & 4
Seismic Information
Enclosure to ND-14-1863

Table 2: FIRS at EL 180' for VEGP 3&4

Frequency (Hz)	Horizontal FIRS (g)	Vertical FIRS (g)
0.1	1.39E-02	7.63E-03
0.1023	1.46E-02	8.04E-03
0.1047	1.52E-02	8.37E-03
0.1072	1.60E-02	8.82E-03
0.1096	1.69E-02	9.28E-03
0.1122	1.77E-02	9.74E-03
0.1148	1.86E-02	1.02E-02
0.1175	1.95E-02	1.07E-02
0.1202	2.05E-02	1.13E-02
0.123	2.16E-02	1.19E-02
0.1259	2.25E-02	1.24E-02
0.1288	2.32E-02	1.28E-02
0.1318	2.40E-02	1.32E-02
0.1349	2.47E-02	1.36E-02
0.138	2.55E-02	1.40E-02
0.1413	2.63E-02	1.45E-02
0.1445	2.70E-02	1.49E-02
0.1479	2.77E-02	1.53E-02
0.1514	2.85E-02	1.57E-02
0.1549	2.93E-02	1.61E-02
0.1585	3.01E-02	1.65E-02
0.1622	3.09E-02	1.70E-02
0.166	3.18E-02	1.75E-02
0.1698	3.27E-02	1.80E-02
0.1738	3.37E-02	1.85E-02
0.1778	3.47E-02	1.91E-02
0.182	3.57E-02	1.96E-02
0.1862	3.68E-02	2.02E-02
0.1905	3.79E-02	2.09E-02
0.195	3.91E-02	2.15E-02
0.1995	4.04E-02	2.22E-02
0.2042	4.17E-02	2.29E-02
0.2089	4.31E-02	2.37E-02
0.2138	4.45E-02	2.45E-02
0.2188	4.60E-02	2.53E-02
0.2239	4.77E-02	2.62E-02
0.2291	4.93E-02	2.71E-02
0.2344	5.11E-02	2.81E-02
0.2399	5.30E-02	2.92E-02
0.2455	5.50E-02	3.03E-02
0.2512	5.72E-02	3.14E-02
0.257	5.94E-02	3.27E-02
0.263	6.18E-02	3.40E-02
0.2692	6.44E-02	3.54E-02
0.2754	6.71E-02	3.69E-02
0.2818	7.00E-02	3.85E-02
0.2884	7.31E-02	4.02E-02
0.2951	7.65E-02	4.21E-02
0.302	8.01E-02	4.40E-02
0.309	8.40E-02	4.62E-02
0.3162	8.81E-02	4.85E-02
0.3236	9.26E-02	5.10E-02
0.3311	9.75E-02	5.36E-02
0.3388	1.03E-01	5.65E-02
0.3467	1.09E-01	5.97E-02
0.3548	1.15E-01	6.31E-02
0.3631	1.21E-01	6.68E-02
0.3715	1.29E-01	7.08E-02
0.3802	1.37E-01	7.51E-02
0.389	1.45E-01	7.98E-02
0.3981	1.54E-01	8.48E-02
0.4074	1.64E-01	9.02E-02
0.4169	1.74E-01	9.59E-02
0.4266	1.85E-01	1.02E-01
0.4365	1.96E-01	1.08E-01
0.4467	2.08E-01	1.14E-01
0.4571	2.19E-01	1.21E-01
0.4677	2.30E-01	1.27E-01
0.4786	2.41E-01	1.32E-01
0.4898	2.51E-01	1.38E-01
0.5012	2.59E-01	1.43E-01
0.5129	2.66E-01	1.46E-01
0.5248	2.72E-01	1.49E-01
0.537	2.76E-01	1.52E-01
0.5495	2.78E-01	1.53E-01

Frequency (Hz)	Horizontal FIRS (g)	Vertical FIRS (g)
0.5623	2.80E-01	1.54E-01
0.5754	2.79E-01	1.54E-01
0.5888	2.78E-01	1.53E-01
0.6026	2.76E-01	1.52E-01
0.6166	2.72E-01	1.50E-01
0.631	2.69E-01	1.48E-01
0.6457	2.64E-01	1.45E-01
0.6607	2.60E-01	1.43E-01
0.6761	2.56E-01	1.41E-01
0.6918	2.52E-01	1.39E-01
0.7079	2.48E-01	1.36E-01
0.7244	2.45E-01	1.35E-01
0.7413	2.42E-01	1.33E-01
0.7586	2.39E-01	1.32E-01
0.7762	2.38E-01	1.31E-01
0.7943	2.37E-01	1.30E-01
0.8128	2.36E-01	1.30E-01
0.8318	2.36E-01	1.30E-01
0.8511	2.37E-01	1.31E-01
0.871	2.40E-01	1.32E-01
0.8913	2.43E-01	1.34E-01
0.912	2.47E-01	1.36E-01
0.9333	2.53E-01	1.39E-01
0.955	2.60E-01	1.43E-01
0.9772	2.69E-01	1.48E-01
1	2.80E-01	1.54E-01
1.0233	2.95E-01	1.62E-01
1.0471	3.13E-01	1.72E-01
1.0715	3.32E-01	1.83E-01
1.0965	3.53E-01	1.94E-01
1.122	3.74E-01	2.06E-01
1.1482	3.96E-01	2.18E-01
1.1749	4.16E-01	2.29E-01
1.2023	4.35E-01	2.39E-01
1.2303	4.51E-01	2.48E-01
1.2589	4.63E-01	2.54E-01
1.2882	4.70E-01	2.59E-01
1.3183	4.74E-01	2.61E-01
1.349	4.75E-01	2.61E-01
1.3804	4.74E-01	2.61E-01
1.4125	4.70E-01	2.58E-01
1.4454	4.64E-01	2.55E-01
1.4791	4.58E-01	2.52E-01
1.5136	4.51E-01	2.48E-01
1.5488	4.44E-01	2.44E-01
1.5849	4.39E-01	2.41E-01
1.6218	4.37E-01	2.40E-01
1.6596	4.38E-01	2.41E-01
1.6982	4.44E-01	2.44E-01
1.7378	4.52E-01	2.49E-01
1.7783	4.65E-01	2.56E-01
1.8197	4.81E-01	2.65E-01
1.8621	5.00E-01	2.75E-01
1.9055	5.22E-01	2.87E-01
1.9498	5.46E-01	3.01E-01
1.9953	5.73E-01	3.15E-01
2.0417	5.97E-01	3.28E-01
2.0893	6.26E-01	3.44E-01
2.138	6.51E-01	3.58E-01
2.1878	6.73E-01	3.70E-01
2.2387	6.90E-01	3.79E-01
2.2909	7.03E-01	3.86E-01
2.3442	7.11E-01	3.91E-01
2.3988	7.15E-01	3.93E-01
2.4547	7.16E-01	3.94E-01
2.5119	7.17E-01	3.94E-01
2.5704	7.17E-01	3.95E-01
2.6303	7.21E-01	3.97E-01
2.6915	7.29E-01	4.01E-01
2.7542	7.42E-01	4.08E-01
2.8184	7.58E-01	4.17E-01
2.884	7.75E-01	4.26E-01
2.9512	7.90E-01	4.35E-01
3.02	8.02E-01	4.43E-01
3.0903	8.10E-01	4.52E-01

Vogtle Electric Generating Plant – Units 3 & 4
Seismic Information
Enclosure to ND-14-1863

Frequency (Hz)	Horizontal FIRS (g)	Vertical FIRS (g)
3.1623	8.15E-01	4.60E-01
3.2359	8.18E-01	4.67E-01
3.3113	8.22E-01	4.75E-01
3.3884	8.28E-01	4.84E-01
3.4674	8.35E-01	4.93E-01
3.5481	8.42E-01	5.03E-01
3.6308	8.48E-01	5.13E-01
3.7154	8.52E-01	5.21E-01
3.8019	8.54E-01	5.28E-01
3.8905	8.53E-01	5.34E-01
3.9811	8.49E-01	5.37E-01
4.0738	8.43E-01	5.40E-01
4.1687	8.37E-01	5.42E-01
4.2658	8.31E-01	5.44E-01
4.3652	8.27E-01	5.48E-01
4.4668	8.25E-01	5.53E-01
4.5709	8.22E-01	5.58E-01
4.6774	8.19E-01	5.62E-01
4.7863	8.15E-01	5.65E-01
4.8978	8.10E-01	5.68E-01
5.0119	8.07E-01	5.72E-01
5.1286	8.05E-01	5.78E-01
5.2481	8.07E-01	5.86E-01
5.3703	8.10E-01	5.95E-01
5.4954	8.14E-01	6.05E-01
5.6234	8.18E-01	6.15E-01
5.7544	8.22E-01	6.25E-01
5.8884	8.26E-01	6.35E-01
6.0256	8.31E-01	6.46E-01
6.166	8.36E-01	6.57E-01
6.3096	8.42E-01	6.70E-01
6.4565	8.49E-01	6.83E-01
6.6069	8.57E-01	6.97E-01
6.7608	8.65E-01	7.12E-01
6.9183	8.74E-01	7.28E-01
7.0795	8.83E-01	7.44E-01
7.2444	8.91E-01	7.60E-01
7.4131	8.99E-01	7.75E-01
7.5858	9.04E-01	7.88E-01
7.7625	9.08E-01	8.00E-01
7.9433	9.10E-01	8.12E-01
8.1283	9.11E-01	8.22E-01
8.3176	9.11E-01	8.31E-01
8.5114	9.10E-01	8.40E-01
8.7096	9.07E-01	8.47E-01
8.9125	9.04E-01	8.54E-01
9.1201	9.00E-01	8.59E-01
9.3325	8.95E-01	8.65E-01
9.5499	8.91E-01	8.71E-01
9.7724	8.89E-01	8.78E-01
10	8.87E-01	8.87E-01
10.2329	8.85E-01	8.85E-01
10.4713	8.84E-01	8.84E-01
10.7152	8.83E-01	8.83E-01
10.9648	8.82E-01	8.82E-01
11.2202	8.80E-01	8.80E-01
11.4815	8.77E-01	8.77E-01
11.749	8.72E-01	8.72E-01
12.0226	8.70E-01	8.70E-01
12.3027	8.67E-01	8.67E-01
12.5893	8.63E-01	8.63E-01
12.8825	8.59E-01	8.59E-01
13.1826	8.55E-01	8.55E-01
13.4896	8.53E-01	8.53E-01
13.8038	8.50E-01	8.50E-01
14.1254	8.44E-01	8.44E-01
14.4544	8.35E-01	8.35E-01
14.7911	8.25E-01	8.25E-01
15.1356	8.15E-01	8.15E-01
15.4882	8.07E-01	8.07E-01
15.8489	7.99E-01	7.99E-01
16.2181	7.91E-01	7.91E-01
16.5959	7.81E-01	7.81E-01
16.9824	7.71E-01	7.71E-01
17.378	7.61E-01	7.61E-01
17.7828	7.53E-01	7.53E-01
18.197	7.47E-01	7.47E-01
18.6209	7.41E-01	7.41E-01

Frequency (Hz)	Horizontal FIRS (g)	Vertical FIRS (g)
19.0546	7.34E-01	7.34E-01
19.4984	7.27E-01	7.27E-01
19.9526	7.18E-01	7.18E-01
20.4174	7.07E-01	7.07E-01
20.893	6.95E-01	6.95E-01
21.3796	6.82E-01	6.82E-01
21.8776	6.70E-01	6.70E-01
22.3872	6.59E-01	6.59E-01
22.9087	6.50E-01	6.50E-01
23.4423	6.43E-01	6.43E-01
23.9883	6.35E-01	6.35E-01
24.5471	6.26E-01	6.26E-01
25.1189	6.17E-01	6.17E-01
25.704	6.06E-01	6.06E-01
26.3027	5.96E-01	5.96E-01
26.9153	5.86E-01	5.86E-01
27.5423	5.77E-01	5.77E-01
28.1838	5.69E-01	5.69E-01
28.8403	5.61E-01	5.61E-01
29.5121	5.54E-01	5.54E-01
30.1995	5.46E-01	5.46E-01
30.903	5.38E-01	5.38E-01
31.6228	5.30E-01	5.30E-01
32.3594	5.22E-01	5.22E-01
33.1131	5.14E-01	5.14E-01
33.8844	5.08E-01	5.08E-01
34.6737	5.02E-01	5.02E-01
35.4813	4.95E-01	4.95E-01
36.3078	4.88E-01	4.88E-01
37.1535	4.82E-01	4.82E-01
38.0189	4.76E-01	4.76E-01
38.9045	4.70E-01	4.70E-01
39.8107	4.64E-01	4.64E-01
40.738	4.58E-01	4.58E-01
41.6869	4.53E-01	4.53E-01
42.658	4.47E-01	4.47E-01
43.6516	4.42E-01	4.42E-01
44.6684	4.37E-01	4.37E-01
45.7088	4.33E-01	4.33E-01
46.7735	4.28E-01	4.28E-01
47.863	4.24E-01	4.24E-01
48.9779	4.21E-01	4.21E-01
50.1187	4.17E-01	4.17E-01
51.2861	4.14E-01	4.14E-01
52.4807	4.11E-01	4.11E-01
53.7032	4.08E-01	4.08E-01
54.9541	4.05E-01	4.05E-01
56.2341	4.03E-01	4.03E-01
57.544	4.01E-01	4.01E-01
58.8844	3.99E-01	3.99E-01
60.256	3.98E-01	3.98E-01
61.6595	3.97E-01	3.97E-01
63.0957	3.96E-01	3.96E-01
64.5654	3.95E-01	3.95E-01
66.0693	3.94E-01	3.94E-01
67.6083	3.93E-01	3.93E-01
69.1831	3.93E-01	3.93E-01
70.7946	3.92E-01	3.92E-01
72.4436	3.91E-01	3.91E-01
74.131	3.91E-01	3.91E-01
75.8578	3.90E-01	3.90E-01
77.6247	3.90E-01	3.90E-01
79.4328	3.89E-01	3.89E-01
81.2831	3.89E-01	3.89E-01
83.1764	3.89E-01	3.89E-01
85.1138	3.88E-01	3.88E-01
87.0964	3.88E-01	3.88E-01
89.1251	3.88E-01	3.88E-01
91.2011	3.88E-01	3.88E-01
93.3254	3.87E-01	3.87E-01
95.4993	3.87E-01	3.87E-01
97.7237	3.87E-01	3.87E-01
100	3.87E-01	3.87E-01

**Table 3: Key for Figures 1 - 18 ISRS for VEGP 3&4 at the Six Key locations
 Based on the VEGP 2.1-Seismic Hazard**

Figures	Node	X ^{1,2} [ft]	Y ^{1,2} [ft]	Z ² [ft]	Location
1, 2, 3	10115	1116.5	948.5	116.5	ASB NE Corner at Control Room Floor
4, 5, 6	11111	929	1000	179.19	ASB Corner of Fuel Building Roof at Shield Bldg.
7, 8, 9	12052	956.5	1000	327.41	ASB Shield Building Roof Area
10, 11, 12	10471	1008	1014	134.25	CIS Operating Deck
13, 14, 15	9007	1000	1000	100	CIS at Reactor Vessel Support Elevation
16, 17, 18	11224	1000	1000	224	SCV Near Polar Crane

¹ X=Y=1000 ft at center of ASB and SCV

² X denotes plant North, Y denotes plant West and, Z denotes vertical direction.

Figures of the ISRS for VEGP 3&4 at the Six Key Locations Based on the VEGP 2.1-Seismic Hazard

FIGURE 1: NODE 10115 – X

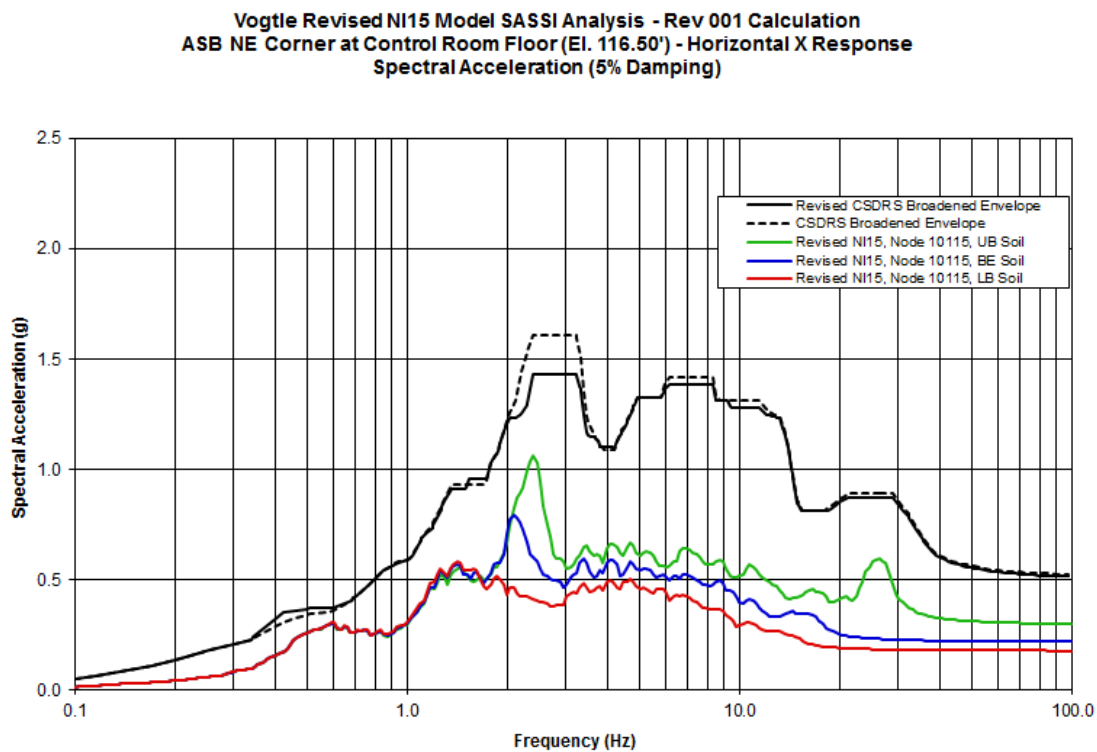


FIGURE 2: NODE 10115 – Y

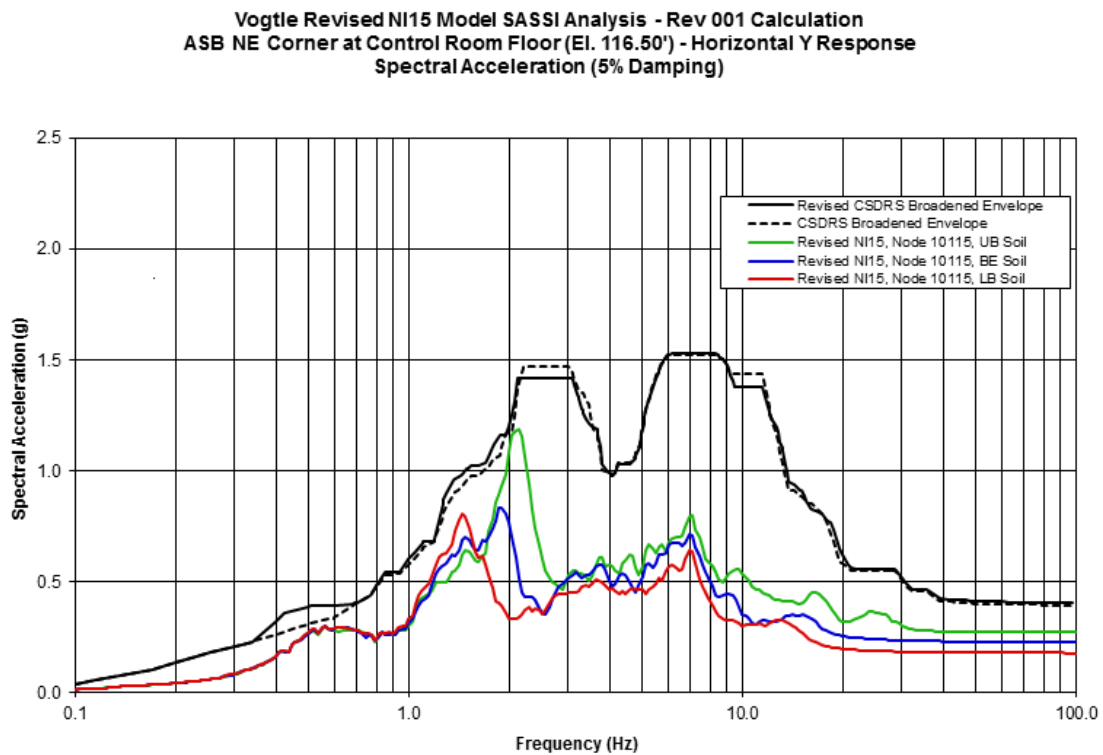


FIGURE 3: NODE 10115 – Z

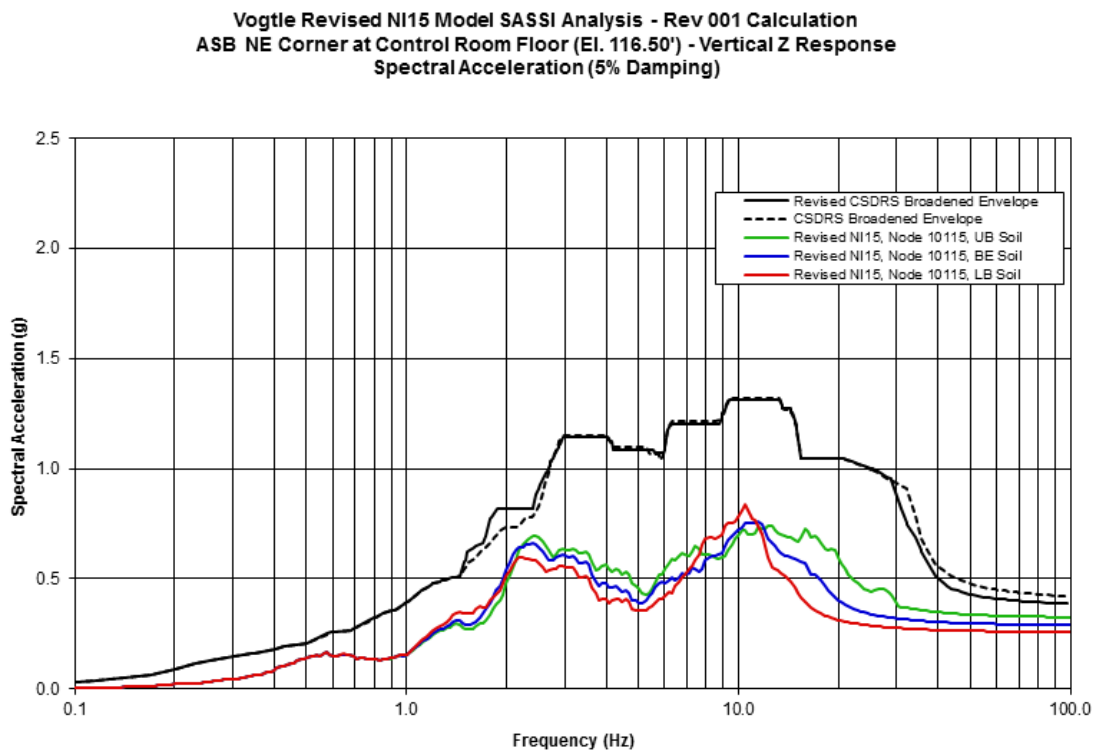


FIGURE 4: NODE 11111 – X

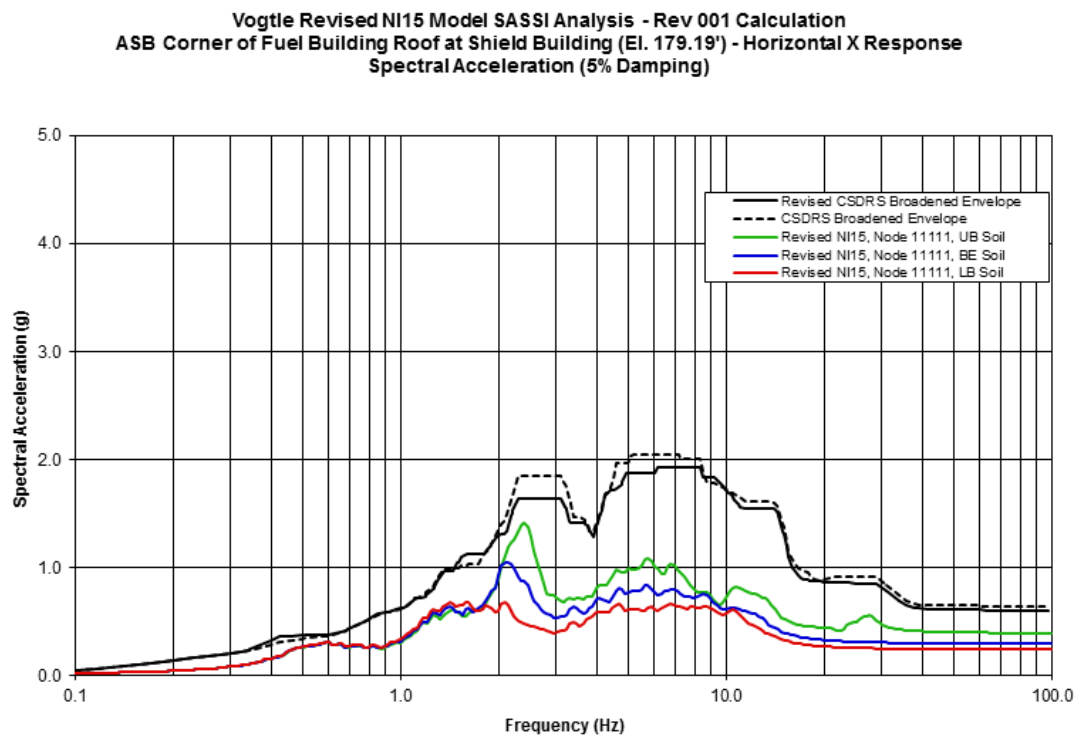


FIGURE 5: NODE 11111 – Y

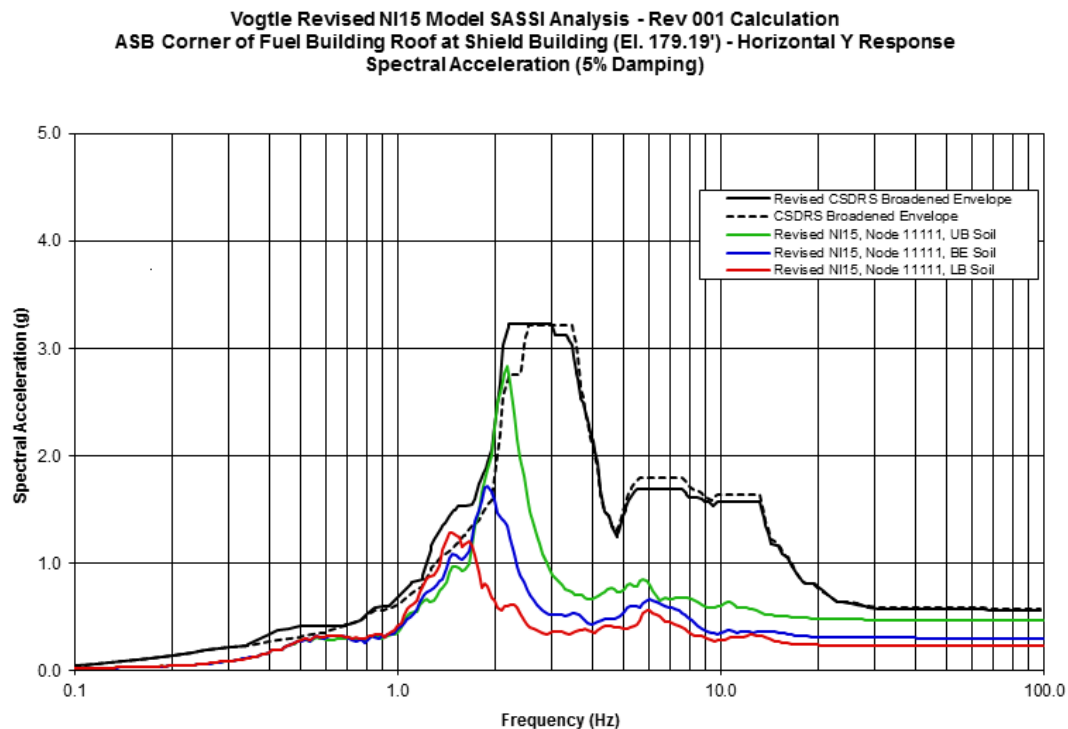


FIGURE 6: NODE 11111 – Z

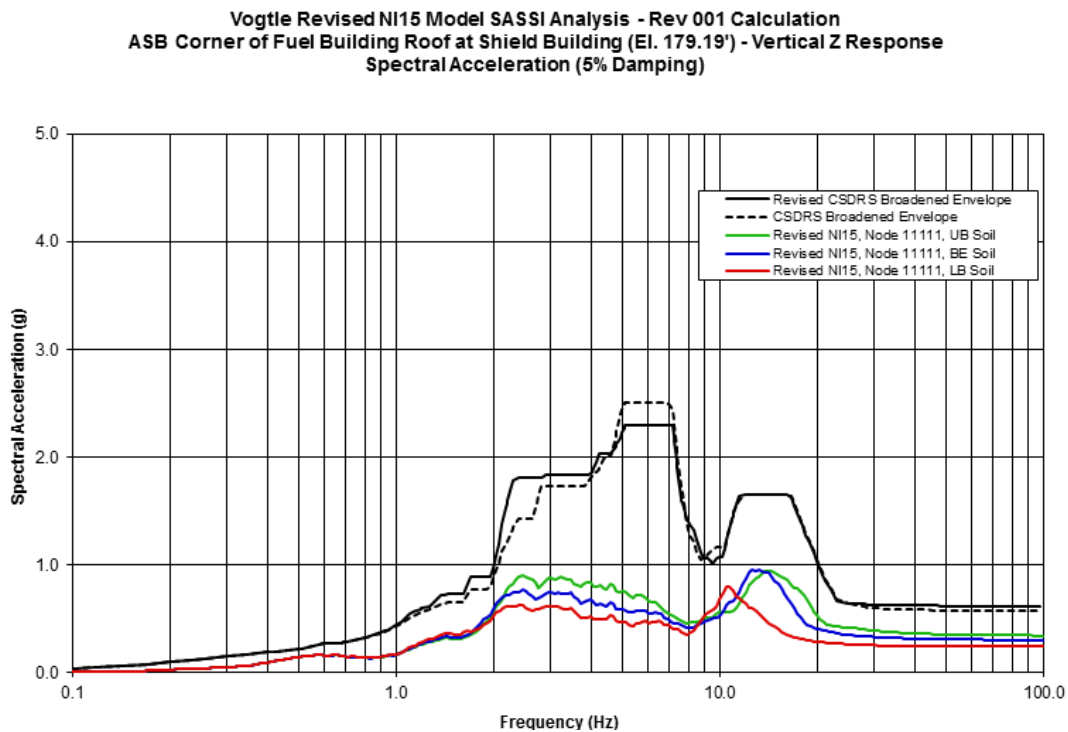


FIGURE 7: NODE 12052 – X

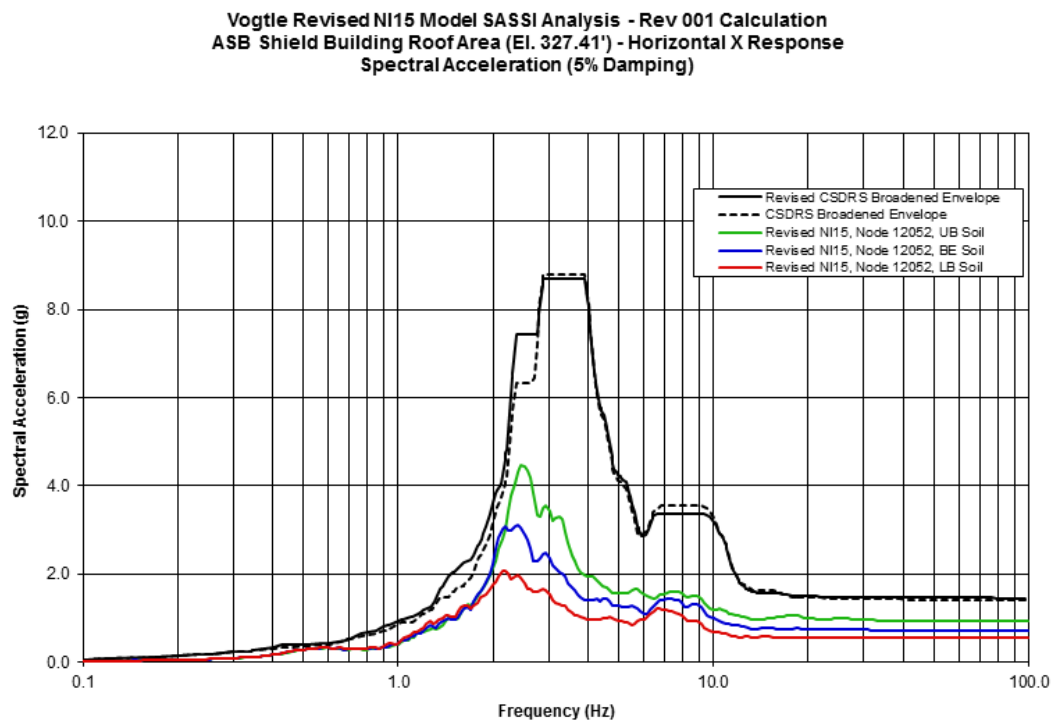


FIGURE 8: NODE 12052 – Y

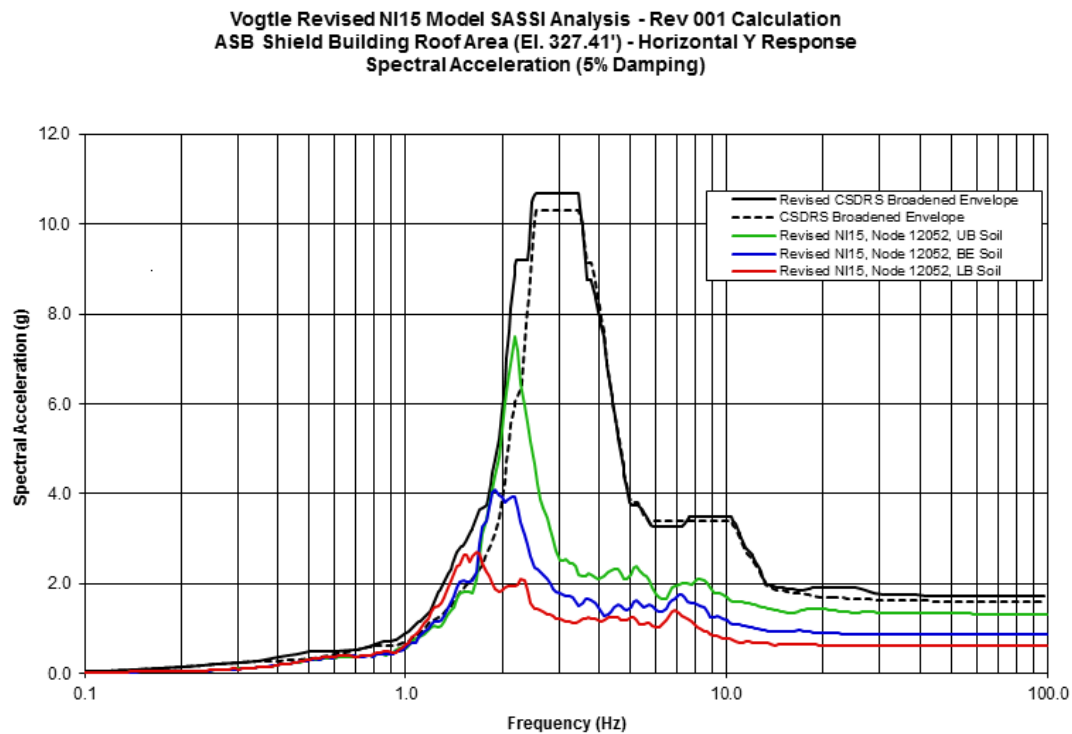


FIGURE 9: NODE 12052 – Z

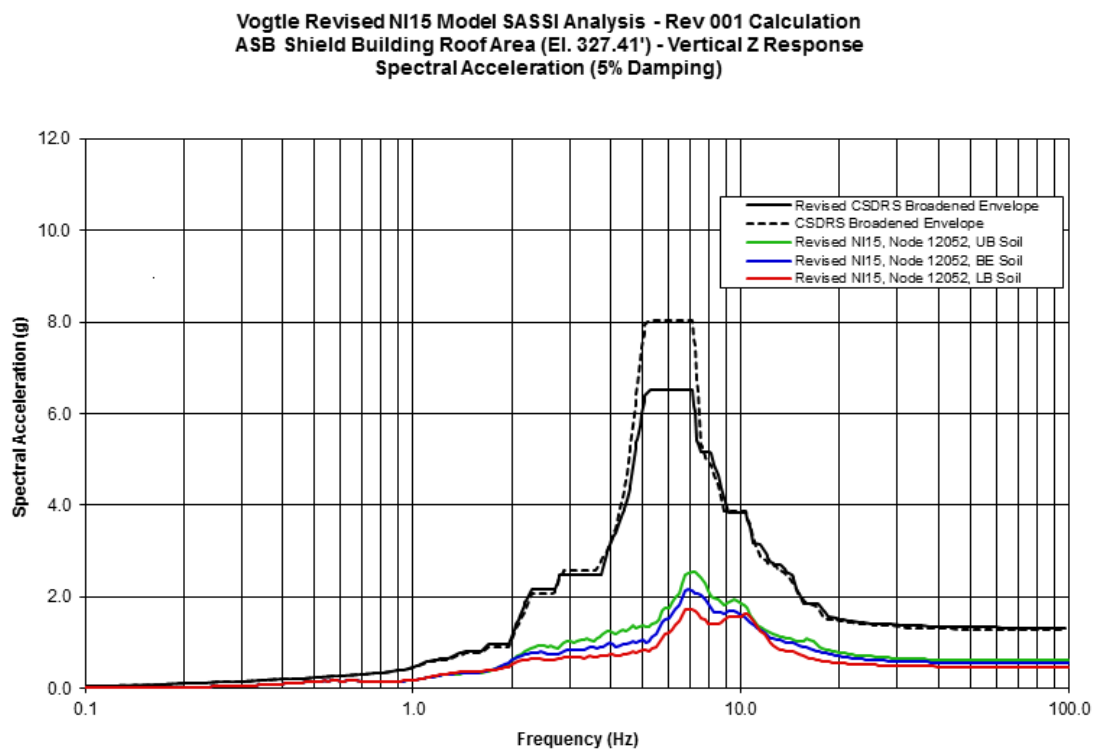


FIGURE 10: NODE 10471 – X

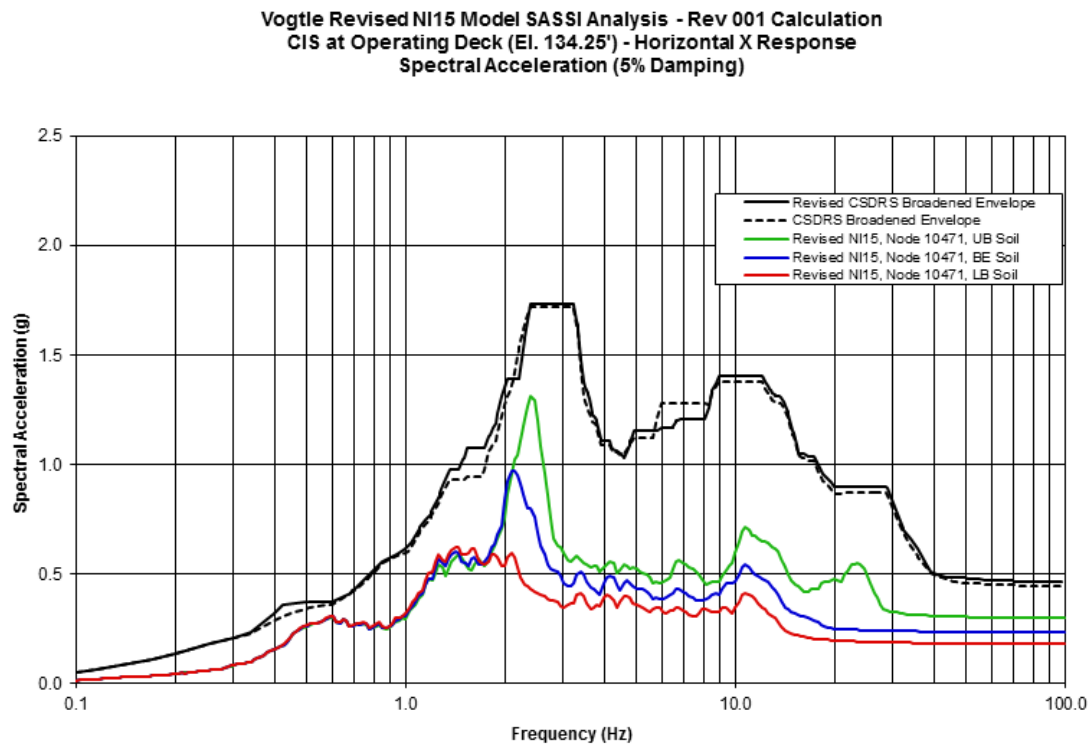


FIGURE 11: NODE 10471 – Y

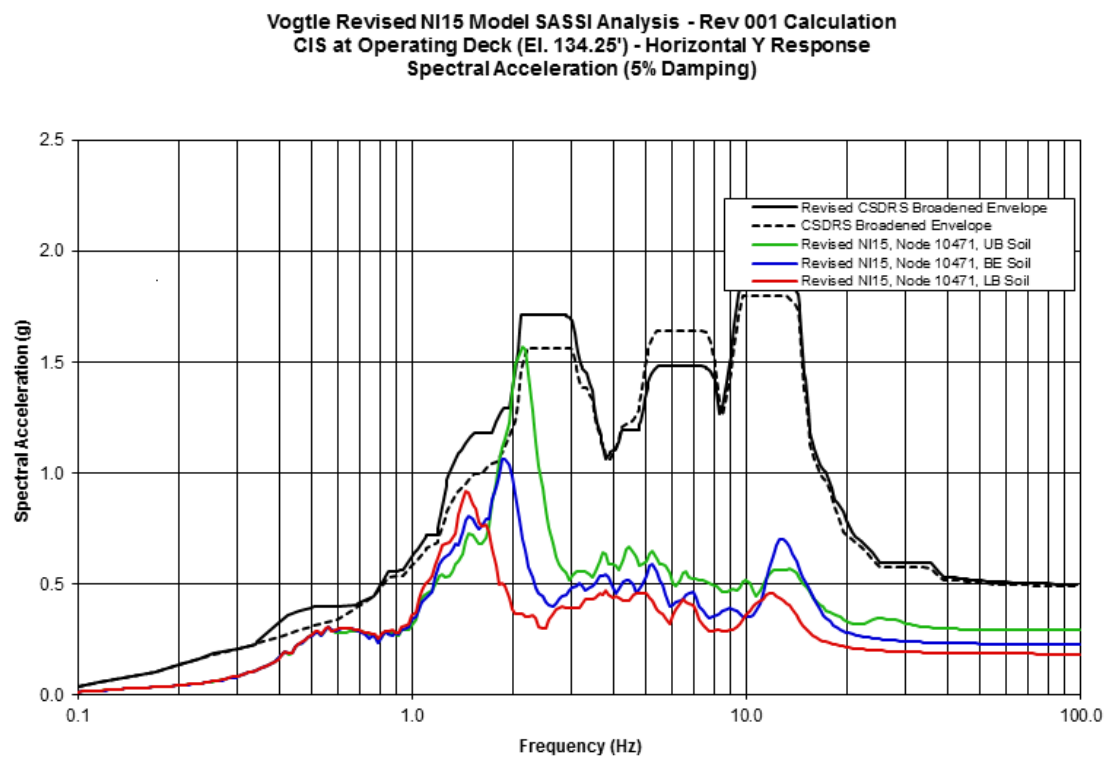


FIGURE 12: NODE 10471 – Z

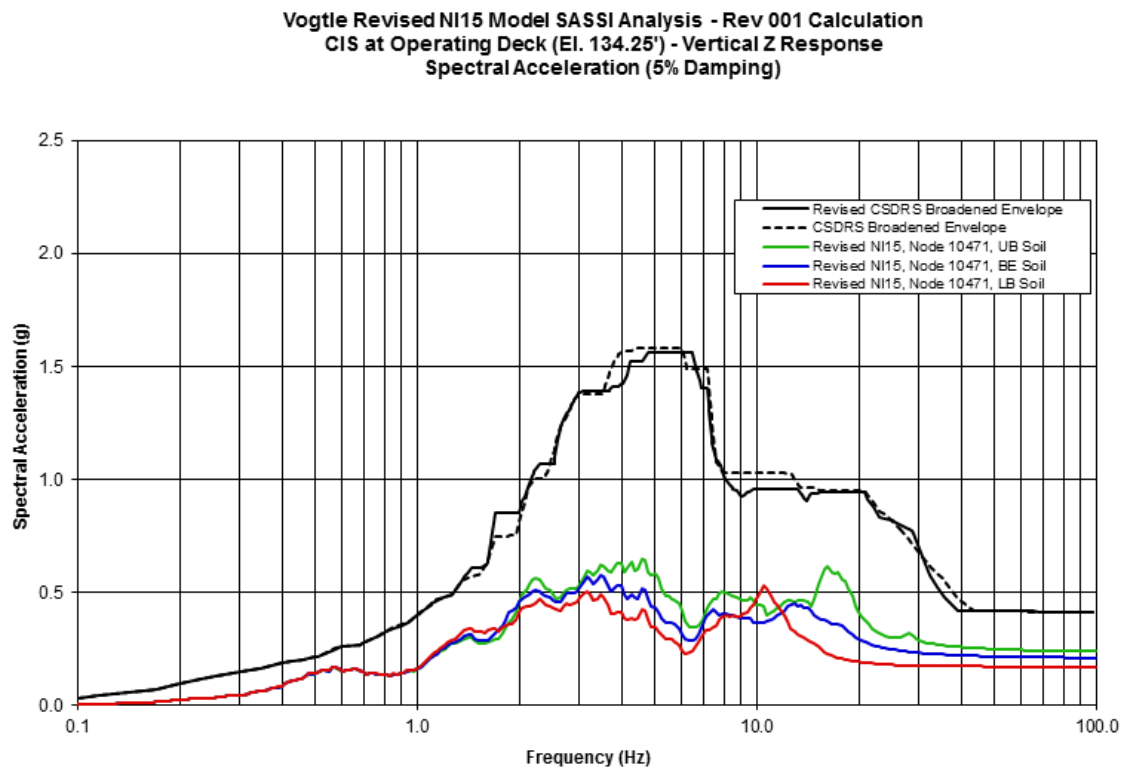


FIGURE 13: NODE 9007 – X

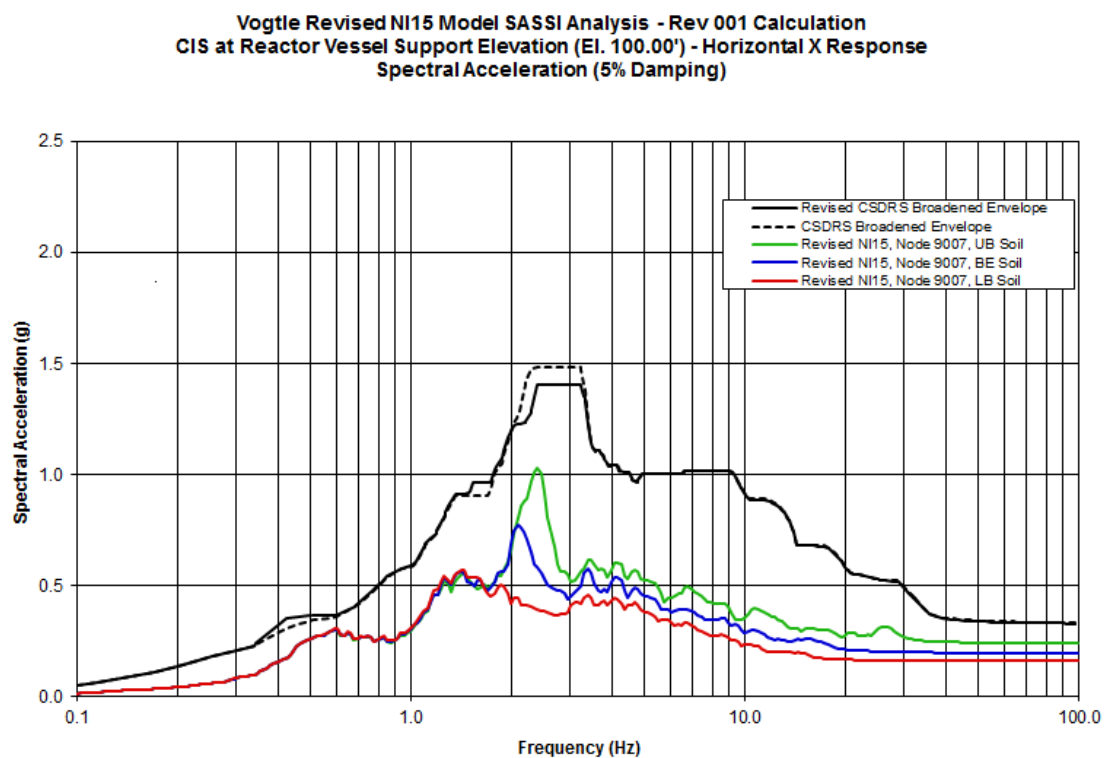


FIGURE 14: NODE 9007 – Y

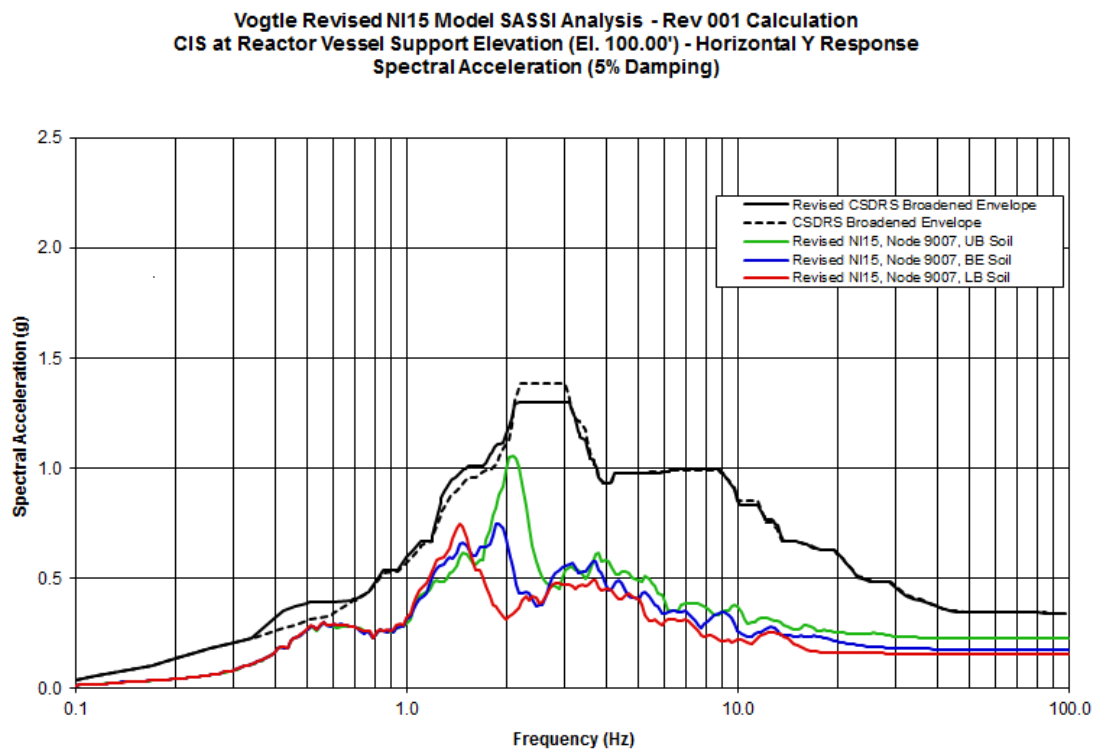


FIGURE 15: NODE 9007 – Z

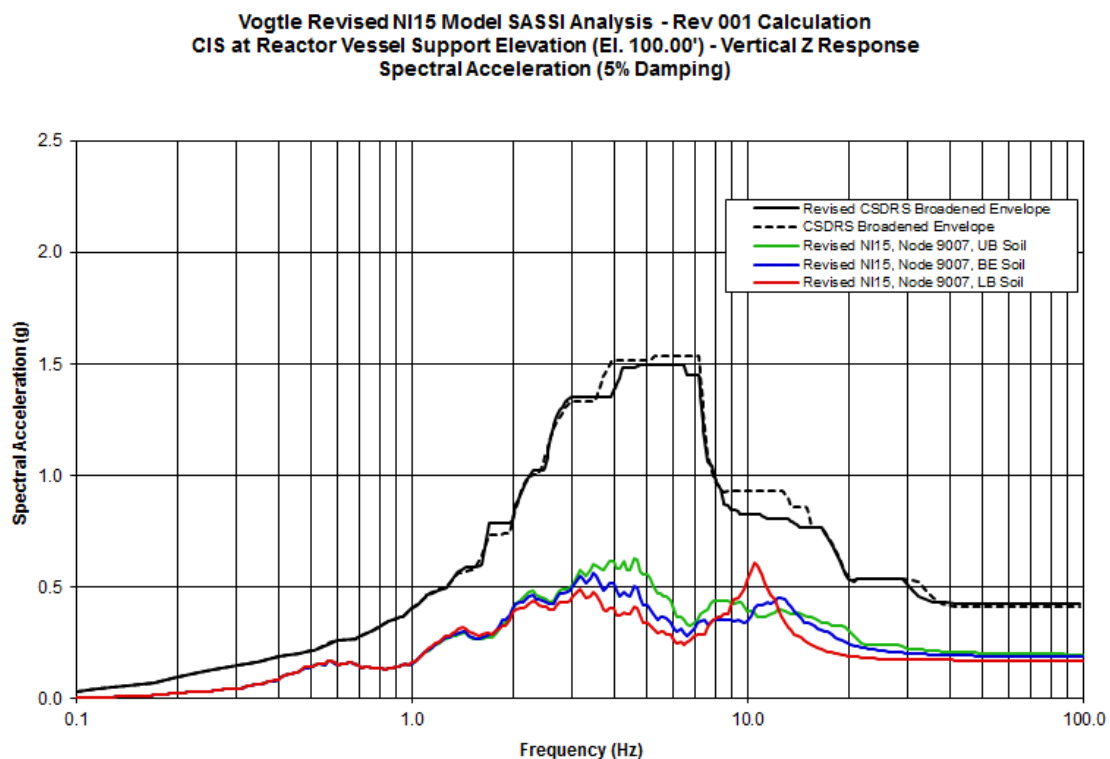


FIGURE 16: NODE 11224 – X

Vogtle Revised NI15 Model SASSI Analysis - Rev 001 Calculation
SCV near Polar Crane (El. 224.00') - Horizontal X Response
Spectral Acceleration (5% Damping)

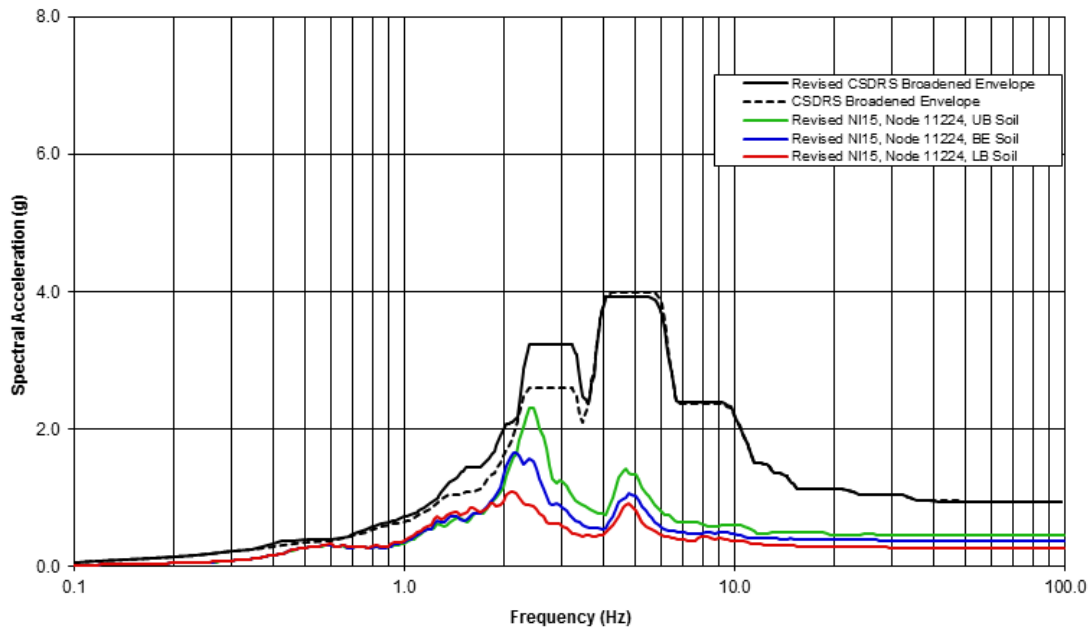


FIGURE 17: NODE 11224 – Y

Vogtle Revised NI15 Model SASSI Analysis - Rev 001 Calculation
SCV near Polar Crane (El. 224.00') - Horizontal Y Response
Spectral Acceleration (5% Damping)

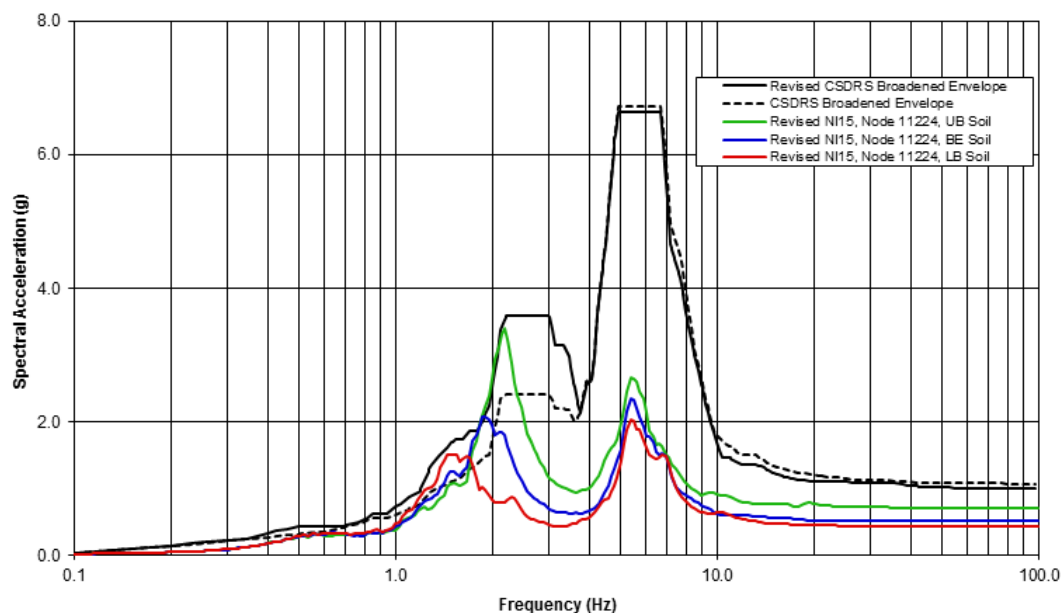
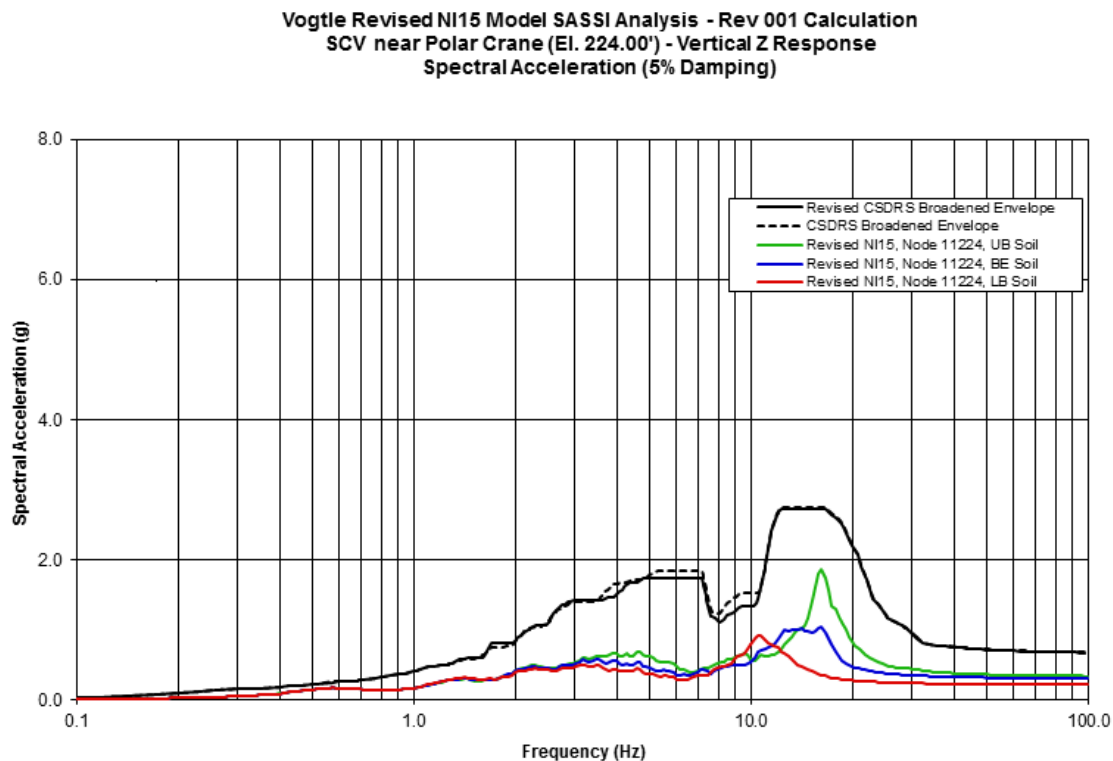


FIGURE 18: NODE 11224 – Z



References:

1. Letter to NRC, "Vogtle Electric Generating Plant – Units 1 and 2 Seismic Hazard and Screening Report for CEUS Sites," March 31, 2014.
2. NUREG-2115, "Central and Eastern United States Seismic Source Characterization for Nuclear Facilities," 2012.
3. EPRI Product: 3002000717 "EPRI (2004, 2006) Ground-Motion Model (GMM) Review Project," June 13, 2013.
4. Vogtle Electric Generating Plant, Units 3 & 4 COL Application Part 2 Final Safety Analysis Report, Revision 5, Section 3.7 Seismic Design, Appendix 3G Nuclear Island Seismic Analyses.